

# Operating Instructions

\_\_\_\_\_ Belt and disc grinding machine

\_\_\_\_\_ BTS 151



BTS 151

BTS 151

## Imprint

### Product identification

Belt and disc grinding machine	Item number
BTS 151	5903151

### Manufacturer

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### Indications regarding the operating instructions

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## 1 Introduction

You have made a good choice by purchasing the Belt and disc grinding machine made by HOLZSTAR.

**Thoroughly read the operating instructions before commissioning the machine.**

It informs you about the proper commissioning, the intended use as well as the safe and efficient operation and maintenance of the Belt and disc grinding machine.

The operating instructions are part of the Belt and disc grinding machine. Always keep it at the place of use of the Belt and disc grinding machine. Furthermore, the local accident prevention regulations and the general safety notes are applicable for the field of application of the Belt and disc grinding machine. The illustrations in these operating instructions serve the general comprehension and may deviate from the actual type.

### 1.1 Copyright

The contents of these instructions are copyright. Their application is admissible in the frame of the device. An application beyond the described application is not allowed without written approval of the manufacturer. For the protection of our products, we shall register trademark, patent and design rights, as this is possible in individual cases. We strongly 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.

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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 untrained staff,
- 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 words indicates an imminently dangerous situation which may lead to death or severe injuries if they are not avoided.



#### **WARNING!**

This combination of symbol and signal word indicates a potentially dangerous situation that can lead to death or serious injury if not avoided.

**CAUTION!**

This combination of symbol and signal word indicates a potentially dangerous situation that can result in minor injury if it is not avoided.

**ATTENTION!**

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.

**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 or commercial 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 necessary protective equipment to the staff and order the use of the necessary protective equipment in a binding way.

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:



### Hearing 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 signs

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 Regulations for safety and accident prevention

The following instructions are to be followed by the operating personnel.

- The noise level (sound pressure level) of this machine may exceed 82 dB (A) at the workplace. In this case, sound and hearing protection measures are required and used by the operator.



### Hearing protection

Please wear ear protection when working with the device.

- Before operating the machine, read the operating instructions.
- Never touch rotating or moving parts.
- Always report electrical faults to an electrician.
- Always keep work clothes, long hair, jewellery etc. away from the machine.
- Switch off machine when work is interrupted.
- Wear suitable clothing. Do not wear loose clothing, gloves, necklaces, rings, bracelets or other jewelry that can get caught in rotating parts. Wearing non-slip shoes is recommended.
- For long hair, wear a hairnet (or similar).
- Check safety devices for correct function before starting work.
- Place the machine securely on a stable and level surface with sufficient space for work.
- When grinding with a grinding wheel, the workpiece must always be pressed against the downward side of the sanding sheet. If ground against the upward side, the workpiece can start to hit up and down, or it can be taken out of his hands.
- Do not use the machine in hazardous environments. Do not use electrical machines on damp, wet surfaces or in rain.
- Ensure good lighting of the workplace. Dusting activities
- Ensure good ventilation. Never use electrical machines / tools in places where they can cause fires or explosions.
- Keep children and other persons away. Children and other persons must be at a safe distance from electrical machinery / tools and electrical cables in the workplace.
- Turn off the power. Before servicing and changing accessories such as planer blades, drills, blades, sanding belt and blades, pull out the plug and press the emergency stop.
- Read and understand safety instructions attached to the machine.
- Always use a dust mask when working with the machine. Note that sanding certain wood may cause harmful and toxic dust.
- Perform regular maintenance.
- Do not overload the machine.
- In the event of abnormal operation of the machine, inform the supervisor immediately.
- Caution is advised when people are in the work area.
- Never change the electrical system.
- Do not expose power tools to wet or damp conditions. Water that enters a power tool increases the risk of electric shock.

- Do not use the power cord to lift or unplug the power tool. Watch out for oil, sharp edges or moving parts.
- Damaged or twisted cables increase the risk of electric shock.
- Never touch the rotating belt or the grinding wheel.
- Never remove mechanical or electrical safety devices.
- Special attention is needed during transport or reconstruction; The transport regulations must be followed.
- Run through the entire work process with the workpiece and give it the necessary space. Make sure that there is no recoil when the workpiece is stuck to the sanding belt or the sanding pad is torn out of the hands.
- Use the recommended accessories. Use of non-recommended accessories may result in accidents or personal injury.
- Before starting, make sure there are no nails or other foreign objects in the workpiece that can damage the Belt and disc grinding machine.
- The distance between the sanding belt / grinding disc and the stop must never be greater than 2-3 mm.
- Use suitable extension cables. For outdoor use, use only extension cords approved for the purpose. Use extension cables with sufficient cross section. Always unroll the whole cable.
- Avoid accidental switching on. Do not carry the tool with one finger on the on / off switch when the cable is plugged into the socket. Make sure that the on / off switch is in the OFF position before plugging into the socket.
- When repairing or servicing, only use genuine HOLZSTAR spare parts.

### 3 Intended Use

The belt and disc grinding machine is used exclusively for sanding wood and wood-like materials (wood fiber board, chipboard, plywood boards, laminated and non-laminated boards, etc.). Grinding other materials can cause fire, injury or damage.

Please pay attention to the instructions in the operating instructions as well as the information signs on the machine. It must be connected to a suitable extraction system. The belt and disc sanding machine is suitable for private use, in schools, craft workshops, workshops and for home improvement, suitable, not for industrial use. Proper use also includes compliance with all information in this manual. Any use beyond the intended use or otherwise is considered misuse.



#### **WARNING!**

#### **Risk of misuse!**

Misuse of the Belt and disc grinding machine can lead to dangerous situations.

- Operate the Belt and disc grinding machine only in the power range specified in the technical data.
- Never bypass or override the safety devices.
- Never work on other materials than specified in the intended use.
- Only operate the Belt and disc grinding machine in a technically perfect condition.
- Never work on several workpieces at the same time

Unauthorized modifications or modifications to the belt and disc grinding machine may invalidate the CE conformity of the grinder and are prohibited. The company Stürmer Maschinen GmbH assumes no liability for design and technical changes to the belt and disc grinding machine.

The improper use of the belt and disc grinding machine as well as the disregard of the safety regulations or the operating instructions exclude a liability of the manufacturer for resulting damage to persons or objects and cause the warranty to lapse!

## 4 Technical Data

Model	BTS 151
Length	460 mm
Width	360 mm
Height	280 mm
Weight	16,5 kg
Supply voltage	230 V / 50 Hz
Sanding belt length	914 mm
Sanding belt width	100 mm
Belt speed	7,35 m/sec
Rotational speed	2980 min <sup>-1</sup>
Ø Sanding roller / drive roller	60 mm
Swinging grinding unit	0-90°
Work table Length	226 mm
Work table Width	160 mm
Table tilting	0-45°
Extraction port diameter out / inside	63 mm / 58 mm
Rating	370 W
Sanding plate diameter	150 mm
Total power consumption	2,2 A
Starting current	12,7 A
Protection Class drive motor	IP 20
Sound power level unloaded	88,7 dB

### 4.1 Type plate



Fig. 2: Type plate BTS 151

## 5 Transport, packaging, storage

### 5.1 Delivery and Transport

#### Delivery

Check the Belt and disc grinding machine for visible transport damage after delivery. If you discover any damage to the Belt and disc grinding machine, immediately report it to the carrier or dealer.

#### Transport



#### CAUTION!

Injuries caused by parts falling over or off a forklift, pallet truck or transport vehicle.

Only use means of transport that can carry the total weight and are suitable for it.

Improper transport of individual devices, unsecured devices stacked on top of each other or next to each other in packed or already unpacked condition 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.

#### General risks during internal transport



#### CAUTION: 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 Belt and disc grinding machine can be transported with a forklift or truck if it is firmly mounted on a pallet.

## 5.2 Packaging

All used packaging materials and packaging aids of the grinding system are recyclable and generally need to be transported to the material recycling.

Crush the packaging material made of cardboard and supply it to the waste paper collection.

The films are made of polyethylene (PE) and the upholstery parts are made of polystyrene (PS). These materials have to be delivered to a recycling station of the responsible dumping company.

## 5.3 Storage

The Belt and disc grinding machine must be thoroughly cleaned before being stored in a dry, clean and frost-free environment. Cover the machine with a protective tarpaulin.

## 6 Scope of delivery and Accessories

### 6.1 Scope of delivery

Check the machine immediately after delivery for transport damage and shortages. To do this, remove all individual parts from the box and compare them with the following list.

- Mitre stop -60 to +60 °
- Sanding belt 914 x 100 mm, K 80
- Sanding sheet Ø 150 mm, K 80 (bonded on)
- Hook and loop holder for sanding sheet available as accessory
- Instruction Manual

### 6.2 Accessories

We recommend only using high quality original HOLZSTAR accessories. Only with original accessories can a flawless operation and optimal work results be guaranteed.

- Particle plate for grinding wheel change  
**Item number: 5900301**
- Grinding belt 915x100mm K 60  
**Item number: 5911006**
- Grinding belt 915x100mm K 80  
**Item number: 5911008**
- Grinding belt 915x100mm K 100  
**Item number: 5911010**
- Grinding belt 915x100mm K 120  
**Item number: 5911012**

- Grinding belt 915x100mm K 150  
**Item number: 5911015**
- Sanding sheet Ø150mm K40  
**Item number: 5911504**
- Sanding sheet Ø150mm K60  
**Item number: 5911506**
- Sanding sheet Ø150mm K80  
**Item number: 5911508**
- Sanding sheet Ø150mm K100  
**Item number: 5911510**
- Sanding sheet Ø150mm K120  
**Item number: 5911512**
- Sanding sheet Ø150mm K150  
**Item number: 5911515**
- Sanding sheet Ø150mm K180  
**Item number: 5911518**
- Klett absorption Ø150mm  
**Item number: 5911001**

## 7 Description

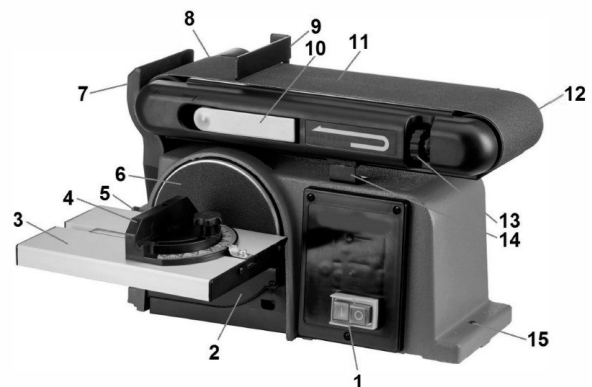


Fig. 3: Description

1. ON / OFF Switch
2. Sanding pad protection
3. Work table
4. Mitre fence
5. Connection for extraction
6. Grinding disc
7. Grinding protection
8. Drive roller
9. Limit stop
10. Lever for belt tension
11. Grinding belt
12. Pulley
13. Belt alignment
14. Bracket
15. Mounting holes

## 8 Assembly



### DANGER!

Before mounting, always make sure that the plug of the power cord is unplugged from the socket.

Remove the machine from its packaging and remove all protective films. Make sure that the machine is not set up or put into operation in a damp or wet environment. The humidity should not exceed 60% and the measured room temperature should be between 0 ° C and 40 ° C.

For a safe work, the machine should be mounted on a stable base (such as a workbench) using the holes provided in the machine base.

### 8.1 Safety stop

Take the safety stop as shown in Fig. 4 and fix it with the hexagon screw M6 x 1.0-14 and the toothed disc. When tightening the screw, make sure that you fasten the safety stop approx. 2 mm above the sanding belt. Do not overtighten the screw, otherwise it may over-tighten.

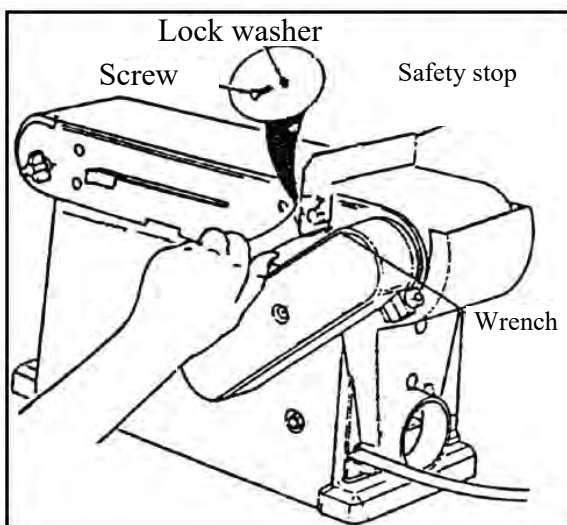


Fig. 4: Assembly the safety stop

### 8.2 Mount the work table

Hold the worktable to the grinding machine as shown in Fig. 5 and fasten it to the side with the clamping screw and a washer and with 2 screws (Fig. 6). The edge of the table must be positioned so that there is a maximum distance of 2 mm to avoid pinching workpieces or fingers between the table and the grinding wheel.

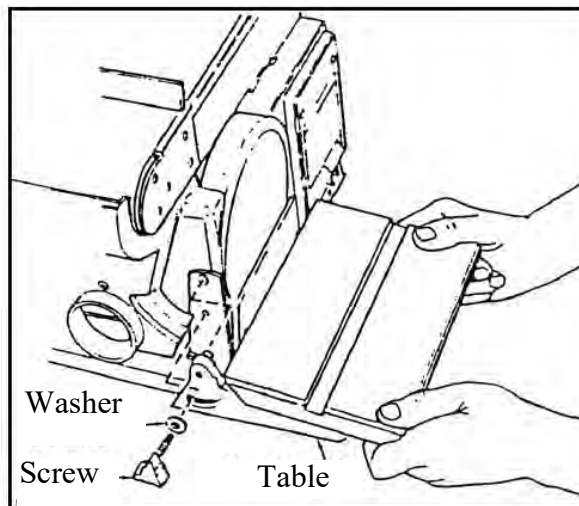


Fig. 5: Mount the work table

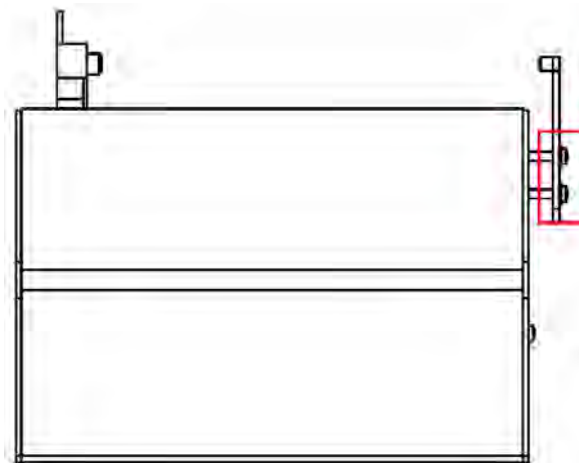


Fig. 6: Fixing the work table

### 8.3 Mount on a workbench

Place the Belt and disc grinding machine on a workbench of suitable height and secure it with screws through the holes in the bottom plate. Use spring washers and locknuts for this purpose .



### NOTE!

There must be sufficient space around the machine for machining larger workpieces.

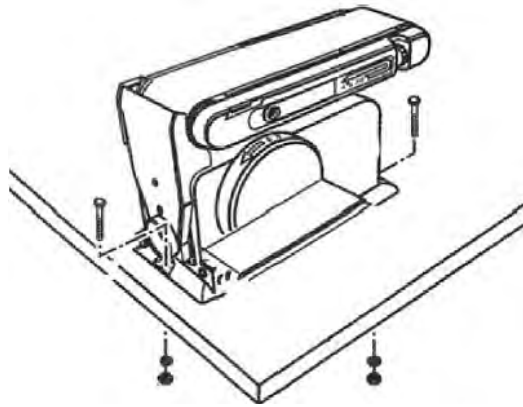


Fig. 7: Mount on a Work bench

## 9 Settings



### DANGER!

Before any intervention on the machine, it must be disconnected from the power supply. Handling and working with the machine is only permitted for persons who are very familiar with the handling and operation of the machine.

### 9.1 Swiveling the work table

Loosen the clamping screws on both sides and bring the work table into the desired position. Then tighten the clamping screws again.

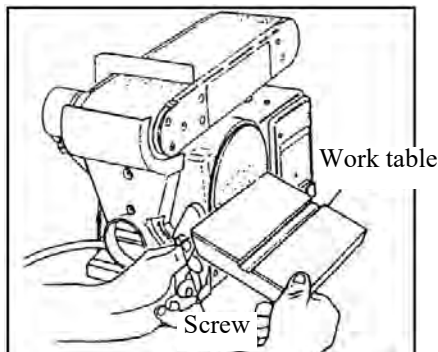


Fig. 8: Swiveling the work table

### 9.2 Align work table

To align the work table exactly at 90°, take a right angle and hold it on the table as shown in Fig.9. Then loosen the table pivot clamping screws and align the table. Finally, tighten the clamping screws again.

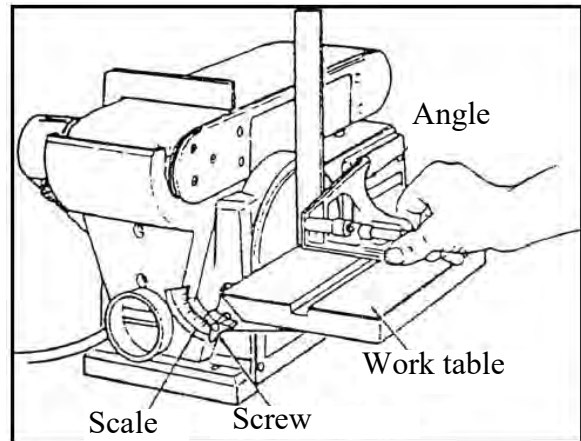


Fig. 9: Align work table



### NOTE!

This process can be repeated to align the work table on the sanding belt device in the vertical position.

### 9.3 Grinding wheel change

Dismount the work table (3) by loosening the clamping screws (23) on both sides. Loosen the two screws of the sanding guard (2) and remove it. Clean the sanding pad (6) of possible adhesive residues. Replace the grinding wheel (24) with a new one and then attach the sanding guard (2).

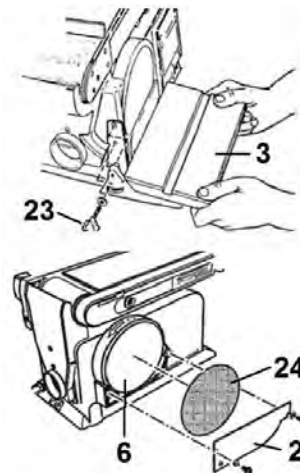


Fig. 10: Grinding wheel change

### 9.4 Belt change

Lift the grinding wheel (22) by loosening the hexagon screw (21). Remove the two screws securing the Belt and disc grinding machine to the bottom of the sanding arm and remove it. Loosen the tension of the sanding belt with the help of the clamping lever (10).

Now carefully pull off the old sanding belt (11). Tighten the new sanding belt (11) and align it. Finally tighten the sanding belt (11) over the tensioning lever (10) and tighten the screws of the grinding wheel (22).



**NOTE!**

For easier replacement of the sanding belt, the sanding unit can be easily tilted upwards. To lift and remove the sanding belt, move it back and forth.

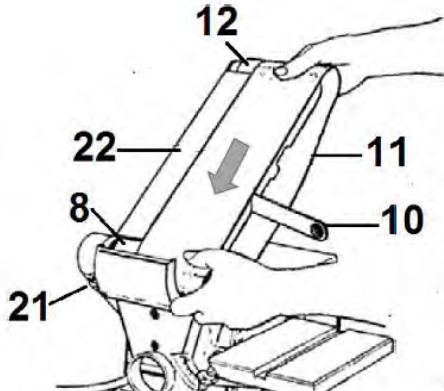


Fig. 11: Belt change

**9.5 Aligning the abrasive belt holder**



Fig. 11.1: Aligning the belt holder

Make sure that the belt and disc grinding machine is set up on a horizontal and level surface. Then check with a spirit level that the grinding machine belt holder is correctly aligned.

If there are any deviations, carry out the following steps: Remove the screw to remove the belt and disc grinding machine drive cover.

Loosen the three fixing screws (Fig. 11.2) to be able to align the abrasive belt holder.



Fig. 11.2: Loosen the fixing screws of the belt holder.

Make sure that the abrasive belt holder rests cleanly on the bracket (Fig. 11.3).



Fig. 11.3: Bracket

After you have aligned the belt holder using a spirit level, tighten the three fixing screws again. Finally, remount the cover.

**9.6 Center the grinding belt**

The run of the sanding belt can be changed via the track adjustment screw (Fig. 12). As the sanding belt moves toward the grinding wheel, turn the adjusting screw clockwise. If the sanding belt moves away from the grinding wheel, turn the adjusting screw counterclockwise. Then move the sanding belt by hand in one direction and check the barrel. Change the run again if necessary.



Fig. 12: Adjustment the belt

## 9.7 Vertical grinding

Loosen the locking screw (23). Bring the sanding unit to the desired position and tighten the locking screw (23) again.

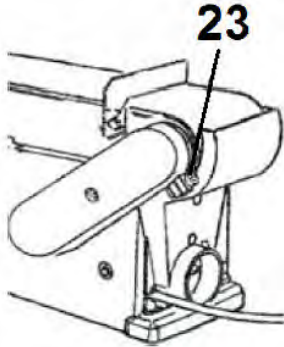


Fig. 13: Vertical grinding

## 9.8 Worktable in vertical grinding position

For grinding on the sanding belt in the vertical position, the work table can be mounted on the sanding unit. To do this, remove the safety stop. Bring the sanding unit into the vertical position as described. Now mount the worktable with the help of the clamping screw.

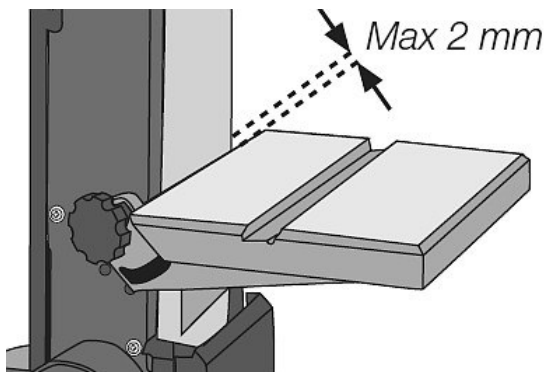


Fig. 14: Vertical grinding position



### NOTE!

The distance between the grinding belt and the grinding table must not exceed 1 to max. 2 mm. Otherwise, there is a risk of pinching workpieces or fingers between the table and the grinding wheel.

## 10 Operation of the machine

Please observe the following working instructions so that your work has the expected success.



### DANGER!

Certain types of wood and wood products produce harmful dust emissions when processed. Therefore, use your machine only in a well ventilated area, use a suction device and wear respiratory protection.



### DANGER!

Rotating parts! Get to work with reason. Pay attention to what you do. Pay special attention to the rotating parts. Wear tightfitting clothing. Make sure that hair or clothing is not caught by rotating parts! Wear a hairnet.

When working with the machine no jewelry may be worn.



### DANGER!

Flying chips and parts thrown off! Be sure to wear safety glasses! Protect your eyes from flying chips and other splinters.



### Safety goggles

Be sure to wear eye protection.



### Dust mask

Be sure to wear a dust mask.

Before each start of work, the following tests must be carried out:

- Check all cables and plugs.
- Check if the worktable is tight.
- Note that there are different grits of the sanding plates for different jobs.
- Before starting the machine, make sure that the washer and the sanding belt rotate freely and are not braked or blocked by any workpieces.
- Lubricate regularly according to point maintenance.
- Before commissioning, the center run of the sanding belt must always be checked by manual feed!

### ON / OFF Switch

To turn on the machine, press the green switch with the sign (I) for about one second. To switch off the machine, press the switch with the symbol (O), as shown in Fig. 15.



Fig. 15: ON / OFF Switch

### 10.1 Surface grinding on the sanding belt

Check that the safety stop is properly installed and tightened. Gently press the workpiece against the sanding belt and the safety stop as shown in Fig.16 with both hands. For better removal of material, the workpiece can be easily moved back and forth.



**DANGER!**

Do not work with too much pressure, otherwise the sanding belt wears too fast.  
Do not put your fingers in contact with the sanding belt.

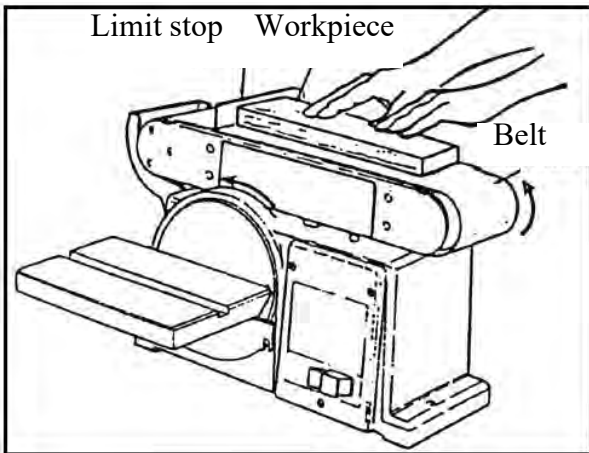


Fig. 16: Sand surfaces

### 10.2 Edge grinding in vertical grinding position

Bring the sanding unit in a vertical position as described and mount the work table. Hold the workpiece firmly with both hands and apply light pressure to the sanding belt. Move the workpiece back and forth slightly.

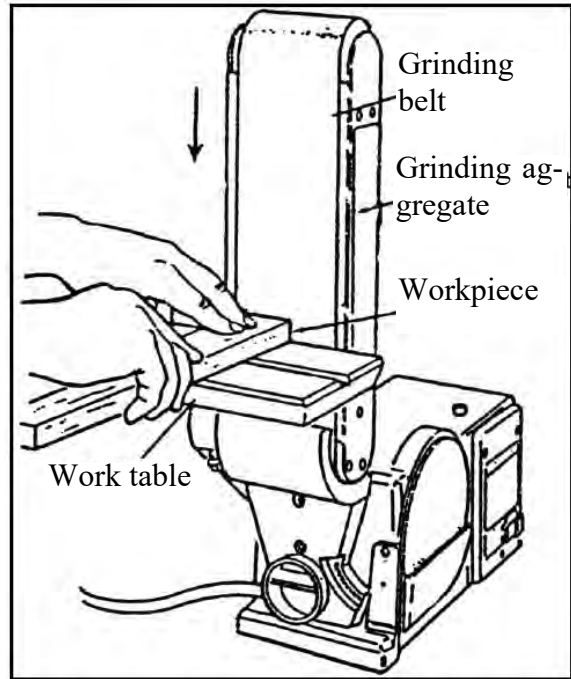


Fig. 17: Edge grinding

### 10.3 Grinding bent workpieces

Hold the workpiece firmly with both hands and proceed as shown in Fig.18. Grind internal curves only at the front pulley.

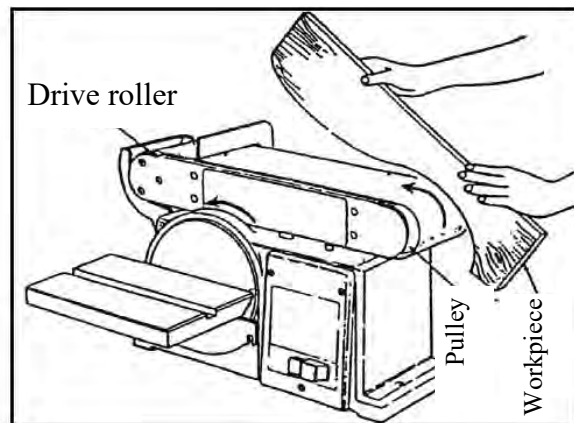


Fig. 18: Grinding bent workpieces

### 10.4 Grinding round workpieces

Hold the workpiece firmly with both hands and proceed as shown in Fig.19.



Fig. 19: Grinding round workpieces



**DANGER!**

Grind round parts always only on the left side, the down-running side of the grinding wheel, otherwise the workpiece can be thrown away.

**10.5 Grinding ends on the grinding wheel**

When grinding the ends of a narrow workpiece, it is easier to use the grinding wheel with the miter fence as shown in Fig. 20. Move the workpiece outward from the center to the left side of the disc.



**DANGER!**

Always grind on the left side of the grinding wheel, which runs downwards. The grinding on the right side of the grinding wheel can cause the workpiece to be thrown upwards.

The edge of the worktable must be positioned so that there is a maximum distance of 2 mm to the grinding wheel to avoid pinching workpieces or fingers between the table and the grinding wheel.

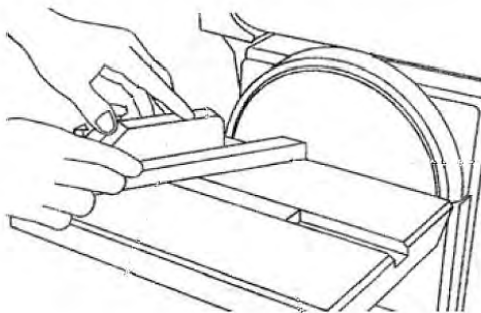


Fig. 20: Grinding ends

**10.6 Connecting for extraction system**

On the side under the work table there is a connection piece with an outer diameter of 63mm and inner diameter of 58mm for connection to an extraction system.

**11 Information for the grinding process**

When grinding, pay attention to the safety instructions and use the protective devices on the machine as well as your personal protective equipment (protective goggles, ear protection, safety shoes, etc.).

Special reference to situations that could cause damage to persons, the machine and / or the environment or could lead to financial losses:

- When grinding with the material, do not press too hard against the sanding pad.
- Make sure that the gap between the work table and the grinding wheel is not too large. Especially with thin workpieces there is a risk that the workpiece will enter the gap!
- Since the machine has no clamping facility, it is important that your workpiece is resting on the work table over the entire surface and can be held fast!
- Make sure the grinding wheel is in good condition and replace used grinding wheels in good time. Only with perfect tools you can achieve a good grinding quality!

## 12 Care, maintenance and repair

Always disconnect the machine from the power supply before starting any cleaning, maintenance or servicing work!

### 12.1 Cleaning

Basically, the machine should be cleaned after each use. When the machine is off, remove the chips and dust with a broom or brush.



#### DANGER!

Do not remove the chips with bare hands. There is a risk of cuts due to chips and tools!



#### NOTE!

Oil, grease and cleaning agents are hazardous to the environment and must not be dumped into wastewater or normal household waste. Dispose of these funds in an environmentally friendly way. The cloths soaked in oil, grease or detergent are easily flammable. Collect the cleaning rags or cleaning wool in a suitable, closed container and dispose of them in an environmentally friendly way - do not throw in household waste!

Maintenance and repair work may only be carried out by qualified personnel. If the Belt and disc grinding 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 adjustment of the tape guide at regular intervals. Relax the sanding belt during longer work breaks. Clean the machine at regular intervals.
- Check daily the adequate function of the suction. Replace damaged safety equipment immediately. Reinstall all guards immediately.
- Connections and repairs of the electrical equipment may only be carried out by a qualified electrician.

#### Functional test

The belt and disc sanding machine is delivered ready to use. Before each use, a functional test should be performed. The sanding belt must 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: Switch on the belt and disk sanding machine for a short time and check the tape again.

Step 3: Switch off the belt and disk sanding machine again.

#### Grinding belt

The grinding belt is a wearing part, which has to 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.

#### Tape guide

Check the tape guide at regular intervals for the correct setting. If the belt and disk sanding machine is not used for a long time, the sanding belt must be relaxed.

#### 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 the belt and disk grinding machine be put into operation.

#### Engine

Periodically clean the engine from dirt, dust and wood chips.

#### Lubricate moving parts



#### Wear safety glasses!

Lubricate the bearing points of the pulleys periodically with a high-quality oil, but at the latest after about 10 operating hours. Do not use too much oil, otherwise the V-belt may slip or oil gets on the workpiece.

#### Sanding pad

Check the sanding pad regularly for faults and replace when worn. Remove the

Work table (3, Fig.3) and the cover (2, Fig.3). Now loosen the screw, remove the sanding pad and replace it with a new one. Tighten the screw of the sanding plate and mount the work table and the cover.



## 12.2 Maintenance

### Replacement of the driving belt

Disconnect the machine before starting any cleaning, maintenance or servicing work Always from the power supply!

Remove the cover (27, Fig. 21) of the belt housing by loosening the screw (26, Fig. 21).

Loosen the three mounting screws, which relaxes the belt. Replace the new strap by inserting a flat-head screwdriver into the auxiliary hole and pushing the strap upwards. Tighten the fastening screws again.

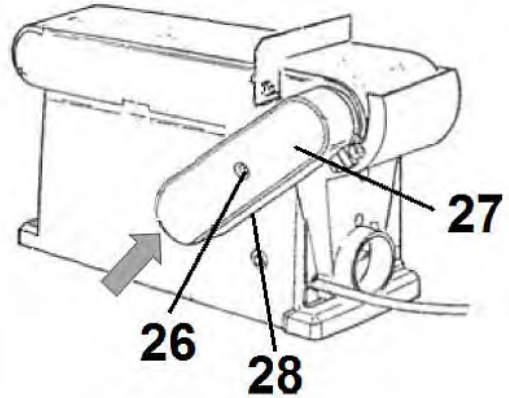


Fig. 21: Replacement of the driving belt

## 13 Troubleshooting

Fault	Possible causes	Disposal
Engine is not running	Damaged ON / OFF switch Relay damaged Engine defective Fuses defective	Lets check the machine by an electrician and replace the damaged parts.
Motor protection triggers	1. Motor is overloaded 2. Drive belt is worn	1. Work the workpiece with less pressure 2. Replace driving belt
Machine slows down while working	It is working with too much pressure	Apply less pressure to the workpiece
Low service life of the abrasives	Abrasive (tape or disc) with too fine grain	Use a grinding wheel with coarse grain
Grinding angle does not fit	Adjusted angles on the work table or on the stop bracket do not fit	Check angle and adjust if necessary
Bad sanding surface	Abrasive with coarse grain	Use finer grained abrasive
Grinding wheel runs optically out of round	Sanding belt not properly applied	Adjustment the direction of the sanding belt
Grinding wheel runs off the drive pulleys	Sanding belt not properly applied	Adjustment the direction of the sanding belt
Wood burns during grinding	Grinding wheel or belt is covered with lubricant. There is too much pressure on the workpiece	Replace the sanding belt or the grinding wheel. Reduce the pressure on the workpiece.

## 14 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.

### 14.1 Decommission

Discarded appliances are immediately professionally decommissioned, 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 unit.

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.

### 14.2 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.

### 14.3 Disposal of electrical appliances



#### NOTE!

Please wear in your and for the sake of Ensure that all components of the machine are disposed of in the designated and approved

Please note that electrical units contain a variety of recyclable materials and environmentally harmful components.

Please contribute that these components are separated and disposed of properly. If in doubt, contact your municipal waste.

For preparation for commissioning please contact a company specialized for disposal.

### 14.4 Disposal of lubricants



#### DANGER!

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

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

### 14.5 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 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 service or the shop where you purchased the product.

## 15 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.

### 15.1 Ordering spare parts

The spare parts may be purchased with the authorised dealer or directly with the manufacturer. Please find the corresponding contact data in Chapter 1.2 Customer service.

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 nameplate, which is attached to the unit.

### Example

The drive belt for the Belt and disc grinding machine BTS 151 must be ordered. The drive belt has the number 70 in the spare parts drawing 1.

By ordering spare parts, send a copy of the spare parts drawing (1) with the marked part (drive belt) and marked position number (70) to the dealer or spare parts department and provide the following information:

- Type of device: **BTS 151**
- Item number: **5903151**
- Drawing number: **1**
- Position number: **70**

## 16 Spare parts drawing

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.

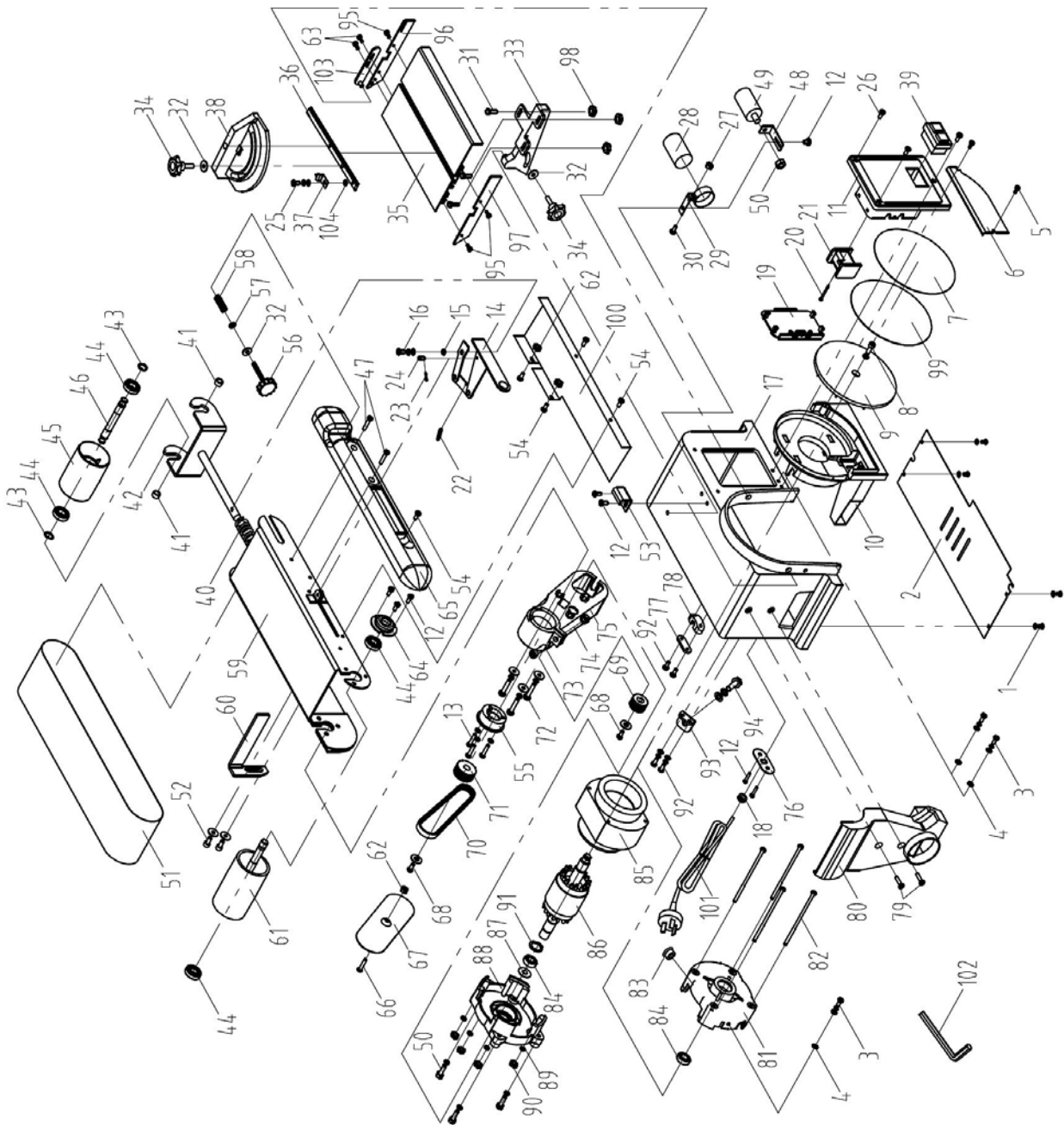


Fig. 22: Spare parts drawing BTS 151

## 17 Electrical wiring diagram

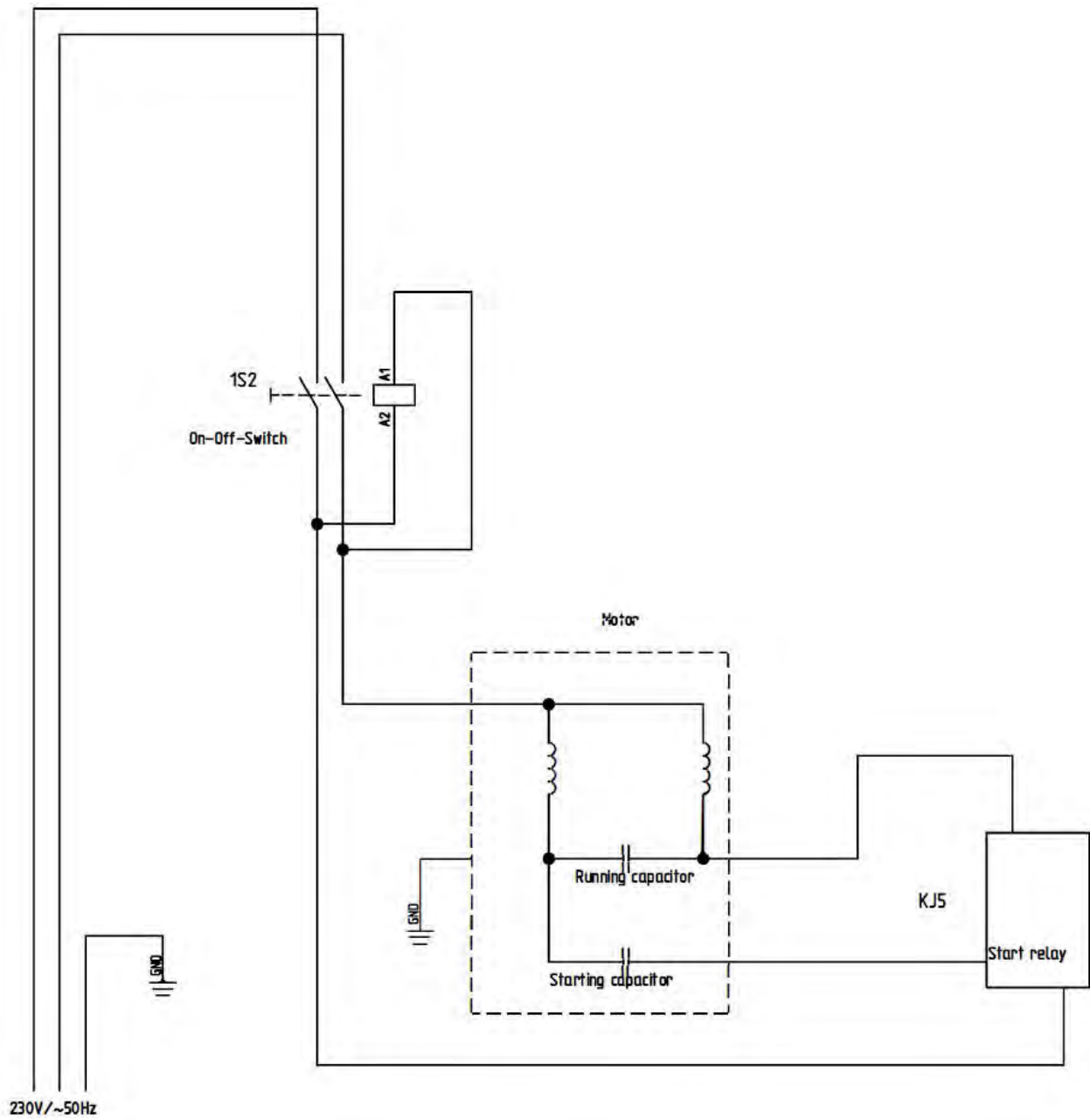


Fig. 23: Wiring diagram BTS 151

## 18 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:** Belt and disc grinding machine

**Description of the machine:** BTS 151

**Item number:** 5903151

**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.

**Relevant EU Directive:**

2014/30/EU	EMC-Directive
2011/65/EU	RoHS-Directive
2012/19/EU	WEEE-Directive

**The following harmonized standards were applied:**

DIN EN 12100:2010	Safety of machinery. General principles for design Risk assessment and risk reduction (ISO 12100:2010)
DIN EN 62841-1:2015	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements
DIN EN 55014-1:2017	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
DIN EN 55014-2:2015	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard
DIN EN 61000-3-2:2014	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16 A per phase)
DIN EN 61000-3-3:2013	Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current <= 16 A per phase and not subject to conditional connection

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

Hallstadt, 25.01.2019



Kilian Stürmer  
Managing Director



## 19 Notes

