

# Instruction Manual

— JIG SAW

— DKS 504 Vario



DKS 504 Vario

DKS 504 VARIO

## Imprint

### Product identification

JIG SAW	Item Number
DKS 504 Vario	5902504

### Manufacturer

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### Information about the operating instructions

Original operating instructions

Published: 02.04.2019  
 Version: 1.02  
 Language: English

Author: FL

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## 1 Introduction

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

Carefully read the operating instructions prior to commissioning.

They describe correct commissioning, intended use and safe as well as efficient operation and maintenance of the Jig Saw.

The operating instructions form part of the Jig Saw. Always keep them at the Jig Saw's location of use. Please also observe the local accident prevention regulations and general safety regulations for the use of the Jig Saw.

### 1.1 Copyright

The contents of these operating instructions are protected by copyright. Their use is permitted within the context of using the Jig Saw. Any further use shall not be permitted without written consent by the manufacturer.

To protect our products, we register our rights to our brands, patents and designs where possible in each individual case. We take strong action against any violation of our intellectual property.

### 1.2 Customer service

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

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

**Repair service:**  
**Fax:** 0049(0)951 96555-111  
**E-Mail:** service@stuermer-maschinen.de  
**Internet:** www.holzstar.de

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

Please submit any information and experiences you make during application of the machine as these may be valuable for product improvements.

## 1.3 Disclaimer

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

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

- Failure to comply with the operation manual,
- Unintended use
- Deployment of untrained staff
- Conversions at one's own responsibility
- Technical modifications
- Use of unauthorised spare parts

The actual scope of delivery may deviate from the descriptions and illustrations in this document as a result of special variants, optional extras or recent, technical modifications. The obligations defined in the supply contract shall apply in addition to the general terms and conditions and the manufacturer's general terms and conditions as well as the statutory regulations valid at the time of the conclusion of the contract.

## 2 Safety

This section provides an overview of all important safety packages for personal protection as well as safe and reliable operation. The individual sections contain additional, task-specific safety information.

### 2.1 Legend of symbols

#### Safety instructions

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



#### **DANGER!**

This combination of symbol and signal term indicates a potentially dangerous situation which may cause death or serious injury if not averted.



#### **WARNING!**

This combination of symbol and signal term indicates an immediate dangerous situation which may cause death or serious injury if not averted.



**ATTENTION!**

This combination of symbol and signal term indicates a potentially hazardous situation which may cause minor or light injuries if it is not averted.



**IMPORTANT!**

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



**NOTE!**

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

**Tips and recommendations**



**Tips and recommendations**

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

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

**2.2 Operator responsibility**

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

**Obligations of the operator:**

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

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

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

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

**2.3 Operating staff qualification**

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



**WARNING!**

**Risk from inadequately qualified persons!**

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

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

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

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

### Operating staff:

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

### Qualified electrician:

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

### Specialist staff:

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

### Manufacturer:

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

## 2.4 Personal protective equipment

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

The personal protective equipment is described in the following section:



### Ear and head protection

The ear protection protects against hearing damage caused by noise. The industrial helmet protects the head against falling objects and bumping against fixed objects.



### Eye protection

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



### Protective gloves

Protective gloves protect the hands from components with sharp objects as well as friction, abrasion, and deep-cut injuries.



### Respiratory Protection

The respiratory protection is used to protect the respiratory tract and the lungs before the intake of dust particles.



### Safety boots

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



### Protective clothing

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

## 2.5 Safety labels on the Jig Saw

The following safety labels and instructions are attached to the Jig Saw s (Fig. 1) and must be observed.



Fig. 1: Safety labels

If safety labels on the machine are damaged or missing, this can cause errors, personal injury and material damage. The safety symbols attached to the machine must not be removed. Damaged safety symbols must be replaced immediately.

As soon as the signs are not clearly visible and comprehensible at first glance, the machine must be stopped until new signs have been attached.

## 2.6 General safety aspects

### Note the following:

- Keep the work area clean and well lit.
- Do not use power tools in potentially explosive atmospheres, such as near flammable liquids, gases or dust. Power tools generate sparks that can ignite dust or fumes.
- Keep children and unauthorized personnel away from the power tool. Distractions can cause you to lose control.

- Do not expose the power tool to rain or moisture. The penetration of water into a power tool increases the risk of electric shock.
- Never change the power plug in any way. Do not use adapter plugs with grounded power tools.
- When operating a power tool outdoors, use an extension cord that is suitable for outdoor use. The use of a cable suitable for outdoor use reduces the risk of electric shock.
- Never use the cable to carry or pull the power tool. Keep the cable away from heat, oil, sharp edges or moving parts. Damaged or entangled cables increase the risk of electric shock.
- Do not use a power tool when you are tired or under the influence of drugs, alcohol or medication. A moment of carelessness when operating power tools can cause injury.
- Keep the right balance and the right balance at all times. This allows better control of the power tool in unexpected situations.
- Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothing, jewelry or long hair can get caught in moving parts.
- Use safety equipment. Always wear eye protection. Safety equipment such as dust mask, non-slip safety shoes, hard hat or hearing protector, which are used for suitable conditions.
- Wear safety goggles to protect against flying wood chips and sawdust. In many cases, a full shield provides even better protection.
- Wear a dust mask to protect your lungs from toxic sawdust.
- Certain types of wood and wood products produce harmful dust emissions when processed. Only use your machine in a well-ventilated area and use a suction device.
- Avoid accidentally starting the device. Make sure that the switch is in the off position before connecting the device.
- The scroll saw must be firmly bolted to a workbench. If the saw moves during certain operations, secure the workbench to the floor.
- This scroll saw is intended for indoor use only.
- Do not cut pieces of material that are too small to be held by hand.
- Before switching on the saw, empty the worktable of all objects except the workpiece (tools, waste, rulers, etc.).
- Remove all adjustment keys before turning on the power tool. A wrench or key attached to a rotating part of the power tool may cause injury.
- Make sure that the teeth of the blades point down to the table and that the blade tension is adjusted correctly.
- Do not cut the workpiece too fast. Only feed as fast as the blade cuts.
- Keep your fingers away from the blade. Use a push stick as you approach the end of the cut.
- Be careful when cutting a workpiece that is irregular in cross section. For example, molded parts must lie flat on the table and must not be "deformed" when cutting.
- Turn off the saw and make sure that the saw blade has come to a complete stop before removing sawdust or debris from the table or moving away from the work area.
- Remove the workpiece to be machined only after the saw blade has come to a complete standstill.
- Make sure there are no nails or foreign objects in the part to be sawn.
- To avoid injury and damage to the unit, do not cut multiple workpieces at once.
- Be especially careful with very large, small or irregularly shaped workpieces.
- Disconnect the power plug from the mains before any adjustments or maintenance.
- DO NOT operate the machine with the saw blade guard removed.
- Be sure to use the correct blade size and type for the material.
- Use ONLY approved replacement saw blades. Contact your HOLZSTAR dealer. Using inferior blades can increase the risk of injury.
- Only have your power tool repaired by qualified service personnel, using only identical replacement parts. This ensures that the safety of the power tool is maintained.
- When connecting the accessory, make sure that you disconnect it from the saw after use. If the accessories are not disconnected, there is a risk of misplacement by turning the tool.

### 3 Intended Use

The JIG SAW DKS 504 Vario is used to saw edged wood or wood-like workpieces, plastics and non-ferrous metals. The scroll saw cuts softwood, plastic and non-ferrous metals. In addition, the machine can be easily used for separating Plexiglas, fiberglass, foam, rubber, leather and cork. Round materials may only be cut with suitable holding devices. Only saw blades suitable for the machine may be used. The use of cutting discs of all kinds is prohibited. It is suitable for private use, 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.



**DANGER!**

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



**WARNING!**

**Danger in case of misuse!**

Misuse of the JIG SAW can lead to dangerous situations.

- Only operate the scroll saw 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 scroll saw in a technically perfect condition.
- Never work on several workpieces at the same time.

For structural and technical changes to the JIG SAW, the company Stürmer Maschinen GmbH assumes no liability.

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

### 4 Technical Data

#### 4.1 Table

Model	DKS 504 Vario
Length	630 mm
Width / Depth	320 mm
Height	380 mm
Weight	12 kg
Supply voltage	230 V
Table length	414 mm
Table width	254 mm
Extraction duct	31 / 35 mm
Saw blade length	133 mm
Stroke speed	550-1600 min <sup>-1</sup>
Max. cutting height at 90°	52 mm
Max. cutting height at +45°	20 mm
Power output	42 W
Power consumption	0,09 kW
Nominal mode drive motor	S2 30 minutes
Rotational speed	1650-4800 rpm
Chuck Ø	3,1 mm

**Duty cycle:**

The duty cycle S2 30 min (short-time operation) states that the engine may be permanently loaded for 30 minutes. Otherwise he would heat up unacceptably. During the break, the engine cools down again to its starting temperature.

**Noise and vibration:**



**Wear ear protection!**

The effect of noise can cause hearing loss. Minimize noise and vibration!

- Use only flawless devices.
- Clean and service the device regularly.
- Adapt the method of operation to the device.
- Do not overload the device.
- If necessary, have the device checked.
- Turn off the power when not in use.

## 4.2 Type plate



Fig. 2: Type plate DKS 504 Vario

## 5 Transport, packaging, storage

### 5.1 Transport

Check the Jig Saw for visible transport damage upon delivery. In case of visible damage to the Jig Saw, immediately notify the carrier or your retailer.

### 5.2 Packaging

All used packaging materials and packaging aids of the Jig Saw 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 Jig Saw must be stored thoroughly cleaned in a dry, clean and frost-free environment. Cover the machine with a protective tarpaulin.

## 6 Description of the machine

### 6.1 Illustration

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

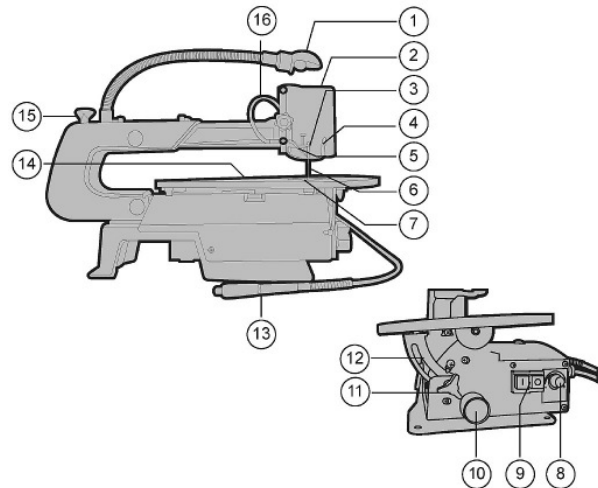


Fig. 3: JIG SAW

- 1 Adjustable lamp
- 2 Blade guard
- 3 Top blade holder
- 4 Workpiece pressure plate
- 5 Sawdust blower nozzle
- 6 Blade
- 7 Table insert
- 8 Blade speed regulator
- 9 On/Off switch
- 10 Dust extraction outlet
- 11 Table tilt lock knob
- 12 Angle adjustment scale
- 13 Hand tool
- 14 Saw table
- 15 Blade tension knob
- 16 Hose (sawdust blower)

### 6.2 Scope of supply

- Universal grinder without tools
- Saw blade 133 x 3 x 0.3 mm, T18
- Saw blade 133 x 3 x 0.3 mm, T15
- Instruction Manual



## 6.3 Strokes and saw blade selection

Different types of saw blades can be used with the machine. The saw blade strength and amount of teeth/inch (teeth division) depends on the radius to be cut. The narrower the radius to be cut, the narrower the saw blade must be and the amount of strokes must be also reduced accordingly.

### Reference values:

Teeth/inch

Approx. 10 t.p.i. wood from 6 mm to approx. 50 mm

Approx. 18 ZpZ fine sawing work, wood up to approx. 6 mm

Approx. 25 ZpZ plastic, GRP, non-ferrous metals, plexiglass

### Selecting rotations:

The harder the material, the smaller the number of strokes.

400–600 strokes/min. For narrow radii and thin material from 0.25 to 0.3 mm

600–1200 strokes/min. For wood and plastic and extremely thin cuts with material strength from 0.25 to 1.3 mm

1200–1600 strokes/min. For cutting hard and soft wood from 0.5 to 5.0 mm in thickness. Also for plastic, paper, aluminium, styrofoam, rubber, leather, cork

## 6.4 Optional accessories

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

- Pin saw blades 135 x 3,0 x 0,25mm  
**Item number:** 5911628
- Pin saw blades 135 x 6,0 x 0,4mm  
**Item number:** 5911660
- Pin saw blades 135 x 6,0 x 0,4mm  
**Item number:** 5911661
- Tool set 103-part in wooden case  
**Item number:** 5912504

## 7 Installation

### 7.1 Requirements for the place of installation

Remove the jig saw from its packaging and remove any protective film. Do not set up or operate the machine 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.

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

### 7.2 Setting up the JIG SAW



#### NOTE!

To reduce noise, a rubber interlayer can be placed between the machine and the workbench. This effectively prevents vibration and noise.



#### CAUTION!

Risk of injury due to a machine that is not stably erected!

Check the stability of the machine after placing it on stable ground.



#### ATTENTION!

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



#### DANGER!

Do not overtighten the screws securing the base plate. The base plate must not be warped.



#### Wear protective gloves!



#### Wear protective clothing!



#### Wear safety shoes!

The Jig saw is already mostly delivered assembled. Only a few parts have to be mounted after delivery.

To set up the saw is a workbench made of solid wood. A noise reducing foam pad is not included with the saw. Such a base is recommended in order to minimize vibration and noise pollution.

The tools and hardware needed to mount on a workbench were not supplied with the saw.

**Use the following equipment:**

- 4 Hexagon bolts M8
- 4 Washers Ø 8 mm
- 8 Hex nuts M8

The following steps will make the machine operational:

Step 1: After unpacking, park the machine at the desired location.

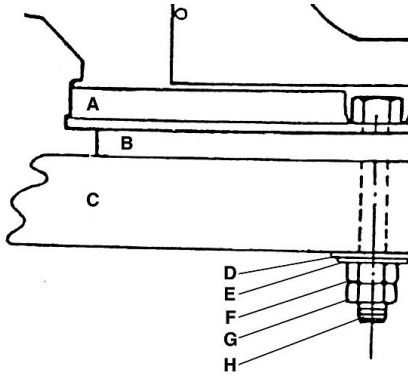


Fig. 4: Mounting on a workbench

- A: Base plate of the saw
- B: Foam rubber underlay
- C: Workbench
- D: Flat gasket
- E: Washer
- F: Hex nut
- G: Locknut
- H: Hex screw

Step 2: Screw the base plate of the machine over the holes with the work surface. Do not over tighten the screws so that the rubber mat absorbs any vibration.

**7.3 Selection of the correct saw blade**

As a rule, choose narrow blades for complicated curved cuts and wide blades for straight and large curved cuts. Circular saw blades wear out and must be replaced regularly to achieve optimum cutting results. Saw blades generally become dull after 1/2 to 2 hours, depending on the type of material and the working speed. The best results are achieved with pieces that are less than 25 mm thick.

If you are cutting workpieces that are thicker than 25 mm, you must insert the blade into the workpiece very slowly. Be especially careful not to bend or twist the blade when cutting.

**7.4 Inserting Pinless Blades**

The adapter allows you to use saw blades with no locating pins at both ends.

Step 1: Switch off the machine and disconnect the power plug from the socket.

Step 2: Adjust the locking screw on the adapter until it covers approximately half of the hole when viewed from the top.

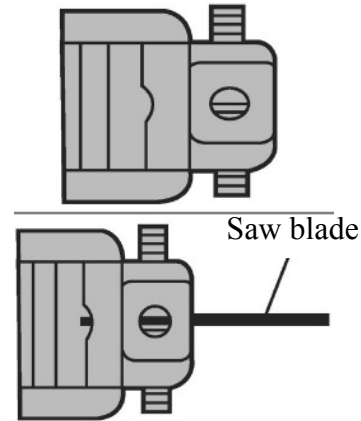


Fig. 5: Insert saw blade adapter

Step 3: Slightly loosen the other locking screw to push an adapter onto each end of the blade.

Step 4: Insert the knife and adapters into the machine (Fig.6). Now set the knife to the correct length.

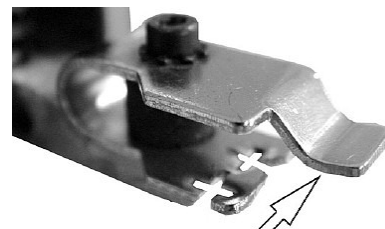


Fig. 6: Insert pinless blades

**Cut right angle with the pinless saw blade**

Cut from the side of the saw as soon as your workpiece has a length of more than 405 mm. With the blade positioned, the table must always be in the 0° position.

Remove both setscrews from each blade adapter and insert them into the opposite holes of the blade adapter perpendicular to the adjustment pin.

## 7.5 Clamp the saw blade

Turning the saw blade tension handle (Fig.7) counter-clockwise decreases (loosens) the blade tension.

Turning the saw blade tension handle (Fig.7) clockwise increases (tightens) the blade tension.



Fig. 7: Clamping the saw blade



### NOTE!

Do not overstretch the blade. This will help extend the life of the saw blade.



### NOTE!

If the tension is too low, the blade may bend or break.

## 7.6 Tilt the saw table

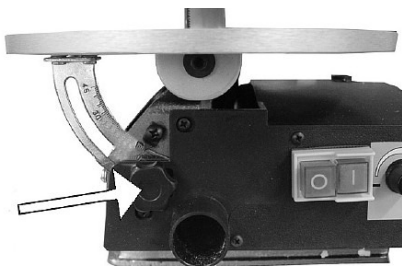


Fig. 8: Tilt the saw table

Step 1: Loosen the clamping screw (Fig.8).

Step 2: Tilt the saw table to the left until the pointer indicates the desired angle on the graduated scale. The worktable can be tilted from 0° to 45° to the left.



### DANGER!

If precision work is required, a trial cut should be made and the grade adjusted if necessary.

## 7.7 Mount the saw blade guard and workpiece holder



### DANGER!

Before any maintenance and conversion work on the Jig saw, the mains plug must be unplugged.

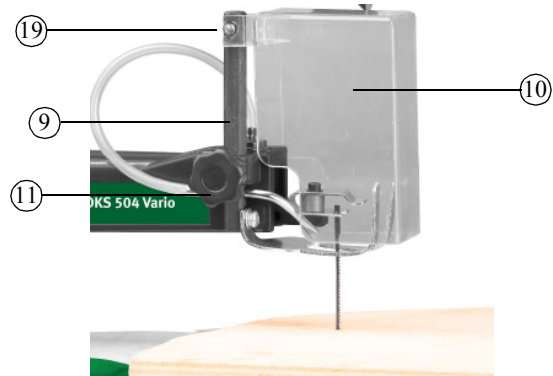


Fig. 9: Mounting the saw blade protection

Step 1: Insert the workpiece hold-down (9) into the hole on the boom (19) and fasten with the clamping screw (11).

Step 2: Slide the saw blade guard (10) onto the workpiece hold down (9).

Step 3: Guide the screw through the hole of the workpiece holder (9) and the saw blade guard (10) and screw tight.

Step 4: With the clamping screw (11), the saw blade guard can be fixed together with the workpiece holder at different heights.

### Install the saw blade

Step 1: Turn off the power and disconnect the power plug from the power outlet.

Step 2: Remove the table cover (Fig. 10).

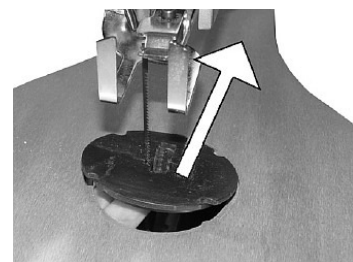


Fig. 10: Open the cover

Step 3: Fold the saw blade guard up and loosen the saw blade (Fig.11).

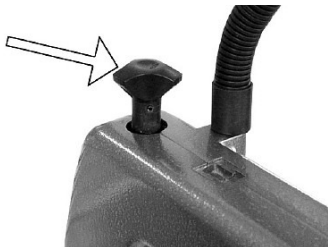


Fig. 11: Loosen the saw blade

Step 4: Press the upper pendulum arm down, then hook the saw blade to the blade holder.

The blade holder has two notches:

Notch 1: For cutting with the upper saw arm.

Notch 2: To cut at right angles with the Upper saw arm.

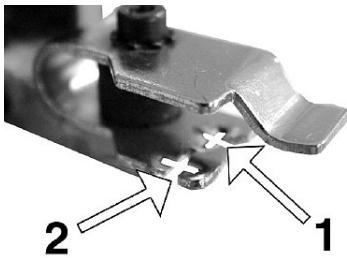


Fig. 12: Insert the saw blade



**DANGER!**

If you are using pin-less blades, hook the blade adapter into the front of the blade holder (Fig.13).

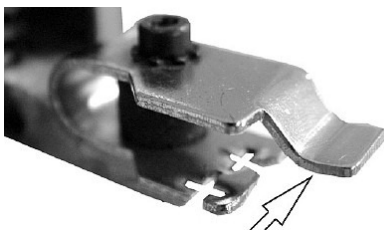


Fig. 13: Insert pinless blade

Step 5: Tighten the saw blade (Fig. 11) and fold down the saw blade guard.



**DANGER!**

Always insert the saw blade so that the teeth point in the direction of the saw table.

### Change the saw blade

Step 1: Turn off the power and disconnect the power plug from the power outlet.

Step 2: Remove the table cover (Fig. 10).

Step 3: Fold the saw blade guard up and relax the saw blade (Fig.11).

Step 4: Press the upper blade holder down. The saw blade from the lower blade holder far away and upwards.

### 7.8 Align saw blade and saw table



**DANGER!**

To avoid an accident, switch off the machine beforehand and disconnect the power plug.

Step 1: Turn off the power and disconnect the power plug from the power outlet.

Step 2: Loosen the clamping screw of the workpiece holder and push the workpiece holder upwards. Then tighten the clamping screw.

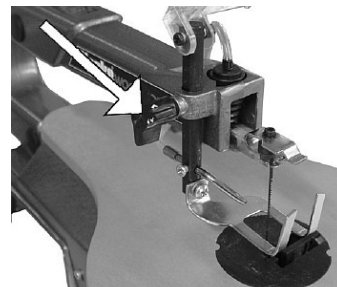


Fig. 14: Position workpiece hold down

Step 3: Release the table lock knob (Fig.15) and tilt the table until it is approximately at right angles to the blade.

Step 4: Place a small angle on the saw table next to the saw blade and lock the table at 90 ° to the angle.

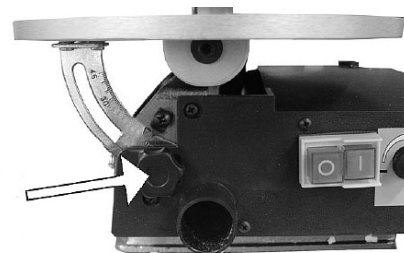


Fig. 15: Tilt the saw table

Step 5: Retighten the table lock using the handle.

## 7.9 Setting the scale

Step 1: Turn off the power and disconnect the power plug from the power outlet.

Step 2: Loosen the locking screw (Fig. 16) that fixes the scale display. Move the indicator to the 0 ° mark and tighten the screw.



### **DANGER!**

Remember that the scale is only a guide and is not reliable for accuracy. Make cuts with the piece of waste to make sure the angle settings are correct.

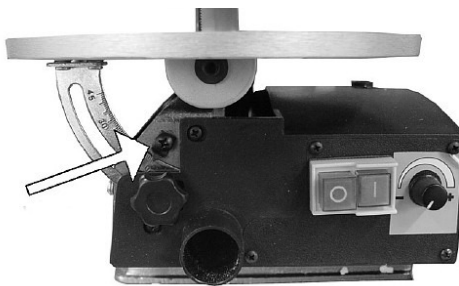


Fig. 16: Setting the scale

Step 3: Lower the workpiece hold down so that it is resting on the workpiece and secure it.

## 7.10 Electrical connection



### **DANGER!**

#### **Danger of electrocution!**

Contact with live components may cause mortal danger. Switched on electrical components can cause uncontrolled movements and lead to serious injuries.



### **DANGER!**

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

When making electrical connections, make sure that the characteristics (voltage, mains frequency) comply with the information given on the rating plate. We strongly recommend that this device be connected to the mains via a residual current device (RCD).

Step 1: Check that the JIG SAW is off.

Step 2: Connect the machine to the mains.

## 8 Operation of the Jig Saw



### **DANGER!**

#### **Danger of electrocution!**

Contact with live components may cause mortal danger. Switched on electrical components can cause uncontrolled movements and lead to serious injuries.

- Disconnect the power before starting any adjustments to the machine.



### **WARNING!**

#### **Risk of injury!**

There is a risk of injury to the operator and other persons if they do not adhere to the following rules.

- The JIG SAW may only be operated by a trained person.
- The operator may not work while under the influence of alcohol, drugs or medication.
- The operator must not work when he is tired or suffering from concentration-impairing illnesses.
- The JIG SAW may only be operated by one person.



### **ATTENTION!**

#### **Risk of crushing!**

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



### **DANGER!**

- Harmful emissions of wood dust when used indoors.
- Danger due to backlash of the workpiece.
- Danger due to ejection of branch parts and workpiece parts



### **DANGER!**

- Protect the machine against moisture (danger of short circuit!)
- Do not overload the machine! You work better and safer in the specified performance range.
- Never use blunt or damaged saw blades. Check that the appropriate saw blade is used.



**DANGER!**

- Before you start cutting, turn on the saw and hear the sound that the machine produces. If you notice strong vibrations or unusual noises, immediately stop the saw and unplug the power cord.



**Wear ear protection!**



**Wear safety glasses!**



**Wear respiratory protection!**



**Wear safety shoes!**



**Wear protective clothing!**

**Notes for sawing**

The saw does not cut wood automatically. The user allows cutting by guiding the wood into the moving saw blade.

The teeth cut the wood only on the downstroke.

The wood must be slowly guided into the saw blade, as the teeth of the saw blade are very small.

Every person who wants to work with the saw needs a certain amount of study time. During this time, some leaves will surely break.

When cutting thicker wood, special care should be taken not to bend or twist the saw blade. This increases the service life of the saw blade.

**8.1 Workflow**

- Step 1: Check that the JIG SAW is turned off and the power plug is unplugged.
- Step 2: Check that all covers and safety devices are properly installed.
- Step 3: The workpiece on foreign objects such as e.g. Check nails or screws and remove if necessary.
- Step 4: Select saw blade, clamp and check the moving parts for ease of movement.

Step 5: Adjust the tilt angle if necessary.

Step 6: Adjust the position of the workpiece hold down, blower and lighting. The blower is preset to direct the air to the most effective point on the cut line. Make sure the pressure plate is set to secure the workpiece and direct air onto the cutting surface.

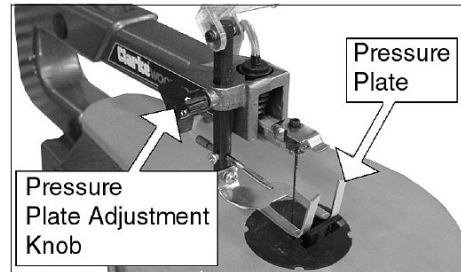


Fig. 17: Adjust the sawdust blower

Step 7: Connect exhaust (eg vacuum cleaner) to exhaust and switch on.

Step 8: Switch on the saw by pressing the green START button (Fig. 18).

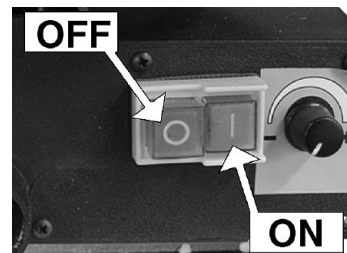


Fig. 18: ON / OFF Switch



**DANGER!**

The machine is equipped with a safety switch against reconnection after voltage drop.

Step 9: Set the desired speed (number of strokes) on the speed controller - depending on the material to be cut. Turn the speed selector clockwise to increase the number of strokes per minute. Turn the speed selector counterclockwise to decrease the number of strokes per minute.

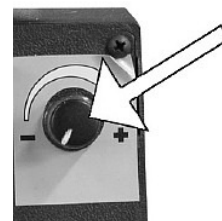


Fig. 19: Speed control

Step 10: Guide the workpiece against the saw blade.

Step 11: After finishing sawing, switch off the device with the red STOP button, switch off the suction and disconnect the mains plug.

When pulling out the workpiece, the blade can be misdiagnosed on average. This is usually caused by sawdust which clogs the kerf. If that happens, do the following:

- Set the switch to OFF.
- Wait for the saw to stop and unplug the power cord.
- Remove the blade and the workpiece.



**NOTE!**

The scroll saw has an attached work light which lights up automatically as soon as the scroll saw is switched on. The light arm can be bent to bring the light in a suitable position.

### 8.2 Carry out internal cuts

A feature of this scroll saw is the ability to make internal cuts in a panel without damaging the exterior or perimeter of the panel.



**DANGER!**

Before adjusting the device and before removing or replacing the saw blade, the device must be switched off and the mains plug must be disconnected!

Step 1: Check that the machine is switched off and the power plug is unplugged.

Step 2: Remove the saw blade.

Step 3: Drill a hole in the piece to be cut out inside the workpiece.

Step 4: Place the workpiece with the hole over the access hole on the saw table.

Step 5: Guide the saw blade through the hole in the workpiece, clamp into the holder and adjust the blade tension.

Step 6: Carry out the cut.

Step 7: After completing the internal cuts, remove the saw blade from the blade holders and remove the workpiece from the table.

### 8.3 Cutting several workpieces



**DANGER!**

To avoid injury, do not cut multiple workpieces that are lying on top of each other if they are not connected.

The scroll saw can be used to cut several identical shapes. Several workpieces can be stacked on top of each other and must be secured together prior to cutting.

The stacked parts must be attached to each other so that they can be handled as a single workpiece on the table.

### 8.4 Connecting a separate tool



**DANGER!**

As soon as the tool is connected to the scroll saw and the scroll saw is switched on, the tool also switches on automatically. Therefore, make sure to hold the tool firmly and securely when turning on the scroll saw.

Step 1: Turn off the power and disconnect the power plug from the power outlet.

Step 2: Remove the cap of the separate tool connector on the scroll saw.

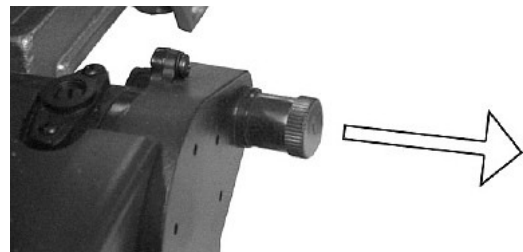


Fig. 20: Remove the cover

Step 3: Connect the connection of the tool to the connection of the scroll saw and tighten.

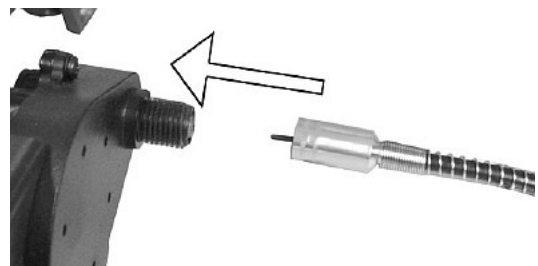


Fig. 21: Connect the worktool



**NOTE!**

First insert the shaft of the connection cable into the connection to the Jig saw and then tighten the connection.



**DANGER!**

Disconnect the separate tool immediately after use from the scroll saw, otherwise injury to the operator.

### 8.5 Change the tools

Step 1: Loosen the screw in the hole in the handle.

Step 2: Turn the clamping nut until the spindle lock engages and the shaft does not turn.

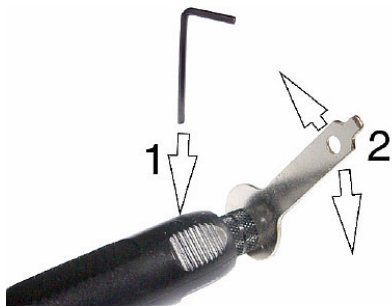


Fig. 22: Change the tool

Step 3: Insert the required tool and tighten the collet with the supplied key.

Step 4: Remove the tool.

### 8.6 Working with the hand tool



**DANGER!**

To avoid the risk of injury, make sure that the blade guard is mounted over the saw blade when using the hand tool.

**Observe the following notes when working with the hand tool:**

- Once the tool is connected to the scroll saw and the scroll saw is turned on, the tool also turns on. Therefore, make sure to hold the tool firmly and securely when turning on the scroll saw.
- Secure the workpiece which you are working on to avoid slippage.
- Hold the tool firmly in your hand and always at a safe distance from other persons.
- Keep children away from the scroll saw and hand tools.
- Always aim the tool away from your body.
- The slow speed is best for polishing, delicate wood carving or working on fragile model parts.
- A high speed is suitable for operation on hardwoods, metals and glass, eg. As carving, milling, molding, cutting and drilling.
- Only put the hand tool out of hand as soon as the tool stops turning.
- Disconnect the separate tool immediately after use from the scroll saw, otherwise injury to the operator.



## 9 Care, maintenance and overhaul/re-pair



### DANGER!

#### Electric shock is life-threatening!

There is a danger of life in case of contact with current running through components. Electrical components that are on can cause uncontrolled movements and lead to the most serious injuries.

- Always disconnect the mains plug before you start cleaning and maintenance works.
- Connections and repairs of the electrical equipment may only be carried out by specialized electrical staff.

### 9.1 Care after working



#### Use protective gloves!



### NOTE!

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

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

Step 2: Empty and clean the suction device.

Step 3: Clean the machine from chips and sawdust with compressed air (Attention: wear safety goggles and a dust mask!) And / or with a brush or a dry cloth.



### DANGER!

Do not remove chips with bare hands. You can suffer a cut injury through chips and tools!

Step 4: Periodically clean the unit with a dry cloth and mild detergent.

Step 5: Spray or oil all unpainted metal surfaces with a little anti-rust spray.

Step 6: Lubricate the bearings of the pulleys regularly, but at the latest after about 25-30 operating hours, with a high-quality engine grease.

Step 7: Check the power cord regularly for damage. If the cable is damaged, have it replaced by a qualified technician.

## 9.2 Maintenance and repair

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

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

All protective and safety equipment must be reinstalled immediately after repair and maintenance work has been completed.

### Extraction device

Check daily the extraction device on the sufficient function. If the extraction device does not work or is restricted, it must be restored. Only then can the Jig Saw be put into operation.

### Lubrication

Lubricate the bearings with oil after 10 hours of operation. After every 50 hours of operation or squeaking from the bearings, oil as follows:

Step 1: Turn off the unit and disconnect it from the power supply.

Step 2: Turn the saw on its side.

Step 3: Pry off the rubber caps that cover the pivot axes.

Step 4: Spray a small amount of SAE 20 oil around the shaft end and bearing.

Step 5: Let the oil soak in this condition overnight. The next day repeat the above procedure for the opposite side of the saw.

### Carbon brushes

Your saw has externally accessible carbon brushes that should be checked regularly for wear.



### DANGER!

Turn off the saw and disconnect it from the power supply. The carbon brushes may only be replaced by a qualified electrician!

Step 1: Using a flat-head screwdriver, remove the cap of the upper brush assembly on top of the motor.

Step 2: Carefully pry the brush assembly out with a small screwdriver.

Step 3: The second carbon brush is accessible through the access opening on the bottom of the motor. Remove this in the same way. If one of the brushes is shorter than 6 mm, replace both brushes in pairs.

Step 4: Make sure the brush cap is properly positioned (straight). Only tighten the carbon brush cap with a hand screwdriver. Do not overdo it!

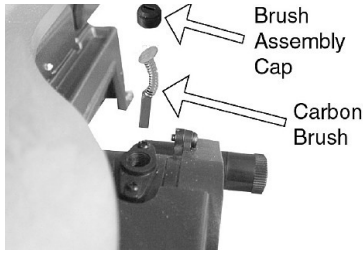


Fig. 23: Change the Carbon brushes

**Drive belt**

To change the drive belt, proceed as follows:

Step 1: Turn off the unit and disconnect it from the power supply.

Step 2: Remove the 3 screws that secure the belt cover.

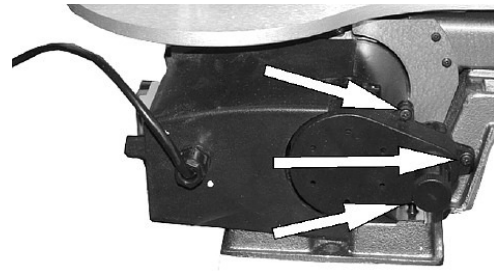


Fig. 24: Remove the belt cover

Step 3: Remove the belt cover.

Step 4: Remove the ankle strap and dispose of it properly.

Step 5: Lay the new belt over the small gear. Then turn the larger gear by hand and pull the belt onto the big gear.

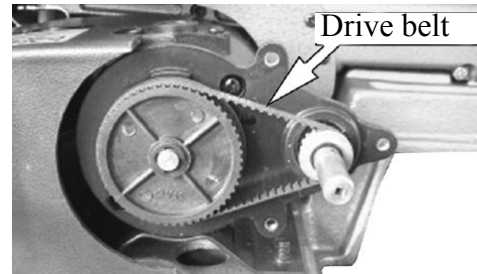


Fig. 25: Change the drive belt

Step 6: Replace the cover and screws.

**10 Troubleshooting**

Fault	Possible cause	Remedy
Engine does not start	No mains voltage, Connection cable defect. Engine defective	Have the power supply checked by qualified personnel. Let replaced the engine by qualified personnel.
Saw blades break	1. Too high or too low voltage 2. Worn out saw blade 3. Saw blade twisted  4. Wrong saw blade	1. Pay attention to the correct voltage. 2. Reduce feed, less feed. 3. Avoid lateral pressure on the saw blade. 4. Fine saw blades for thin work-pieces, coarse saw blades for thicker workpieces.
The Saw blades loosed while working	1. Saw blade is not correctly adjusted	1. Loosen the saw blade retaining bolt and reorient the bracket.

## 11 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.

### 11.1 Decommissioning

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

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.

### 11.2 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.

### 11.3 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 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**

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

## 12.1 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
- 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, item number and year of manufacturing on the type plate which is fixed on the device.

### **Example**

The drive belt for the Jig Saw DKS-504 Vario must be ordered. The drive belt has the number 95 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 (95) to the dealer or spare parts department and provide the following information:

- Type of device: **JIG SAW DKS 504-Vario**
- Item number: **5902504**
- Drawing number: **1**
- Position number: **95**

### 12.2 Spare parts drawing DKS 504 Vario

The following drawing are 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.

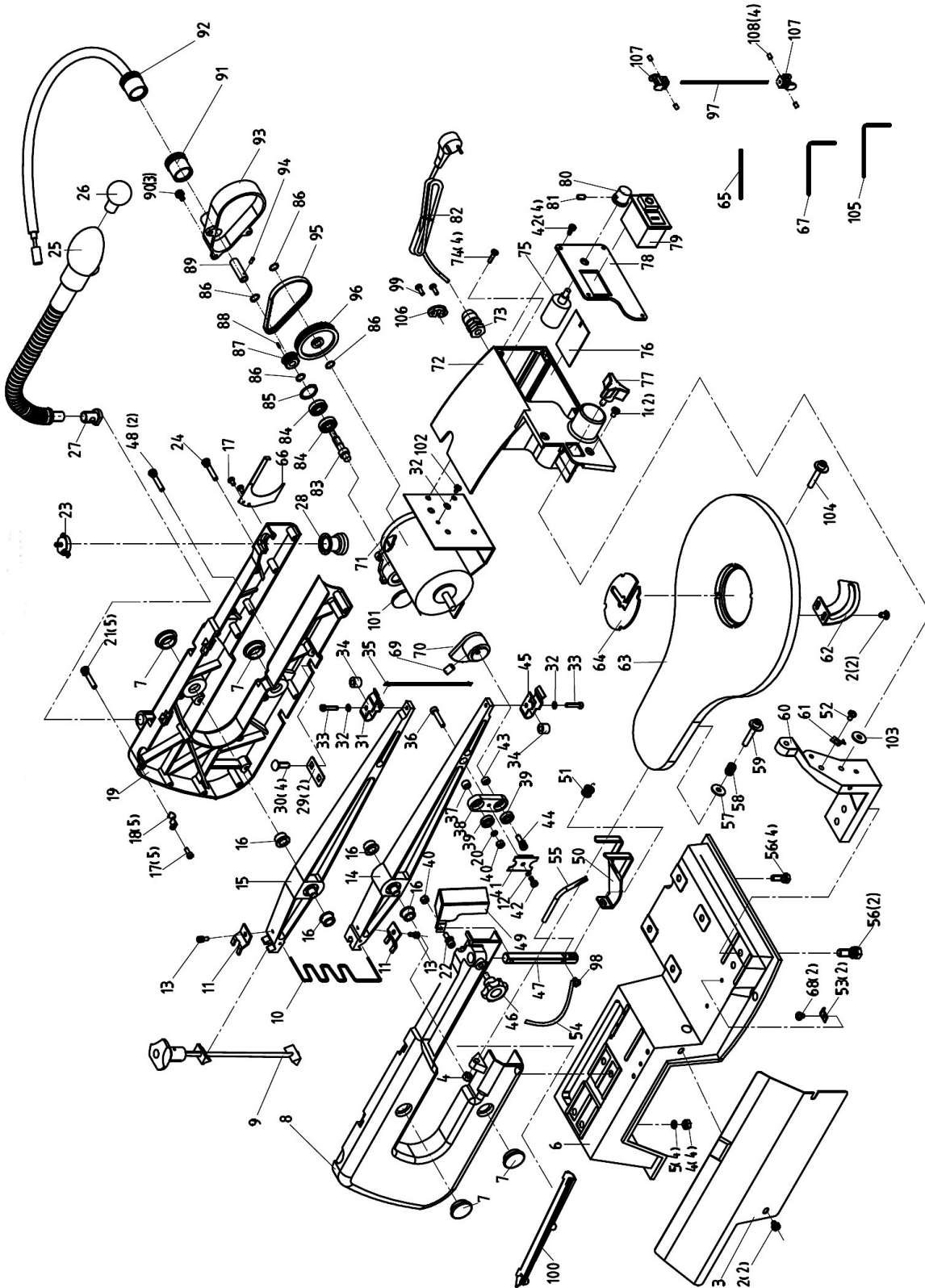


Fig. 26: Spare parts drawing JIG SAW DKS 504 Vario

### 13 Electrical Wiring Diagram

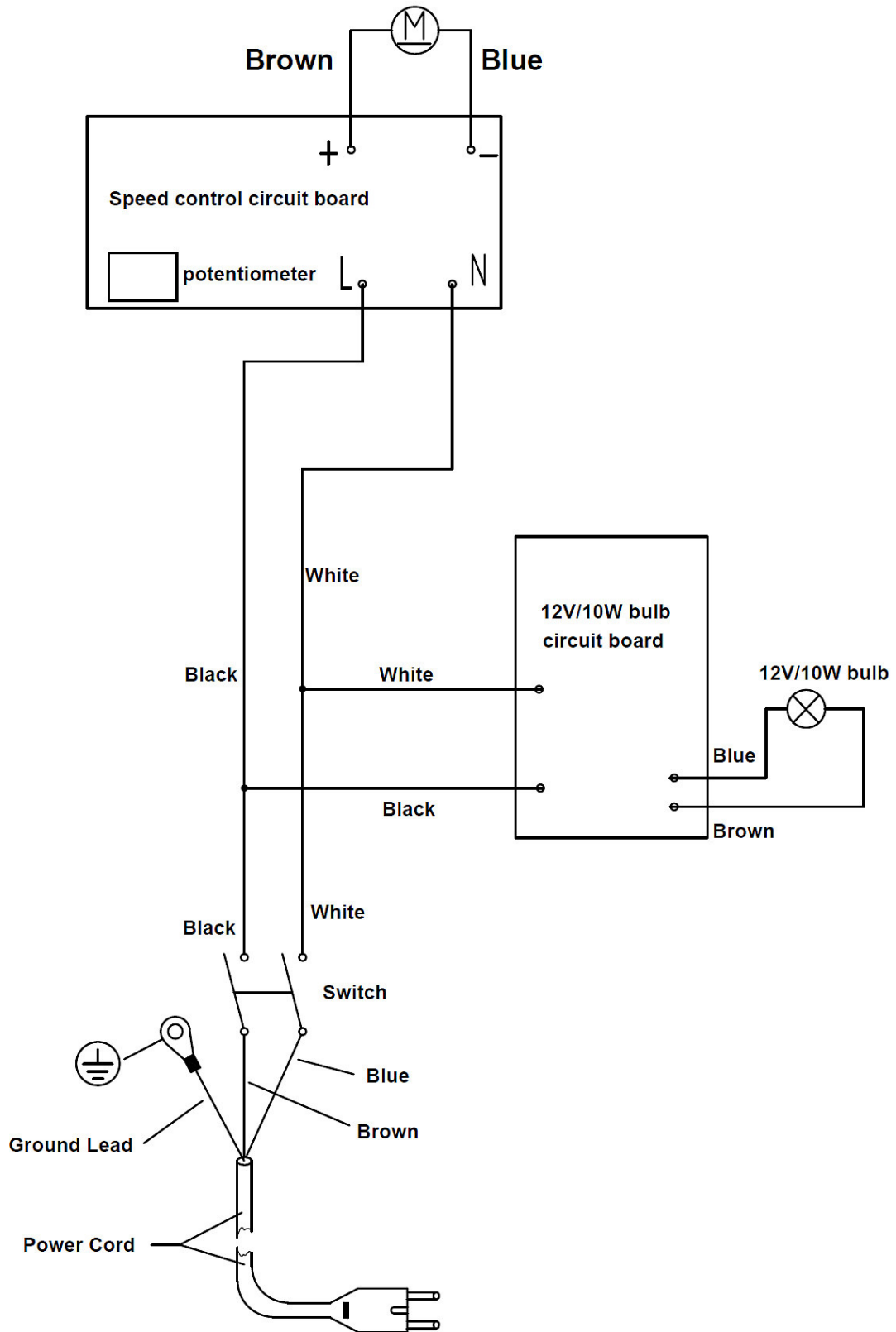


Fig. 27: Electrical Wiring Diagram DKS 504 Vario

## 14 EC-Declaration of Conformity

As per machine directive 2006/42/EC, Appendix II 1.A

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

hereby declares that the following product

**Product Category:** Holzstar® Woodworking machines

**Machine type:** JIG SAW

**Designation of the machine:** DKS 504 Vario

**Item number:** 5902504

**Serial number:** \_\_\_\_\_

**Year of manufacture:** 20\_\_\_\_

corresponds, on the basis of its design and construction, as well as the version that we have put into circulation, with the relevant fundamental health and safety requirements of (subsequent) EU Directives.

**Relevant EU Directives:** 2014/30/EU EMC-Directive  
 2011/65/EU RoHS-Directive

**The following harmonized standards have been applied:**

- EN 61029-1: 2000 +A11+A12 Safety of transportable motor-operated electric tools - Part 1: General requirements
- EN 55014-1:2017 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
- EN 55014-2:2015 Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard (CISPR 14-2:2015)
- EN 61000-3-2:2014 Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current <= 16 A per phase) (IEC 61000-3-2:2014)
- 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  
 General Manager



## 15 Notes

