holzkraft
Holzbearbeitungsmaschinen

Operating Instructions

Belt and Plate Sanding Machine

BTS 200

BTS 200

BTS 200

Imprint

Product identification

Belt and Plate Sanding Machine	Item number
BTS 200	5902200

Manufacturer

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Indications regarding the operating instructions

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according to DIN EN ISO 20607:2019

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Author MS/SN

Indications regarding the copyright

Contents

1 Introduction

You have made a good choice by purchasing the Belt and Disc Grinding Machine made by HOLZKRAFT.

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 your Belt and Plate Sanding Machine.

The operating instructions are part of the Belt and Plate Sanding Machine. Always keep it at the place of use of the Belt and Plate Sanding Machine. Furthermore, the local accident prevention regulations and the general safety notes are applicable for the field of application of the Belt and Plate Sanding Machine.

The illustrations in these operating instructions serve the general comprehension and may deviate from the actual type.

1.1 Copyright

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.

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

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

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

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

1.3 Limitation of liability

All 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 words indicates a possibly dangerous situation which may lead to death or severe injuries if they are not avoided.

CAUTION!

This combination of symbol and signal words indicates a possibly dangerous situation which may lead to minor or light injuries if they are 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 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 of the machine. It must implement these in form of operating manuals for the operation of the machine.
- During the entire lifetime of the 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 the 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 of the 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 expressively 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 the device which are indicated in the individual paragraphs of these instructions.

The personal protective equipment is explained in the following paragraph:

Eye protection

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

Ear protection

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

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 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.

2.6 General safety instructions

- The belt and disc grinder may only be operated and maintained by persons who have read and understood these operating instructions. The operator must be sufficiently trained in the use, setting and operation of the machine.
- Do not switch on the machine until immediately before starting machining. Do not leave the running machine unattended.
- Never open the protective covers while the belt and disc grinding machine is in operation.
- Keep the workplace and the floor in the vicinity of the belt and disc grinder 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 humidity to avoid danger by short circuit or electric shock.
- Do not use the machine in the vicinity of flammable gases, liquids and solids. There is a risk of explosion or fire due to possible flying sparks.
- Use the machine only in dry rooms or in dry surroundings and ensure that the working area is sufficiently illuminated.
- Only operate the machine with the safety devices fully and correctly attached and do not modify anything on the machine.
- Hearing protection must always be worn when working with the belt and disc grinder. Wearing loose clothing (ties, scarves, open jackets and clothing that is not tight-fitting) is prohibited. A hair net must be worn for long hair.
- Use only original spare parts.
- Inspect all workpieces for foreign objects such as nails and screws before operation.
- Do not use abrasives that are cracked or have changed shape.
- Wear suitable gloves when changing abrasives.
- Before switching on, check that all repair and adjustment tools have been removed.
- Before any maintenance and repair work, the belt and disc grinder must be secured against start-up.
- Do not use compressed air to clean the machine or to remove chips.
- All protective and safety devices must be refitted immediately after repair or maintenance has been completed.

3 Intended use

The belt and disc sanding machine is designed exclusively for sanding wood or wood-like materials and is universally applicable for schools, craft workshops, workshops and for the do-it-yourselfer.

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 belt and disc sander with materials other than wood (e.g. machining of metal).
- Use of the belt and disc grinder with parameters that are not permitted for the processing of wood.
- Operating the belt and disc sander without the functioning, intended protective devices.
- Bridging or changing 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.
- Careless handling of the belt and disc grinding machine during operation.
- Installation of spare parts and use of accessories and operating 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.

Incorrect use of the Belt and Plate Sanding Machine can lead to dangerous situations.

In case of constructive and technical changes to the Belt and Plate Sanding Machine, the company Stürmer Maschinen GmbH assumes no liability.

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 tool or workpiece, e.g. when changing tools.
- Danger of inhaling wood dust (if necessary, use an extraction system in accordance with the legal requirements).
- Risk of injury to the eye from flying parts, even with protective goggles.

4 Technical data

Model	BTS 200
Motor power (230 V/50 Hz)	1,1 kW
Motor speed	1720 min-1
Belt speed	12 m/sec.
Grinding disc-Ø	305 mm
Sanding belt dimension	152 x 1219 mm
Sanding unit swivel range	0 – 90°
Dimensions worktable plate sanding unit	315 x 155 mm
Dimensions work table Belt sanding unit	400 x 255 mm
Swivel range table	-15 – +45 °
Suction socket-Ø	2 x Ø 63 mm
max. dimension	830 x 620 x 1340 mm
Sound pressure level*	82 dB(A), poss. higher
Weight	53 kg

* The sound pressure level of this machine can exceed 82 dB (A) at the workplace. It is recommended to use an ear protection.

4.1 Environmental conditions

Model	BTS 200
Working temperature	1 °C bis 40 °C
Humidity	max. 90%
Operation height	max. 1000 m
Work environment	dry and non-flammable
Work light	> 500 LUX

4.2 Type plate

Fig. 1: Type plate BTS 200

5 Transport, packaging, storage

5.1 Delivery and transport

Delivery

Check if there are any visible transportation damages after delivery of the Belt and Plate Sanding Machine.

If the Belt and Plate Sanding Machine shows any damages, immediately inform the carrier or the distributor.

Transport

Improper transport is liable to cause accidents and may result in damage or malfunctions of the machine for which we do not assume any liability or warranty.

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

WARNING!

Serious or fatal injuries due to machine parts falling over or off the forklift, lift truck or transport vehicle. Observe the instructions and information on the transport box.

Observe the total weight of the machine. The weight of the machine is specified in the "Technical data" of the machine. When the machine is unpacked, the weight of the machine can also be read on the type plate.

Only use transport equipment and load slinging devices that can support the total weight of the machine.

WARNING!

Serious to fatal injuries due to damaged or insufficiently load-bearing hoists and load slings that tear under load. Check the hoists and load slings for sufficient load-bearing capacity and perfect condition.

Observe the accident prevention regulations of the employers' liability insurance association responsible for your company or other supervisory authorities.

Fasten the loads carefully.

General hazards during in-house transport

WARNING TIPPING DANGER

The machine may be lifted a maximum of 2cm without being secured.

Employees must be outside the danger zone, the reach of the load.

Warn employees and point out the danger to employees.

Machines may only be transported by authorized and qualified persons. When transporting, act responsibly and always consider the consequences. Refrain from daring and risky actions.

Slopes and inclines (e.g. driveways, ramps and similar) are particularly dangerous. If driving on such passages is unavoidable, special care must be taken.

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

Danger points, unevenness and faults must be inspected before transport. The removal of hazardous points, unevenness and faults at the time of transport by other employees leads to considerable hazards.

Careful planning of in-house transport is therefore essential.

Transport with a forklift / pallet truck:

Belt and Plate Sanding Machine can be transported by forklift truck or pallet truck if it is firmly mounted on a pallet.

5.2 Packaging

All used packaging materials and packaging aids of the device 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 grinder must be cleaned thoroughly before being stored in a dry, clean and frost-free environment. To prevent rust formation, all unpainted metal surfaces must be provided with suitable rust protection.

Cover the machine with a protective tarpaulin.

6 Description of the device

6.1 Image

The illustrations in these operating instructions serve the general comprehension and may deviate from the actual type.

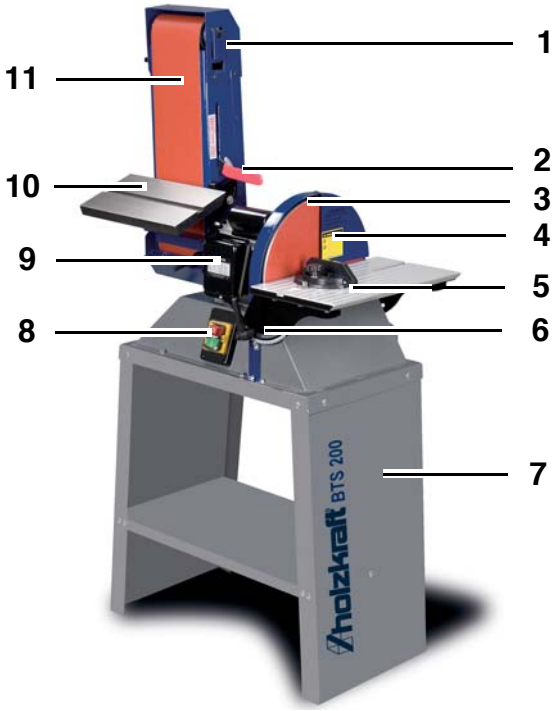

Fig. 2: Description of the device

1 Grinding arm
2 Sanding belt- tension lever
3 Grinding disc
4 Safety label
5 Work table sanding disc with bracket
6 Inclination-adjustment
7 Foundation
8 ON-/OFF-Switch
9 Type plate
10 Workpiece support
11 Sanding belt

6.2 Scope of delivery

- Mitre stop
- Sanding belt 1219 x 150 mm, K 100
- Sanding sheet Ø 300 mm, K 80

Optional accessories:

- Sanding belts
- Velcro sanding discs

7 Installation and set up

7.1 Installation

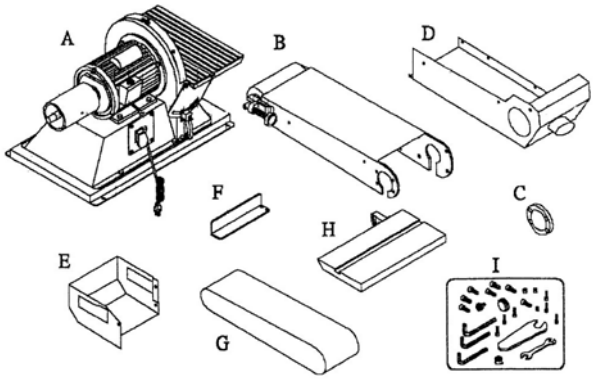

Fig. 3: Machine parts of Sanding Machine BTS 200

A Machine (Motor, workpiece support and chassis)
B Grinding arm
C Bearings cover
D Grinding arm cover
E Tension pulley cover
F Bracket
G Sanding belt
H Workpiece support
I Screws, nuts, washer, wrench

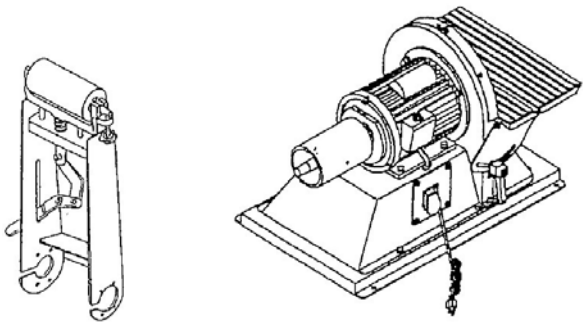

Fig. 4: Place machine for assembly

Step 1: Place the machine (A) on a stable ground.

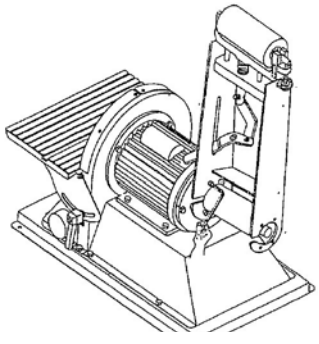

Fig. 5: Mount the sanding arm on the drive

Step 2: Mount the sanding arm on the drive by fixing it with the 4 provided screws (M8 x 20).

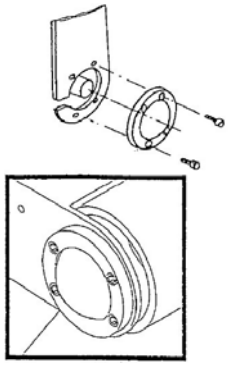

Fig. 6: Bearing-cover

Step 3: Mount the bearing cover on the driver pulley.

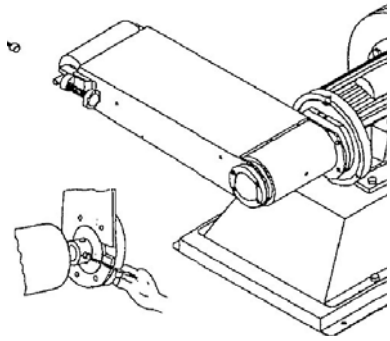

Fig. 7: Mounting of the bearing-cover

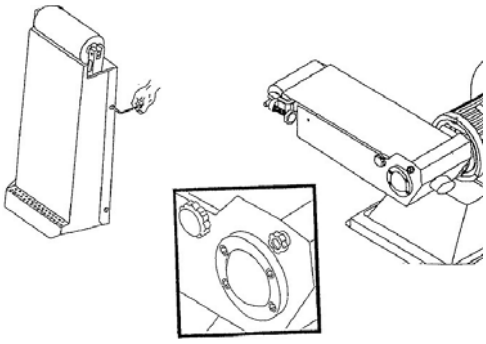

Fig. 8: Mounting of the sanding arm cover

Step 4: Fasten the cover under the grinding arm with the 4 M6x10mm provided screws (fig. 8).

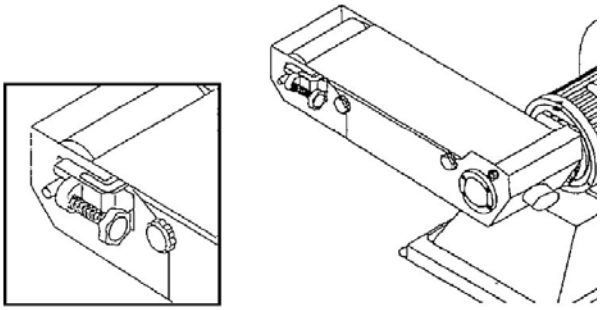

Fig. 9: Mount the cover of the tension pulley and sanding belt

Step 5: Fasten the cover of tension pulley and sanding belt.

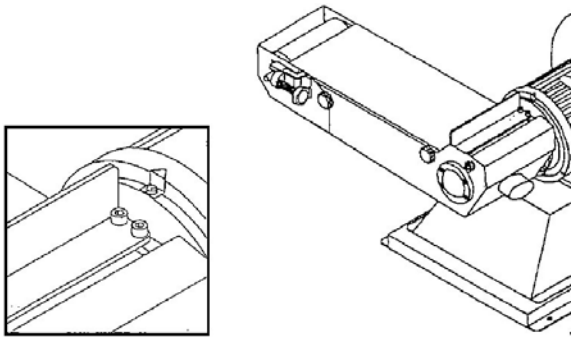

Fig. 10: Fastening of bracket.

Step 6: Fasten the bracket.

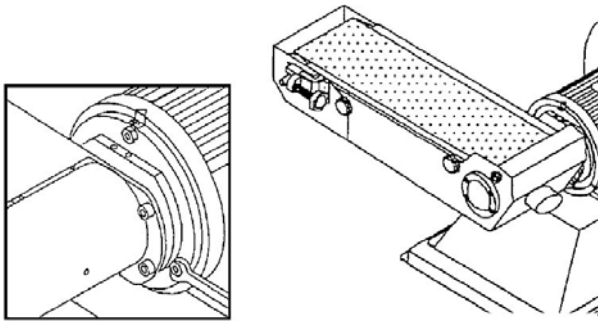

Fig. 11: Tensioning of the sanding band.

Step 7: Tension the sanding band.

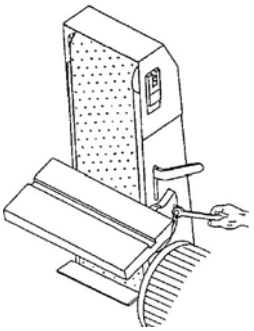

Fig. 12: Put up of the sanding arm

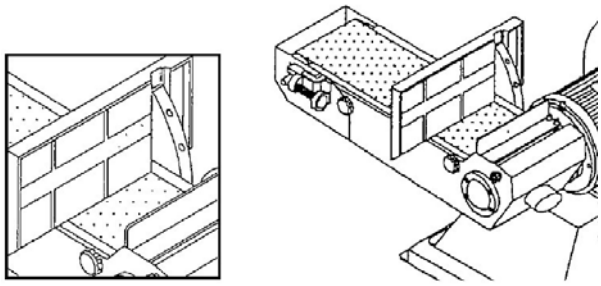

Fig. 13: Fastening of the work table

Step 8: Put up the grinding arm vertically (Fig. 12) and fasten the work table with a M8x 30 hexagon screw and a M8 x 18 washer (Fig. 13).

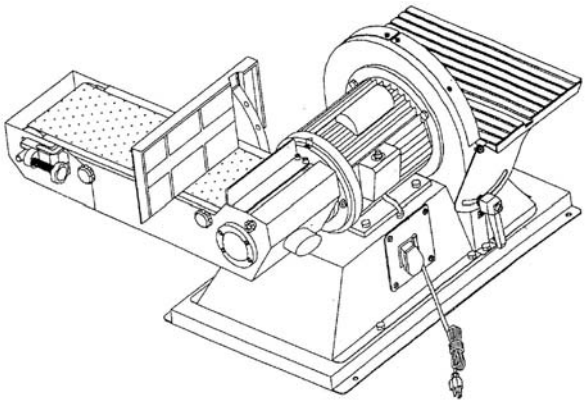

Fig. 14: Completely assembled machine

7.2 Put up

Belt and Plate Sanding Machine must be stably erected on a level and solid ground with which it has to be fixed screwed. In this way is avoided, that the machine can tip and injure somebody caused by movement. It is also avoided that vibrations and thus inaccuracies arise during workpiece mechanical processing.

There must be enough space for the operating personnel, for the transport of material as well as for adjusting and maintenance. On every side there must be at least 1m distance between the sanding machine and the wall.

NOTE!

After installation remove the grease from the blank metal parts which has been applied for protection.

- Use normal solvents for this.
- Do not use water, nitro solvents, or similar!

8 Adjustment

NOTE!

Before handling the machine, it must be disconnected from the power supply.

- Handling and working with the machine is permitted only to persons who are familiar with the handling and the mode of operation of the machine.

8.1 Swiveling the grinding arm

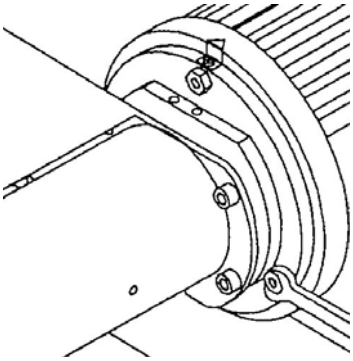

Fig. 15: Undoing the nuts

Step 1: Undo the three M8 nuts a bring the work table in desired position.

8.2 Adjusting the work table

Step 1:In order to align the work table precisely to 90 °, hold a rectangular angle on the table. Subsequently loose the clamping screw of the table swiveling system and align the table at the right angle. Afterwards tighten the clamping screw again.

NOTE!

This operation can also be repeated for aligning the work table with the grinding belt device in the vertical position.

8.3 Changing the sanding belt

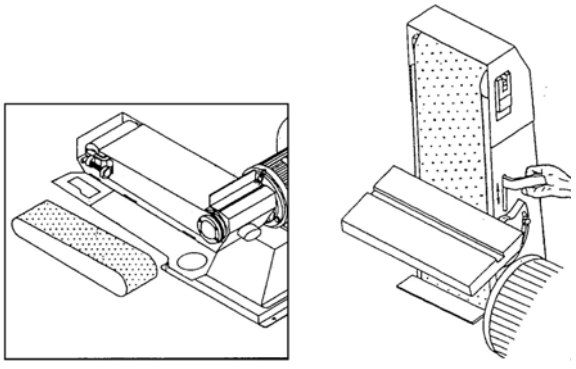

Fig. 16: Changing the sanding belt

Step 1: Open the side flap of the sanding arm cover and loose the tension of sanding belt with the tension lever (Fig. 16).

Tips and recommendations

Observe the running direction of the sanding belt.

Step 2: Replace sanding belt. Afterwards push backwards the tension lever again, so that sanding belt is tensioned.

NOTE!

The grinding unit can be swiveled slightly upwards in order to facilitate the changing of the grinding belt. Move sending belt to and fro in order that it gets easier to mount or dismount the sanding belt.

8.4 Sanding belt run

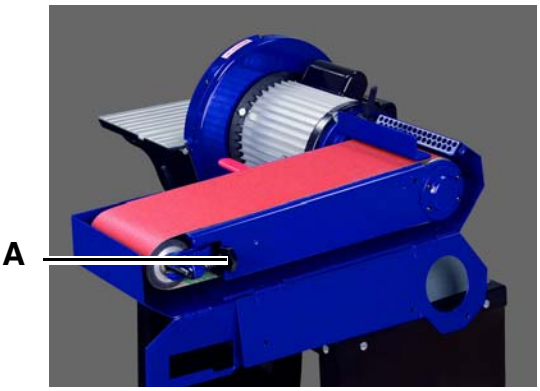

Fig. 17: Adjustment of belt run

Step1: The run of the sanding belt can be changed by the run adjusting screw A (Fig. 17).When the sanding belt itself moves towards the sanding disc, screw the adjusting screw clockwise.

When the sanding belt moves away from the sanding disc, screw the adjusting screw counterclockwise. Subsequently move the grinding belt again by hand and check for proper running characteristics. Change the running characteristics again if necessary.

8.5 Suction device connection

Tips and recommendations

The suction device for chips and dust must ensure a performance of at least 600 m^3/h with a flow velocity of 25 - 30 m/s.

NOTE!

The suction device must be switched on and off with the engine simultaneously or prompt.

Step 1: Connect the suction hoses (Diameter 63 mm) with the connecting branch for the suction device and fix them with hose clamps.

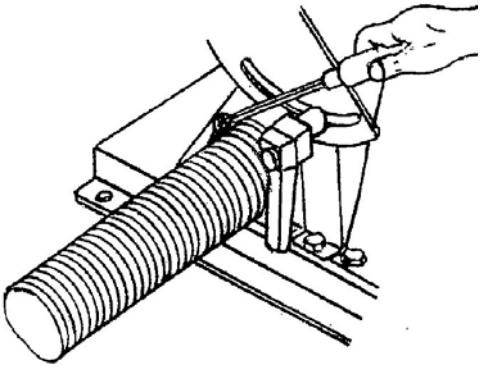

Fig. 18: Mounting of suction hoses

Step 2: Connect the other ends of the suction hoses with the suction device and fix them with connecting branches.

Step 3:Run a functional test to check the functionality of suction device.

8.6 Adjustment of the work table inclination angle

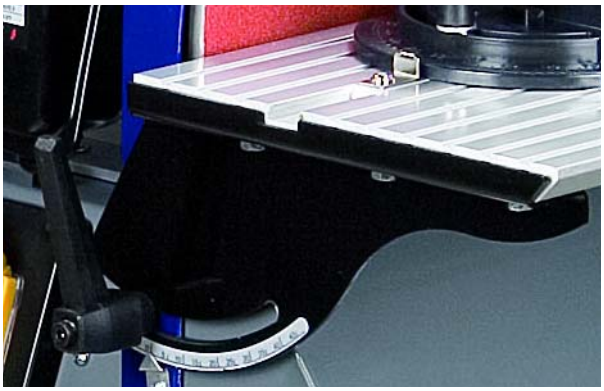

Fig. 19: Adjustment of the inclination angle

Step 1: Loose the clamp lever below work table (Fig. 19).

Step 2: Adjust the work table at the desired inclination angle (see scale) and tighten the clamp lever.

NOTE!

Make sure that the work table does not come into contact with the grinding disc.

8.7 Electrical connection

DANGER!

Danger to life from 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.

Make sure that

- the power supply has the same characteristics (voltage, mains frequency, phase position) as the motor and has a shockproof socket with properly installed and functional protective contact,
- voltage of 230 V (15A – fuse) is used,
- a cable cross-section of at least 1.5 mm² will be used for the supply line.

9 Operation

WARNING!

- The machine may only be operated by an instructed and experienced person. Other persons must keep away from the working area during operation.
- The operator must not work when under the influence of alcohol, drugs or medication.
- The operator must not work if he is overtired or suffers from diseases that impair concentration.
- There is a risk of injury to the upper limbs when working on the machine improperly.
- Before commissioning, check the electrical connection, lines and contacts.

DANGER!

The mains plug must be disconnected before carrying out any adjustment work on the machine.

Use ear protection!

Use protective glasses!

Use protective gloves!

Use protective boots!

Wear protective clothes!

Note:

Do not press to hard against the sanding disc with the material during sanding.

Make sure that the gap between the work table and the grinding disc is not too large.Particularly in the case of thin workpieces, there is a risk that the work piece will enter the gap! Since the machine does not have any clamping capability, it is important that your workpiece should rest on the work table as much as possible and be held in place! Be sure that the grinding disc is in good condition and replace worn grinding discs in good time. Only with perfect tools you can achieve a good grinding quality!

The following tests shall be carried out before each start of work:

- Check all cables and plugs.
- Check whether the work table is firmly tightened.
- Check whether the correct grinding belt with the correct grain size is installed for your machining material.
- Before starting the machine, make sure that the disc and the sanding belt are free to rotate and that they are not braked or blocked by workpieces.
- Check the tape tension.
- Check the tape run. If necessary, readjust the tape run with the adjusting screw
- Lubricate regularly according to the item Maintenance.

After End of work:

- Relax the sanding belt to avoid deformation and premature tearing of the sanding belt.

9.1 Grinding of curved workpieces

Remove the tension roller coverage to grind curved workpieces.

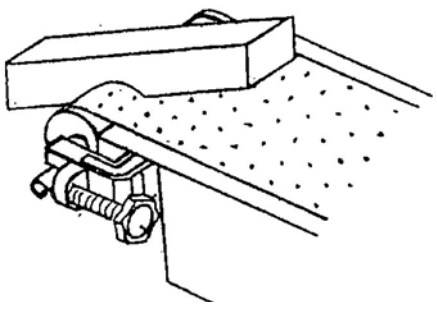

Fig. 20: Grinding of curved workpieces

9.2 Grinding at the grinding disc

When you use the disc for grinding, always grind on the directed downward rotating side of the sanding disc so that the work piece can rest securely on the support table. If you do not observe this, the workpiece may get out of control, be thrown around, and cause injury.

10 Care, maintenance and overhaul/repair

DANGER!

- Before starting cleaning and maintenance work, switch off the machine and disconnect the power plug.
- Connections and repairs may only be carried out by qualified personnel.

NOTE!

After maintenance, repair and cleaning works, check if all claddings and protective equipment are properly reassembled to the machine and that there are no more tools inside or in the working area of the device.

10.1 Care by cleaning

Suitable Use protective gloves!

NOTE!

Never use strong detergents for all cleaning work. This can lead to damage or destruction of the device.

The Belt and Plate Sanding Machine must always be kept in a clean condition.

Basically the machine should be cleaned after each use. Use a hand brush or brush to remove the chips and dust from the cooling openings of the engine when the machine is switched off. Cleaning with compressed air is not permitted since the fine chips can easily fly into the eyes and lead to injury.

ATTENTION!

- Never remove chips or grinding dust with bare hands. Danger of injuries due to sharp-edged chips.
- Never remove chips or grinding dust with a compressed air blow gun. This can lead to eye injury and may damage machine parts.

For the disposal of the chips we refer to the local regulations.

10.2 Maintenance and Repair

The following maintenance and repair work may only be performed by qualified personnel.

- Check switches and safety devices for wear or damage.
- Check abrasives for wear or damage

If the Belt and Plate Sanding Machine does not function properly, contact a specialist dealer or our customer service. The contact details can be found in chapter 1.2 Customer service.All protective and safety devices must be reassembled immediately after repair and maintenance work has been completed.

10.2.1 Function test

A functional test should be performed before each use.

Step 1: The abrasive must rotate freely and must not jam.

Step 2: Check the connecting cable for damage.

10.2.2 Suction

Check the suction unit daily to ensure that it is functioning properly. If the suction unit does not function or only functions to a limited extent, it must be repaired. Only then may the belt and disc grinder be put into operation.

10.2.3 Tape guide

Check the belt guide for correct setting at regular intervals. If the belt and disc grinder is not used for a longer period of time, the grinding belt must be relaxed.

10.2.4 Moving parts

All moving parts must be cleaned after 500 hours of operation using a soft brush.

Then apply a thin layer of oil or grease to the moving parts.

11 Troubleshooting

Fault	Possible cause	Remedy
Belt and Plate Sanding Machine doesn't work.	ON/OFF Switch is defective.	Belt and Plate Sanding Machine must be checked by an electrician and the defective parts replaced by him.
Belt and Plate Sanding Machine slows down during grinding.	Workpiece is pressed too strong towards grinding zone by the user.	Reduce contact pressure.
Low life of abrasives.	Grain size of abrasive (grinding belt or grinding disc) is too fine.	Use abrasive with more coarse grained size.
Bad grinding pattern.	Grain size of abrasive (grinding belt or grinding disc) is too coarse.	Use abrasive with more fine grained size.
Grinding angle doesn't fit.	Adjusted angle of work table or bracket is wrong.	Check the angle and re-adjust it if necessary.
Grinding disc runs optically non-round.	Sanding disc is placed eccentric.	Apply the grinding disc in the middle.
Sanding belt runs out of roller position.	Sanding belt run is wrongly adjusted.	Adjust the sanding belt run correctly.
The wood is getting dark or starts to burn during machining	1. The sanding belt is worn or added with abrasive dust. 2.Workpiece is pressed with too high contact pressure onto the grinding zone.	1. Replace the sanding belt. 2. Reduce the contact pressure.

12 Disposal, recycling of used devices

For environmental benefits it is necessary to ensure that all components of the machine are only disposed of by the provided and allowed means.

12.1Decommissioning

Immediately decommission used machines in order to avoid later misuse and endangering of the environment or of persons.

Step 1: Dispose of all environmentally hazardous operating materials of the used device.

Step 2: If required, disassemble the machine into easy-to-handle and usable components and parts.

Step 3: Supply the machine components and operating materials to the provided disposal routes.

12.2 Disposal of electrical devices

Electrical devices include numerous recyclable materials as well as environmentally hazardous components.

These components must be disposed of separately and professionally. In case of doubt, please contact your municipal waste management company.

For the recycling process, please request the assistance of a specialized waste disposal centre if required.

12.3 Disposal of lubricants

The manufacturer of the lubricant makes the disposal instructions for the used lubricants available. If applicable, ask for the product-specific data sheets.

12.4 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 endangered by improper disposal. Material recycling helps to reduce the consumption of raw materials. For more information about recycling this product, contact your local community, municipal waste management, or the shop where you purchased the product.

13 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.

Loss of warranty

The manufacturer's warranty will become null and void if non admitted spare parts are being used.

The spare parts can be purchased by the authorised dealer.

Indicate the following basic information for spare part orders:

- Type of device
- Item number
- Position number
- Quantity
- Year of manufacture
- 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.

You will find indications regarding the device type, article number and year of manufacturing on the type plate which is fixed on the device.

Example

The drive roller for the Belt and plate sanding machine BTS 200 must be ordered. The drive roller has the number 17 in the spare parts drawing 1.

By ordering spare parts, send a copy of the spare parts drawing (1) with the marked part (drive roller) and marked positon number (17) to the dealer or spare parts department and provide the following information:

- Type of machine: **Belt and Plate Sanding Machine BTS 200**
- Article number: **5902200**
- Drawing number: **1**
- Position number: **17**

The article number of your type of device is:

Belt and Plate Sanding Machine BTS 200: **5902200**

13.1 Spare parts drawing

In case of service, the following drawing shall help to identify the necessary spare parts. Send a copy of parts drawing with the marked components to your authorised dealer when ordering spare parts.

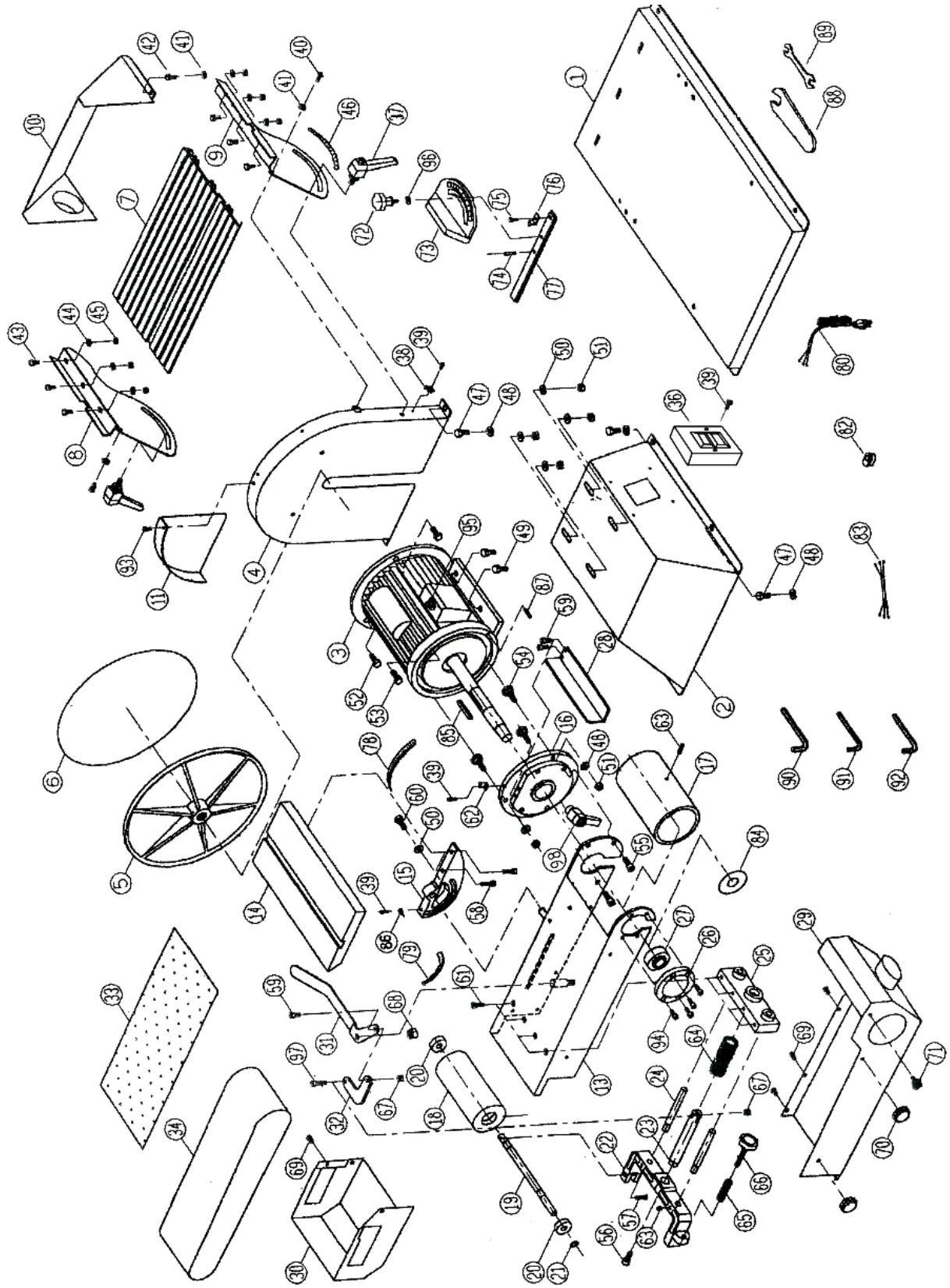

Fig. 21: Spare parts drawing BTS 200

Spare parts list

Pos.	Designation	Quantity	Size
1	Base	1	
2	Motor base	1	
3	Motor	1	1-1/2HP
4	Disc cover	1	
5	Aluminum Disc	1	
6	Sanding pager	1	
7	Table	1	
8	Left tilting turning	1	
9	Right tilting turning	1	
10	Dust hood cover	1	
11	Left safety guard	1	
12	Right safety guard	1	
13	Platen	1	
14	Cast iron table	1	
15	Tilting turning of platen	1	
16	Platen packing	1	
17	Drive roller	1	
18	Idler roller	1	
19	Idler roller shaft	1	
20	Ball bearing	2	6201ZZ
21	C-Type Ring	1	S-12
22	Idler roller bracket	1	
23	Push spindle	1	
24	Fixing spindle	1	
25	Push fixing bracket	1	
26	Ball bearing cover	1	
27	Ball bearing	1	
28	Platen table stop	1	
29	Platen cover	1	
30	Idler roller cover	1	
31	Handle	1	
32	Fixing plate	1	
33	Graphite paper	1	
34	Sanding paper	1	

Pos.	Designation	Quantity	Size
35	Turns spindle	1	
36	Switch plate	1	
37	Knob	2	
38	Pointer	1	
39	Round head screw*	7	M4x8
40	Round head screw*	2	M6x8
41	Washer*	4	M6
42	Hex. head screw*	2	M6x10
43	Hex. head screw*	6	M6x12
44	Washer*	6	6x13
45	Nut*	6	M6
46	Knob	1	
47	Hex. head screw*	6	M8x12
48	Spring washer	6	M8
49	Hex. head screw*	4	M8x25
50	Washer*	5	M8x18
51	Nut*	7	M8
52	Hex. head screw*	2	M8x16
53	Hex. head screw*	1	M8x15
54	Hex. head screw*	3	M8x18
55	Hex. head screw*	4	M8x20
56	Hex. head screw*	1	M8x25
57	Hex. head screw*	1	M5x25
58	Hex. head screw*	2	M6x25
59	Hex. head screw*	3	M6x15
60	Hex. head screw*	1	M8x30
61	Pan. head screw*	4	M6x20
62	Pointer	1	
63	Screw*	4	6x10
64	Push back spring	1	
65	Push back spring	1	
66	Screw*	1	M8x50
67	Nut*	2	M6
68	Nut*	1	M10
69	Screw*	4	M6x10

Pos.	Designation	Quantity	Size
70	Knob	2	M6x10
71	Knob	1	M6x10
72	Knob	1	M6x22
73	Miter gage	1	
74	Pin	1	4,7x20
75	Round head screw*	1	4,7x6
76	Pointer	1	
77	Miter bar	1	
78	Sticker	1	
79	Sticker	1	
80	Power cord	1	
81	Switch	1	
82	Sprain release	3	6W-4S
83	Connector	1	
84	Ball bearing cover	1	
85	Key	1	6x6x50
86	Pointer	1	
87	Screw*	2	M5x10
88	Hexagon wrench*	1	22mm
89	Hexagon wrench*	1	10-13mm
90	Hexagon wrench*	1	M6
91	Hexagon wrench*	1	M5
92	Hexagon wrench*	1	M4
93	Round head screw*	4	M5x8
94	Hexagon head screw*	4	M6x10
95	Switch tempera-ture monitoring	1	
96	Washer*	1	6.5x16x2
97	Hexagon head screw*	1	M6x30

* Standard part, available from specialist retailers

14 Circuit diagram

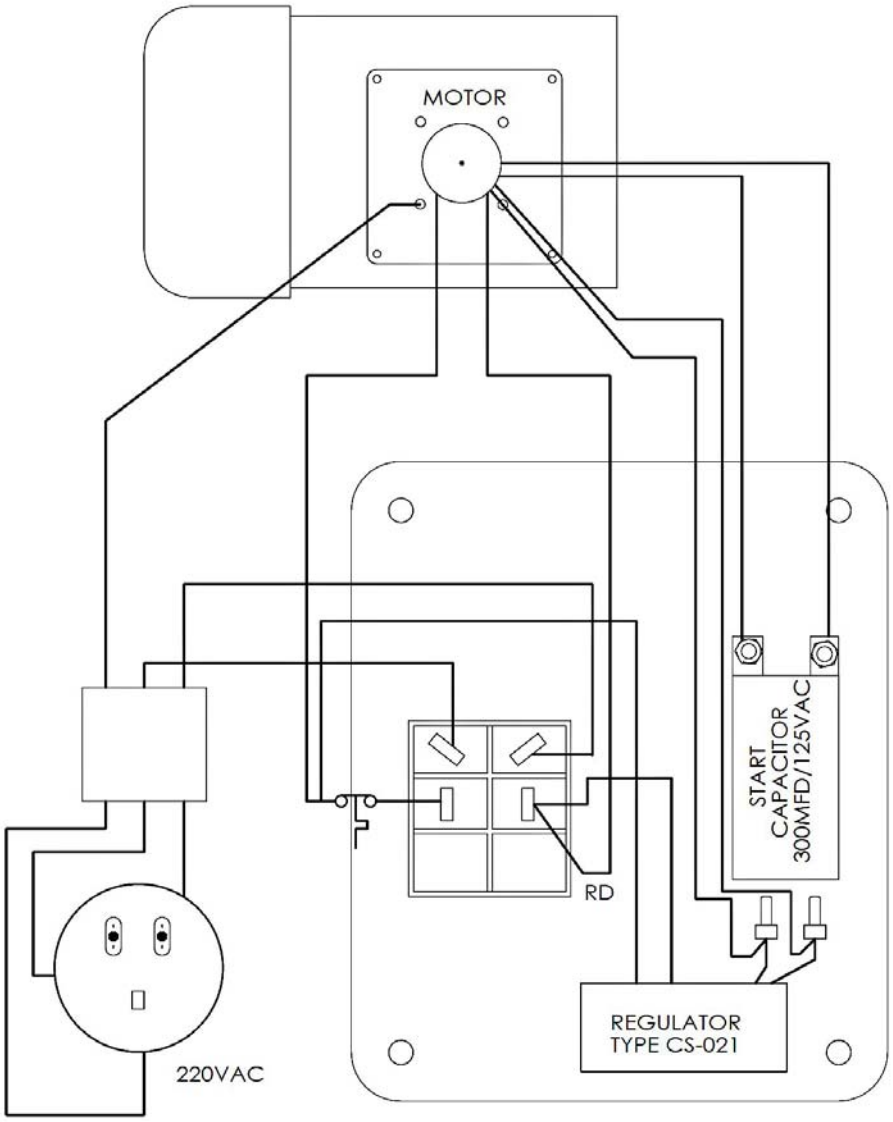

Fig. 22: Circuit diagram

15 EC Declaration of Conformity

According to machine directive 2006/42/EC Annex II 1.A

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

herewith declares that the following product

Product group: Holzkraft® Woodworking machines

Designation of the machine: BTS 200

Machine type: Belt and Plate Sanding Machine

Item number: 5902200

Serial number*: _____

Year of manufacture*: ____

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

follows all the relevant provisions of the above mentioned Directive and other Directives applied (below) - including their amendments current at the time of the declaration.

Applicable EU directives:

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

The following harmonized standards have been applied:

DIN EN 60204-1: 2019-06	Safety of machines - Basic concepts, general principles for design Part 1: General requirements (IEC 60204-1:2005)
DIN EN ISO 12100: 2011	Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010)

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

Hallstadt, 26.05.2021

Kilian Stürmer
General Manager

CE


stürmer
OPTIMUM