

# Instruction Manual

## — Table Saw

— TKS 316 PRO 230 V

— TKS 316 PRO 400 V



TKS 316 PRO

TKS - SERIES

## Imprint

### Product identification

Table Saw	Item number
TKS 316 PRO 230V	5902321
TKS 316 PRO 400V	5902323

### Manufacturer

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### Indications regarding the operating instructions

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## 1 Introduction

You have made a good choice by purchasing a HOLZSTAR table 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 your table saw.

The operating instructions form part of the table saw. Keep these operating instructions at the installation location of your table saw. Also observe the local accident prevention regulations and general safety regulations for the use of the table saw.

### 1.1 Copyright

The contents of these operating instructions are protected by copyright. Their application is permitted within the context of the use of the table saw. Any further use shall not be permitted without written consent by the manufacturer. For the protection of our products, we shall register trademark, patent and design rights, as this is possible in individual cases. We strongly oppose any infringement of our intellectual property.

### 1.2 Customer service

Please contact your specialist retailer if you have any questions regarding your table 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:** 0951 96555-111  
**E-Mail:** service@stuermer-maschinen.de  
**Internet:** www.holzstar.de

**Spare parts orders:**  
**Fax:** 0951 96555-119  
**E-Mail:** ersatzteile@stuermer-maschinen.de

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

## 1.3 Disclaimer

All data in these operating instructions 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:

- Non-observance of these operating instructions
- 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 sections on individual service life phases contain additional, specifically applicable safety information.

### 2.1 Legend of symbols

#### Safety Instructions

Safety instructions in these operating instructions 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 directly dangerous situation which may cause death or serious injury if not averted.

**WARNING!**

This combination of symbol and signal term indicates potentially hazardous situations 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 Obligations of the operating company****Of the operator**

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

**Obligations of the operating company**

If the table saw is used for commercial purposes, the operating company of the table saw 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 table saw must be met. The following applies in particular:

- The operator must inform himself about the applicable occupational health and safety regulations and determine additional hazards in a hazard assessment which are caused by the special working conditions at the place of use of the machine. These must be implemented in the form of operating instructions for the operation of the machine.
- During the entire period of use of the machine, the operator must check whether the operating instructions issued by him correspond to the current state of the rules and regulations and, if necessary, adapt them.
- The operator must clearly regulate and define the responsibilities for installation, operation, troubleshooting, maintenance and cleaning.
- The operator must ensure that all persons handling the machine have read and understood these instructions. In addition, he must train the personnel at regular intervals and inform them about the dangers.
- The operator must provide the personnel with the necessary protective equipment and instruct them to wear the required protective equipment in a binding manner.

Furthermore, the operator is responsible for ensuring that the machine is always in perfect technical condition. The following therefore applies:

- The operator must ensure that the maintenance intervals described in these instructions are observed.
- The operator must have all safety devices regularly checked for operability and completeness.

## 2.3 Requirements to staff

### Qualifications

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 the table saw and expose themselves and others to the danger of severe or lethal injuries.

- Have all works only performed by qualified persons.
- Keep insufficiently qualified persons 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 if it is indicated in these instructions and if the operating company expressly commissioned the operator.

### Qualified electrician

Due to their technical training, knowledge and experience as well as knowledge of the relevant standards and regulations, skilled electricians are able to carry out work on electrical systems and to recognize and avoid possible dangers independently.

### Qualified personnel

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 member has to wear personal protective equipment while performing different tasks on and with the machine which are indicated in the individual paragraphs of these instructions.

The personal protective equipment is explained in the following paragraph:



### **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**

The protective gloves provide protection for the hands against sharp-edged components, as well as against friction, abrasions or deeper injuries.



### **Safety boots**

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



### **Protective clothes**

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

## 2.5 General safety instructions

- The table saw may only be operated and operated by persons familiar with the table saw and aware of the dangers of using table saws.
- Persons under the age of 16 may use the table saw only as part of a vocational training and under the supervision of an instructor.
- Do not operate the machine under the influence of drugs, alcohol or medication.

- When installing, operating, maintaining and repairing the table saw, observe the European standards. For the European standards that have not yet been transposed into the relevant national law, the country-specific regulations still applicable must be applied.
- Operators of table saws outside the scope of the European standards are obliged to comply with the safety and accident prevention regulations in force in the country of operation. If necessary, appropriate measures to comply with country-specific regulations must be taken before commissioning the table saw.
- Always disconnect the table saw from the electrical supply as soon as you carry out adjustments, inspection, cleaning or maintenance.
- Make sure that no body parts or garments can be caught and pulled by rotating components.
- Make sure that no tools or loose parts remain on or in the machine when switching on (eg after maintenance work).
- Prevent unfavorable postures, keep your feet stable and keep your balance at all times. Use suitable workpiece supports when cutting long material.
- Use the table saw only in the specified power range, and only for the purpose for which it is intended.
- Do not overload the machine - use it only within the performance range for which the machine was designed.
- Always keep the table saw and the work area of the table saw clean and tidy. A messy work area can lead to accidents.
- Check the table saw for damage before each use. Check each time before switching on whether keys or setting tools are removed. Use the table circle
- Do not saw if the on / off switch is defective. Keep handles free of oil and grease.
- Do not use the table saw in rain or in humid environments. Ensure adequate lighting. Do not use the table saw near flammable liquids or gases.
- Do not operate the device in a damp or wet environment.
- Avoid contact of the body with earthed objects such as heaters or pipes as soon as you work on the machine.
- Do not operate the machine without the guards installed and always maintain a sufficient distance from the saw blade.
- Do not try to stop the saw blade by pressing the workpiece against the side of the saw blade.
- Always work with a properly set splitting knife.
- Cut thin or thin-walled workpieces only with fine-toothed saw blades. Always use sharp saw blades.

- Check the workpiece for foreign objects (eg nails, wires, cables or screws).
- Never cut multiple workpieces at the same time - or bundle with several individual pieces.
- When cutting round stock, use a suitable template to prevent the workpiece from rotating.



**NOTE!**

Danger of cutting even with a stationary cutting tool!  
Always wear gloves as soon as you change the cutting tool.

**2.6 Safety labels on the table saw**

The following safety signs are applied on the table saw (Fig. 1), which need to be observed and followed.



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.

**2.7 Safety devices**

**Riving knife**

The riving knife prevents a workpiece from being caught by the rising teeth and pushed against the operator. The splitting wedge must always be mounted during operation.



Fig. 2: Riving knife and blade guard

### Blade guard

The blade guard protects against unintentional contact with the saw blade and from chips flying about. Always have the blade guard installed during operation.

### Push stick

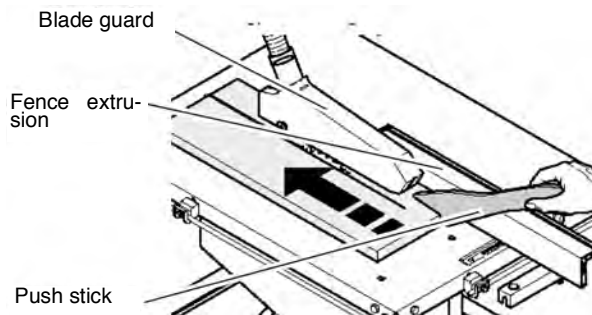


Fig. 3: Working with a push stick

The push stick serves as an extension of the hand and protects against accidental contact with the saw blade. The push stick must always be used if the distance between the stop profile and the saw blade is less than or equal to 120 mm. Guide the push stick against the surface of the saw table at an angle of 20 to 30 °.

### Motor protection switch

In the motor of the Table Saw there is a thermal protection switch, which automatically shuts off the motor in case of thermal overload.

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

## 3 Intended Use

The Table Saw TKS 316 PRO is intended for longitudinal and transverse cutting of solid wood, coated wood, chipboard, blockboard and similar wooden materials. Round workpieces may only be sawn with a suitable holding fixture as they can be rotated by the rotating saw blade.

The table saw is designed and built for use in non-hazardous environments. The machine must be operated with a suitable extraction system.

The Table Saw is suitable for private use, not for industrial use.

When working with the table saw, suitable ear protection must be worn.

Proper use also includes compliance with all information in this manual. Any use beyond the intended use or otherwise is considered misuse.



### WARNING!

#### Risk of misuse!

Misuse of the Table Saw can lead to dangerous situations.

- Alterations and changes in the operating values of the table saw are prohibited. They endanger people and can damage the table saw.
- Never saw several workpieces at the same time.
- do not saw metal or metal-like materials

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

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

## 4 Residual risks

The machine is built according to the state of the art and the recognized safety rules.

Nevertheless, individual residual risks can occur when working.

- Danger of injury to fingers and hands due to the rotating saw blade if the workpiece is handled improperly.
- Injuries from the workpiece being ejected due to improper posture or guidance, such as work without a stop.
- Health hazards due to noise. When working, the permissible noise level is exceeded. Be sure to wear personal protective equipment such as ear protection.
- Injuries due to defective saw blade. Check the saw blade regularly and before each use for integrity.
- Danger due to current, when using improper electrical connection cables.
- When using special accessories, the operating instructions enclosed with the optional accessories must be observed and read carefully.
- Furthermore, despite all the precautions taken can not be obvious residual risks.
- Residual risks can be minimized if the safety instructions and the intended use, as well as the operating instructions are observed as a whole.

## 5 Technical Data

Model	TKS 316 PRO 230 V	TKS 316 PRO 400 V
Length	1350 mm	1350 mm
Width / Depth	1250 mm	1250 mm
Height	1000 mm	1000 mm
Weight	60 kg	60 kg
Supply voltage	230 V	400 V
Max. cutting width with rip fence	200 mm	200 mm
Max. cross cut width left from saw blade	245 mm	245 mm
Saw blade angle	90° bis -45°	90° bis -45°
Max. cutting height 90°	90 mm	90 mm
Max. cutting height - 45°	50 mm	50 mm
Saw blade diameter	315 mm	315 mm
(Main) saw blade speed	2800 min <sup>-1</sup>	2800 min <sup>-1</sup>
Ø Extraction port diameter bottom	100 mm	100 mm
Ø Saw blade protection extraction port	30 mm	30 mm
Table length	550 mm	550 mm
Table width	800 mm	800 mm
Work height	850 mm	850 mm
Drive motor output	1,6 kW	2,1 kW
Absorbed power drive motor	2,2 kW	2,8 kW

### 5.1 Type plate

Tischkreissäge		Table circular saw		CE	
Typ	TKS 316 PRO	Serien-Nr.			
Type		Serial no.			
Artikel-Nr.	5902321	Baujahr			
Item no.		Year of manufacture			
Drehzahl	2800 min <sup>-1</sup>	Netzanschluss	230 V		
Motor speed		Power connection			
Aufnahmeleistung	2,2 kW	Sägeblattdurchmesser	315 mm		
Input power		Saw blade			
Abgabeleistung Motor	1,6 kW	Gewicht	60 kg		
Output power Motor		Weight			
 <a href="http://www.holzstar.de">www.holzstar.de</a>		Stürmer Maschinen GmbH Dr.-Robert-Pfleger-Str. 26, 96103 Hallstadt Deutschland / Germany			

Fig. 4: Type plate TKS 316 PRO (230 V)



## 6 Transport, packaging, storage

### 6.1 Delivery and transport

#### Delivery

After delivery, check the table saw for visible transport damage. If you find any damage to the table saw, report it immediately to the shipping company or dealer.

#### Transport

Improper transport is accident-prone and can cause damage or malfunctions for which we do not grant any liability or guarantee.

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



#### WARNING!

Severe or fatal injuries may occur if parts of the machine tumble or fall down from the forklift truck, pallet truck or from the transport vehicle. Follow the instructions and information on the transport box.

Note the total weight of the machine. The weight of the machine is indicated in the "Technical data" of the machine. When the machine is unpacked, the weight of the machine can also be read on the rating plate. Only use transport devices and load suspension gear that can hold the total weight of the machine.



#### WARNING!

The use of unstable lifting and load suspension equipment that might break under load can cause severe injuries or even death. Check that the lifting and load suspension gear has sufficient load-bearing capacity and that it is in perfect condition.

Observe the accident prevention regulations issued by your Employers Liability Insurance Association or other competent supervisory authority, responsible for your company.

Fasten the loads properly.

#### General risks during internal transport



#### WARNING: DANGER OF TIPPING

The device may be lifted unsecured by a maximum of 2cm.

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

Warn employees and, if necessary, advise employees of the hazard.

Devices may only be transported by authorized and qualified persons. Act responsibly during transport and always consider the consequences. Refrain from daring and risky actions.

Gradients and descents (e.g. driveways, ramps and the like) are particularly dangerous. If such passages are unavoidable, special caution is required.

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

Danger points, unevenness and disturbance points must be inspected before transport. The removal of danger spots, disturbances and unevenness at the time of transport by other employees leads to considerable dangers.

Careful planning of internal transport is therefore essential.

#### Transport with a forklift/lift truck:

For shipping, the device packed in crates is delivered on a pallet so that it can be transported with a forklift truck or pallet truck.

### 6.2 Packaging

All of the machine's packaging materials and packing aids are suitable for recycling and must always be disposed of using material-based recycling systems.

Packaging materials made of cardboard must be shredded and disposed of as part of waste paper recycling.

The foils are made of polyethylene (PE), padding is made of polystyrene (PS). Dispose of these substances at a recycling centre or hand them over to the relevant waste disposal company.

### 6.3 Storage



#### DANGER!

Do not store the table saw unprotected outdoors or in a humid environment.

Store the table saw in a dry, clean and frost-free environment, carefully cleaned. Store the table saw in such a way that it cannot be put into operation by unauthorized persons and nobody can injure themselves on the standing table saw. Cover the machine with a protective tarpaulin.

## 7 Description of the device

### 7.1 Machine

Illustrations in these operating instructions may deviate from the original.

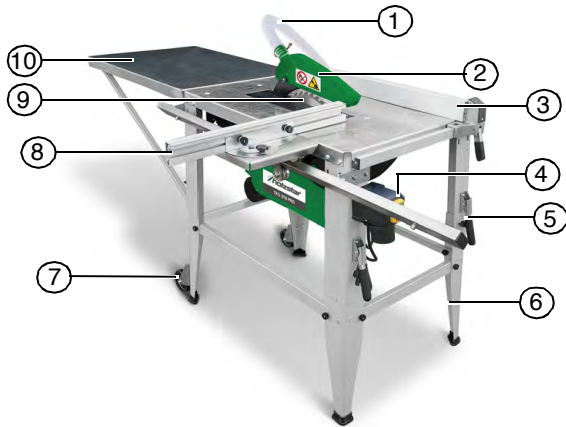


Fig. 5: Table Saw TKS 316 PRO

1. Suction hose
2. Chip hood
3. Rip fence
4. ON / OFF switch
5. Transport handle
6. Stable foot
7. Transport wheel
8. Sliding carriage with stop
9. Saw blade
10. Table extension

### 7.2 Scope of delivery

- Chassis
- Saw blade guard with suction hose
- Sliding table
- Table extension
- Rip fence
- Carbide saw blade  $\varnothing$  315 mm / 36 Z
- Miter stop without aluminum profile

### 7.3 Accessories

- Additional extension table 800x550mm  
**Item number: 5912321**
- Aluminium profile for miter gauge  
**Item number: 5912322**
- Cutting change circular saw blade 28 teeth  
 $\varnothing$ 315mm  
**Item number: 5263128**
- Angle stop  
**Item number: 5912323**

## 8 Setting up and connecting

### 8.1 Requirements for the installation location

The table saw must be placed securely on a level and firm surface. Ensure that there is sufficient freedom of movement for working. The installation location should meet the following criteria:

- The substrate must be level, firm and vibration-free.
- The substrate must not allow any lubricants to penetrate.
- The installation or working area must be dry and well ventilated.
- No machines causing dust or chips should be operated near the machine.
- There must be sufficient space for the operating personnel, for material transport and for adjustment and maintenance work.
- The place of installation must have good lighting.
- There must be an extraction device with min. 690 m<sup>3</sup>/h extraction capacity, min. 20 m/s flow velocity at the extraction connection; hose diameter 100 mm, max. hose length 4 m.

### 8.2 Setting up



#### CAUTION!

Risk of injury from an unstably installed machine!  
Check the stability of the machine after setting it up on stable ground.



#### CAUTION!

Some metal parts may be sharp-edged. Check all metal parts to avoid injury.



#### CAUTION!

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



#### DANGER!

To ensure sufficient stability of the machine, it should be screwed to the ground.

Check the state of the table saw immediately upon receipt and immediately claim any damage from the last transport company, even if the packaging is not damaged. In order to secure claims against the carrier, we recommend that you leave your machinery, equipment and packaging materials in the condition in which you found them when the damage was discovered.



**DANGER!**

- Read each step before executing it.
- Take care of the corresponding parts for each work step.

**Required tools:**

- 2 wrenches 10mm
- 1 wrench 22mm
- 1 wrench 8mm
- 1 wrench 7mm
- 1 Phillips screwdriver

Use the following steps to make the machine operational:

Step 1: Open the large package and place the table saw on the floor with the saw table facing down.



Fig. 6: Assembly position

Step 2: Fold up the four legs and fasten the legs with the wing nuts and flat screws. Slide the screws up in the groove (Pos.a, Fig.7) and tighten them firmly.

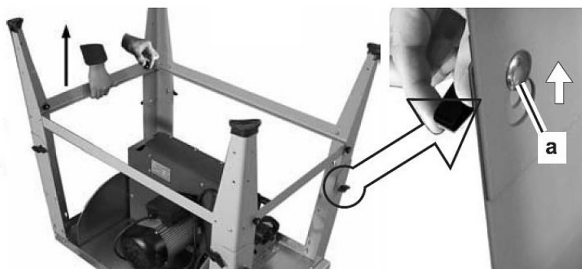


Fig. 7: Folding out the feet

Step 3: Attach the cross braces to the feet using the screws and knurled nut.

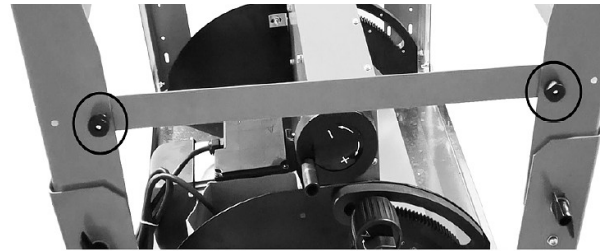


Fig. 8: Tighten knurled nut

Step 4: Place the suction nozzle in the recess and fasten it with 3 self-tapping screws and 2 M4x8 pan-head screws.

Step 5: Put the suction hose on the suction nozzle and the chip hood and fix them with hose clamps.

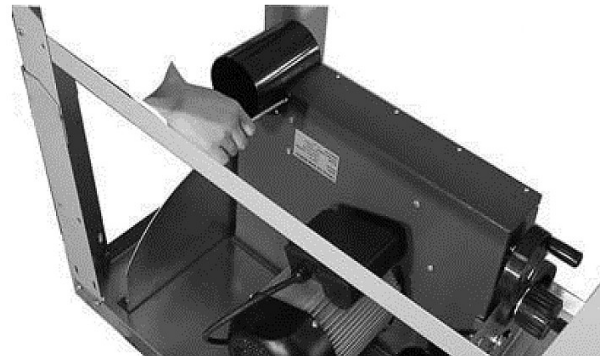


Fig. 9: Mount suction nozzle

Step 6: Attach the switch to the front with the two self-locking M4 nuts and the M4x60 screws.



Fig. 10: Mounting On / Off - Switch



**NOTE!**

The switch must be mounted on the left stand.

Step 7: Mount the transport rollers as well as the transport handles to the machine.



Fig. 11: Assembly of the transport rollers and transport handles

Step 8: Mount the longitudinal stop on the clamp.  
Slide the mounted stop onto the guide rail.

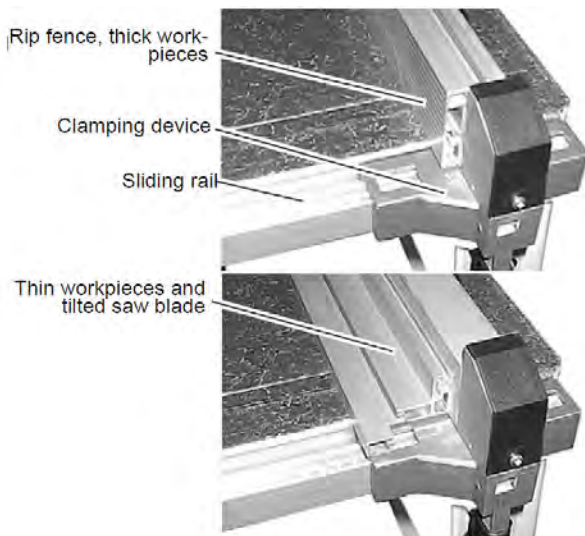


Fig. 12: Mounting longitudinal stop



**NOTE!**

The longitudinal stop can be attached in two different ways:

- For sawing thick workpieces
- For sawing thin workpieces with swiveled saw blade

Step 9: Mount the mounting brackets on the front and rear of the frame. Do not fully tighten the screws of the mounting brackets yet. The slide rail with sliding carriage must first be aligned after assembly.



Fig. 13: Mounting mounting bracket

Step 10: Mount the sliding carriage as shown. Tighten the screws.

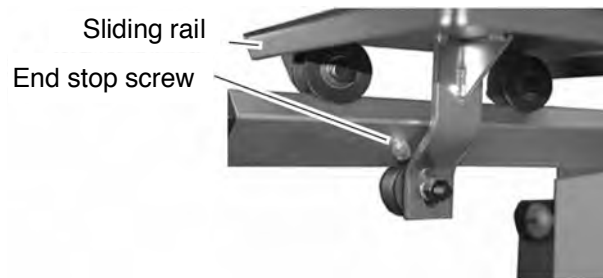
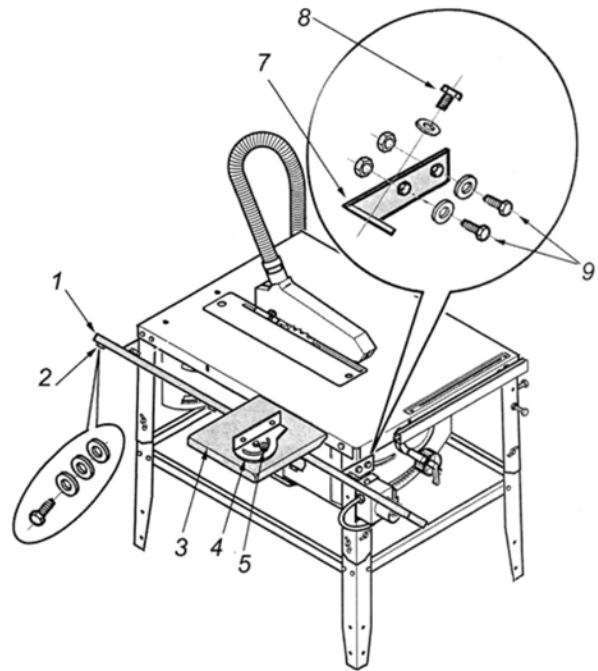


Fig. 14: Assembly of the sliding carriage and sliding rails

Remove an end stop screw from the sliding rail. Push the sliding carriage onto the sliding rail.

Screw in the end stop screw again with three washers and check whether the sliding carriage is stopped by the end stop screw.



**ATTENTION!**

If the sliding carriage is not stopped by the end stop screw, the washers at the end stop screw are missing. Check whether the sliding carriage is stopped by the end stop screw.

Step 11: Screw the hexagon bolt into the sliding carriage from below.

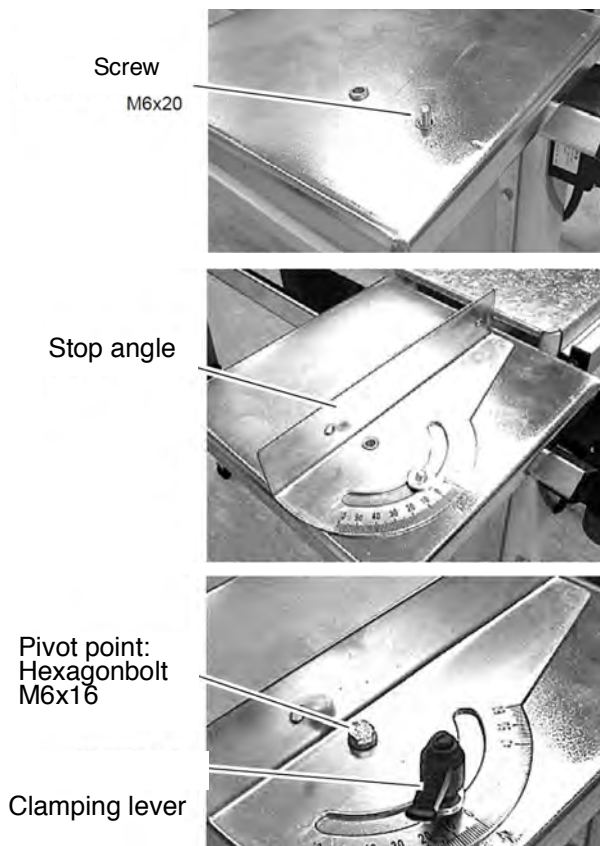


Fig. 15: Mounting stop angle

Place the stop bracket on the sliding carriage.

Put the washer  $\varnothing$  18mm from above on the hexagon screw.

Fix the pivot point of the angle attack.

Turn the clamping lever on the screw.

Step 12: Now align the mounting brackets with slide rail and tighten the screws.

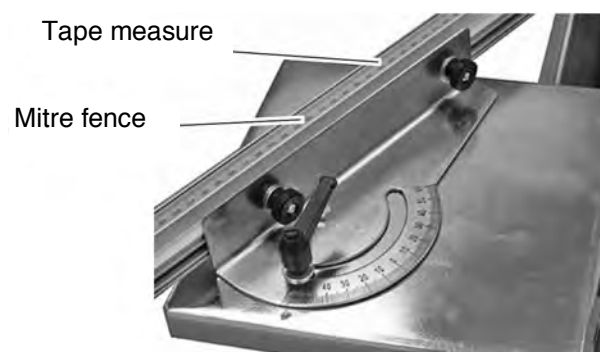


Fig. 16: Assembly of the mitre fence

### Mount the saw blade



#### CAUTION!

- Risk of cutting at the saw blade. Wear protective gloves when mounting the saw blade.



#### Use protective gloves!

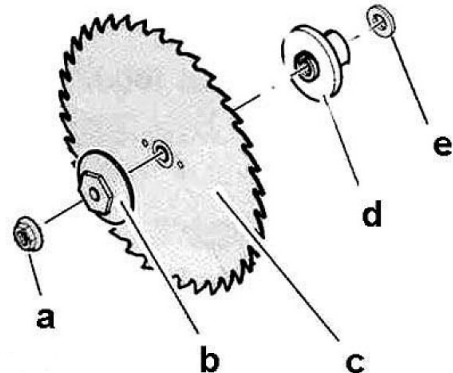


Fig. 17: Saw blade

a Union nut

b Clamping flange

c Saw blade

d Centering flange

e Adjusting washer

Step 1: Turn the saw blade all the way up. Turn left-hand hexagon nut off motor shaft. Remove saw blade flange at front. Clean the saw blade in the clamping area of the flanges.

Step 2: Place the saw blade on the centering flange, observe the running direction of the teeth. Replace the saw blade flange at the front. The driving pin on the front saw blade flange must be inserted into the bore of the centering flange.

Step 3: Place washer with outer  $\varnothing$  44 mm on the motor shaft. Turn hexagon nut with left-hand thread onto the motor shaft. Tighten hex nut. Use a 9 mm wrench on the motor shaft as a counterhold and hand-tighten the nut.



#### NOTE!

With spacers, the position of the saw blade is adjusted to the riving knife. The position of the saw blade has been determined at the factory. One or more spacers are already on the motor shaft.

After installation, check the position of the saw blade for the riving knife. The position of the splitting wedge must be exactly in the middle of the saw blade.

**If the saw blade is not in the middle, correct the alignment as follows:**

Loosen the six self-locking hex nuts that secure the mounting brackets under the saw table by one turn.

Align the mounting brackets with the assembly attached as needed until the blade is properly aligned.

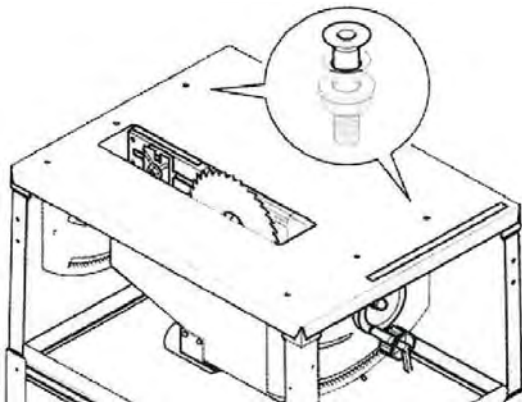


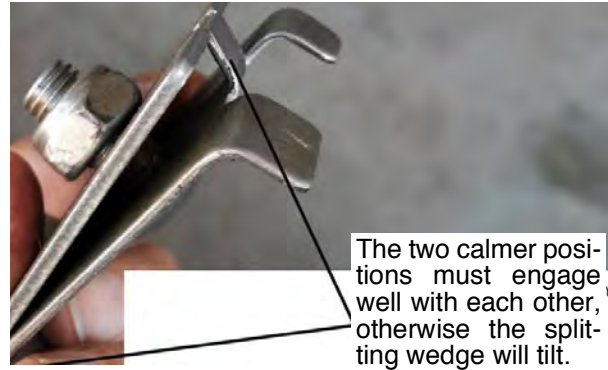
Fig. 18: Align saw blade

**Mounting the riving knife**



The screw must be inserted into the hole provided for this purpose. Correctly executed, only the round screw head must be visible. (Otherwise, the splitting wedge can no longer be locked.)

Fig. 19: Mounting riving knife part 1



The two calmer positions must engage well with each other, otherwise the splitting wedge will tilt.

Fig. 20: Mounting riving knife part 1



Self-locking nut - difficult to loosen

The two clamps must be correctly fastened and must not tilt

Fig. 21: Mounting riving knife part 3

**Insert riving knife into the riving knife holder**



**DANGER!**

The riving knife is one of the safety devices and must be correctly installed for safe operation



**CAUTION!**

Risk of cutting on the saw blade. Wear safety gloves.



**Use protective gloves!**

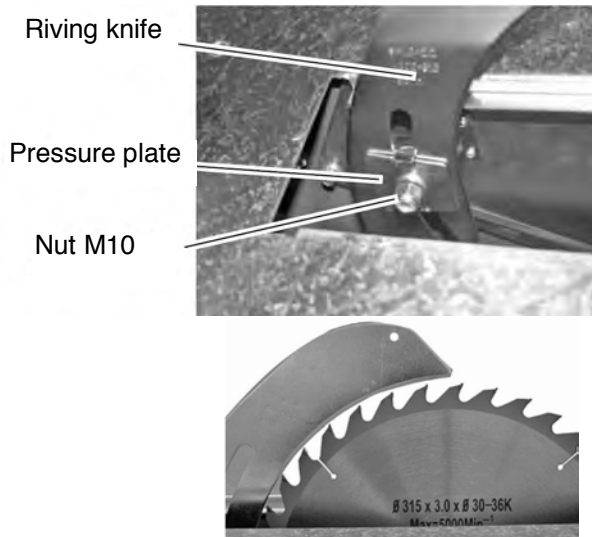


Fig. 22: Assembly riving knife

**Step 1:** Push the splitting wedge between the pressure plate and the locking plate. The riving knife must protrude from the saw table just as the saw blade does.

**Step 2:** Adjust the distance to the saw blade. The distance between the riving knife and the saw blade must be 3 - 8 mm. Tighten the self-locking nut.

### Install the table insert extrusion

**Step 1:** Place the table insert profile in the saw table. To insert the table insert profile, first insert the profile on the right (switch side) under the frame. Then insert the profile completely and push it back a little.



Fig. 23: Install the table insert extrusion

### Assembly of the blade guard



#### DANGER!

The chip hood belongs to the safety devices and must be mounted correctly for a safe operation



#### CAUTION!

Risk of cutting the saw blade. Wear safety gloves.



#### Use protective gloves!

### Blade guard



Fig. 24: Assembly of the blade guard

**Step 1:** Remove the M5x50mm screw from the protective cover, mount the chip guard on the splitting wedge and use the screw through the cover and the hole. Tighten the knurled nut, then slide the suction hose onto the suction port of the splitting wedge and tighten the hose clamp.

### Mounting the rear table extension



#### NOTE!

The table extension can be mounted laterally on the right side or at the rear. Two long table supports are required for mounting the "Table extension rear". Two short table supports are required for mounting the "Table extension right side".

**Step 1:** Lift the table extension (Pos.200) into the receptacle and press the table down.

**Step 2:** Attach the table extension (Pos.200) to the back of the table.

**Step 3:** Insert the screw (Pos.203) into the hole from the outside.

**Step 4:** Mount the wing nut M6 (pos.204) on the screw (pos.203) and tighten it slightly.

Step 5: Place the cross strut (pos.202) over the screw (pos.203) and tighten the M6 wing nut (pos.204).

Step 6: Repeat the steps for the other cross strut.

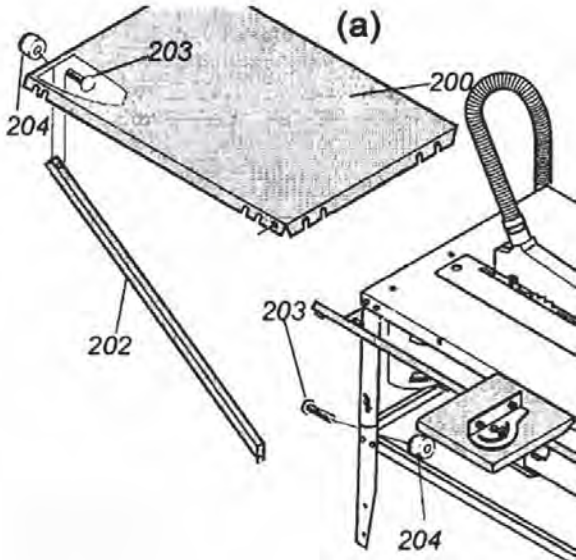


Fig. 25: Mounting the table extension/extension at the rear

**Mounting the table extension on the side**

**NOTE!**

The guide rail for the longitudinal stop can be mounted on the lateral table extension.

Step 1: Lift the table extension (Pos.200) into the receptacle and press the table down.

Step 2: Attach the table extension (Pos.200) to the back of the table.

Step 3: Insert the screw (Pos.203) into the hole from the outside.

Step 4: Mount the wing nut M6 (pos.204) on the screw (pos.203) and tighten it slightly.

Step 5: Place the short cross strut (Pos.201) over the screw (Pos.203) and tighten the wing nut M6 (Pos.204).

Step 6: Repeat the steps for the other cross brace.

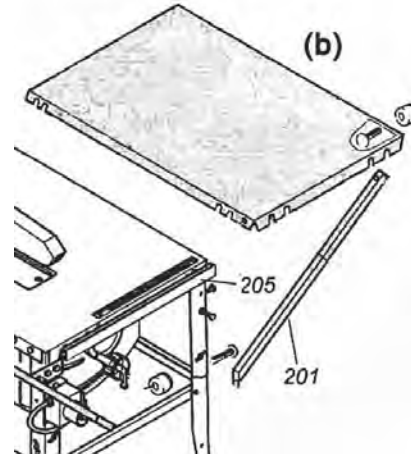


Fig. 26: Table extension sideways

**8.3 Electrical Connection**



**DANGER!**

**Risk of death due to electric shock!**

Contact with live components may result in fatal injury. Switched-on electrical components can make uncontrolled movements and lead to serious injuries.



**ATTENTION!**

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



**ATTENTION!**

The three phases must be connected in such a way that the direction of rotation corresponds to the arrow on the saw blade.

Rotary direction arrow



Fig. 27: Saw blade with rotary direction arrow

When making electrical connections, make sure that the characteristics (voltage, mains frequency, protection) match those on the rating plate and for the motor. Only use the table saw in a dry environment. Operate the table saw only on an electrical supply that meets the following requirements:



- Fused with a residual current device (RCCB), with a residual current of 30 mA.
- Use only one earthing contact socket (correctly grounded socket) or one CEE 400 V connection cable for circular saw table saws. There must be a right spin.
- Lay the power cord so that it does not interfere with work and can not be damaged.
- Protect the power cord from heat, aggressive liquids and sharp edges.

Step 1: Check that the table saw is off.

Step 2: Connect the machine to the mains and check the direction of motor rotation. If the direction of rotation is wrong, two phases must be exchanged.

## 9 Operation of the Table Saw



### **DANGER!**

#### **Risk of death due to electric shock!**

Contact with live components may result in fatal injury. Switched-on electrical components can make uncontrolled movements and lead to serious injuries.

- Disconnect the mains plug before making any adjustments to the machine



### **WARNING!**

#### **Danger to life!**

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

- The table saw may only be operated by an instructed and experienced person.
- 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 illnesses affecting his concentration.
- The table saw may only be operated by one person. Other persons, especially children, must stay away from the work area during operation.



### **CAUTION!**

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

Wearing gloves is expressly prohibited when cutting workpieces.



### **CAUTION!**

#### **Danger of crushing!**

Improper work on the machine may result in injury to the upper limbs



### **DANGER!**

The push stick must always be used if the distance between the fence profile and the saw blade is less than or equal to 120 mm.

When sawing small wood sections, use the material deflector to prevent wood parts from jamming between the saw blade and the table plate.



### **WARNING!**

Some types of wood dust can cause cancer when inhaled. Work in closed rooms only with a suitable chip extraction system.

- Suitable for the outer diameter of the suction nozzle (100 mm or 30 mm).
- Air flow rate at the extraction nozzle > 20 m/s



### **DANGER!**

Danger due to kickback of workpieces:

The workpiece can be gripped by the saw blade and thrown against the operator.

- Only work with correctly adjusted splitting wedge. Always use sharp saw blades and do not tilt the workpieces.



### **DANGER!**

Danger from objects caught by the saw blade during sawing, e.g.

- Tools on the saw table
- hidden metal parts in the workpiece.
- Never saw several workpieces at once.



### **DANGER!**

Operation without chip extraction system is only possible:

- outdoors.
- when only few chips are produced with narrow workpiece thicknesses.
- with dust mask.



**DANGER!**

Before using the table saw, make sure that by:

- No danger to persons arises.
- No things are damaged.
- Refrain from any safety-related working method
- Use personal protective equipment.
- When sawing, keep sufficient distance to the saw blade. If necessary, use a push stick. Avoid unfavorable postures. Ensure a secure footing and maintain balance at all times.
- After sawing, drive the saw blade until the chip hood rests on the saw table.
- Use gloves when changing the saw blade.



**DANGER!**

Check the circular saw for damage before each use. Check each time before switching on whether keys or setting tools are removed. Do not use the circular saw if the on / off switch is defective.



**DANGER!**

For long workpieces, use suitable workpiece supports. Never slow down the saw blade by pushing it sideways. The saw blade must come to a standstill within 10 seconds.



**Wear ear protection!**



**Wear safety glasses!**



**Wear a Dust mask in dust generating work!**



**Wear safety shoes!**



**Wear protective clothing!**

**ON/OFF switch**

Switch on - press the green „I“ button.

Switch off - press the red „O“ button.



Fig. 28: ON / OFF Switch

**Undervoltage release**

In the event of an electrical power failure, an undervoltage relay is triggered. This prevents the circular saw from restarting on its own as soon as the electrical voltage is restored. The green ON switch must be pressed again to restart the saw.

**9.1 Adjusting the cutting height**



**DANGER!**

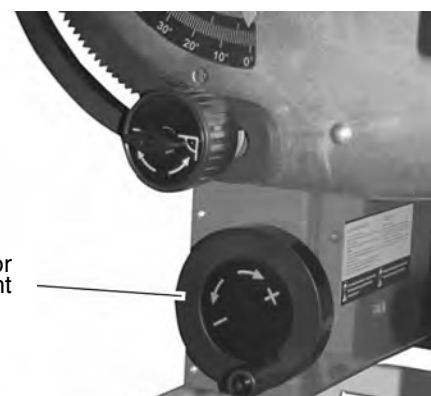
Parts of the body or objects within the adjustment range can be caught by the moving saw blade! Adjust the cutting height only when the saw blade is at a standstill and the mains plug is disconnected.



**NOTE!**

The saw blade can be placed up to 90 mm from the table. With a saw blade inclination of 45°, the cutting height is reduced to 50 mm.

The cutting height must be adapted to the height of the workpiece. Adjust the cutting height by turning the handwheel.



Handwheel for cutting height adjustment

Fig. 29: Adjusting the cutting height

## 9.2 Adjusting the saw blade angle of inclination



### DANGER!

Parts of the body or objects within the adjustment range can be caught by the moving saw blade! Adjust the saw blade tilt only when the saw blade is stationary and the mains plug is pulled out.



### NOTE!

In order to use the full adjustment range of 45°, the cutting height must be reduced accordingly.

The inclination of the saw blade can be infinitely adjusted from 0° - 45°.

Loosen the clamping screw, adjust the angle of inclination with the handwheel and tighten the clamping screw again.

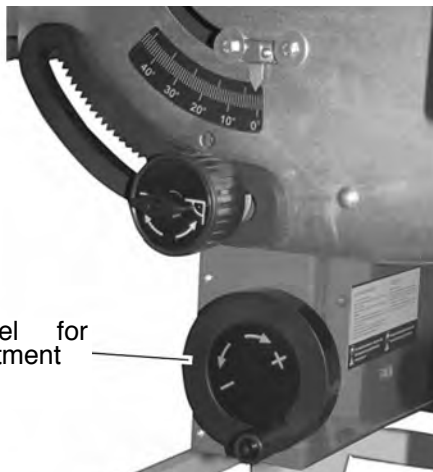


Fig. 30: Height adjustment and angle of inclination

## 9.3 Sawing with rip fence



### DANGER!

Always use the push stick if the distance between saw blade and rip fence is less than 120 mm.



### NOTE!

In order to use the full adjustment range of 45°, the cutting height must be reduced accordingly.

- For sawing thick workpieces.
- For sawing thin workpieces with swiveled saw blade.

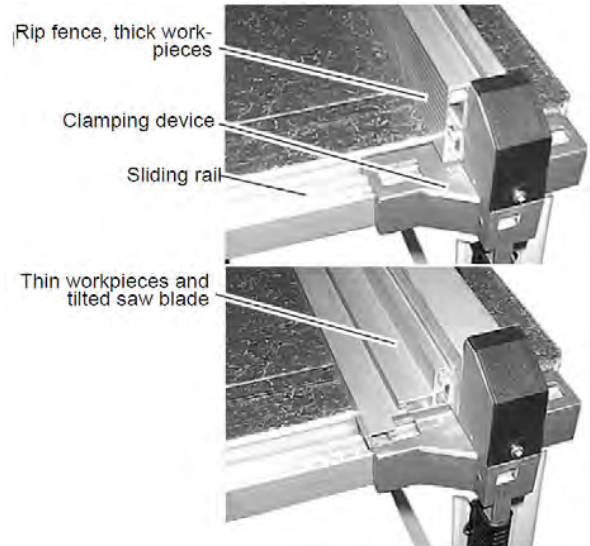


Fig. 31: Sawing operation with the rip fence

## 9.4 Sawing with mitre fence



### DANGER!

The fence profile must be at least 10 mm from the cutting line.

Step 1: Set and lock the required stop angle.

Step 2: Adjust the cutting height of the saw blade.

Step 3: Adjust and lock the saw blade angle of inclination.

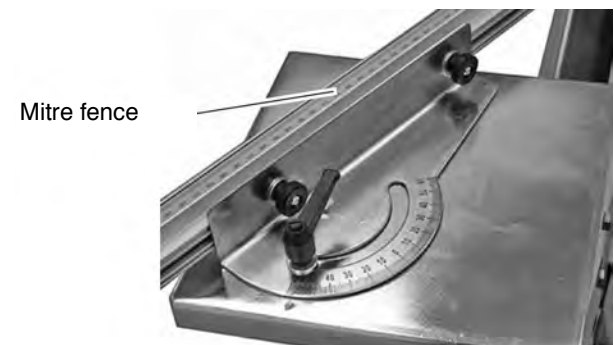


Fig. 32: Saw operation with the mitre fence

Step 4: Switch on the motor and saw through the workpiece in one go.

Step 5: Switch off the table saw if you do not continue working immediately.

## 10 Care, maintenance and repair



### DANGER!

#### Risk of death due to electric shock!

Contact with live components may result in fatal injury. Switched-on electrical components can make uncontrolled movements and lead to serious injuries.

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



### NOTE!

After care, maintenance and repair work, check that all guards and protective devices have been properly mounted on the machine and that there are no tools left inside the machine or in its working area. Damaged safety devices and equipment parts must be repaired or replaced by customer service or a specialist workshop.

### 10.1 Care after work



#### Use protective gloves!



### NOTE!

Never use strong cleaning agents for any cleaning work. This can damage or destroy the device.

Step 1: Disconnect the mains plug from the socket.

Step 2: Empty and clean the suction device.

Step 3: Clean the machine with a dry cloth and/or with compressed air (wear protective goggles!). In particular, the guide rails must be kept clean. Always keep the surfaces of the support tables clean. In particular, remove resin residues with a suitable care spray.

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

Step 5: Check the machine for damage to the safety devices and the saw blade. If necessary, carry out or arrange for the repair to be carried out in accordance with the safety instructions.

Step 6: Check the machine regularly and replace if necessary:

- Loose bolts and nuts
- Worn or damaged switches
- Worn or damaged saw blade
- Worn or damaged saw blade guard

### 10.2 Maintenance

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

If the lathe 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 immediately mounted after completion of repair and maintenance work.

#### Visual inspection and maintenance

Main-tenance interval	Maintenance work
before each use	Visually check that the saw blade protection cover is free of sawdust..
before each use	Visually check whether the distance between the riving knife and the saw blade is 3mm - 8mm.
before each use	Check the mains cable for damage and if necessary replaced it by a qualified electrician
after 40 hours	Check the function of the brake. The saw blade must stop within 10 seconds of being switched off.
monthly	Clean and oil the guide elements for adjusting the saw blade.
monthly	Remove sawdust with a vacuum cleaner or brush.
after 300 hours	Check all screw connections and tighten if necessary.
as required	Replace the motor if the braking function drops.

### 10.2.1 Saw blade change



#### DANGER!

Only use suitable saw blades (see Technical Data). If the saw blades are unsuitable or damaged, centrifugal force may cause parts to be thrown away explosively.

Do not use them:

- Saw blades made of highstrength steel (HSS),
- Saw blades with visible damage,
- Cut-off wheel blades.



#### DANGER!

- Only install saw blade with genuine parts.
- Saw blades have to be installed in such way that they do not wobble or run out of balance and cannot work loose during operation.
- Do not use loose-fitting reducing rings; the saw blade could work loose.
- Do not extend the tool for tightening the arbor bolt.
- Do not tighten the arbor bolt by hitting the wrench.
- After the arbor bolt has been tightened, remove all tools used during saw blade installation!



#### CAUTION!

Shortly after sawing, the saw blade can be very hot - risk of burns! Let a hot saw blade cool down.  
Do not clean the saw blade with flammable liquids.



#### CAUTION!

There is also a risk of cuts on the stationary saw blade. Wear protective gloves.  
When reassembling, always pay attention to the direction of rotation and the arrangement of the flanges.



**Use protective gloves!**

Step 1: Switch off the saw and disconnect it from the power supply. Remove the table insert profile and crank the saw blade all the way up.

Step 2: Dismantle the chip hood and - if necessary - additionally secure the saw blade to the teeth with a wooden board.

Step 3: Hold the shaft with an open-end wrench.

Step 4: Loosen the nut with a suitable open-end wrench.

Step 5: Remove the saw blade flange and saw blade from the shaft.

Step 6: Clean the clamping surfaces on the flanges and on the new saw blade.

Step 7: Place the new saw blade and saw blade flange on the shaft. The driving pin on the saw blade flange at the front must be inserted into the bore of the centering flange.

Step 8: Place disc with outside diameter 44 mm on the motor shaft.

Step 9: Use an open-end wrench (Fig.33) to hold the shaft. Turn hexagon nut with left-hand thread onto the motor shaft.

Step 10: Tighten the hex nut. Use the key as a counterhold and tighten the nut.



Fig. 33: Saw blade change

## 11 Troubleshooting

Fault	Possible cause	Solution
Motor does not start	<ol style="list-style-type: none"> <li>1.No mains voltage</li> <li>2.Undervoltage relay was triggered by a short voltage drop</li> <li>3.Motor overheated, e.g. due to blunt saw blade, excessive feed, chip accumulation in the housing</li> </ol>	<ol style="list-style-type: none"> <li>1.Have the power connection checked by qualified personnel</li> <li>2.Switch on again</li> <li>3.Eliminate the cause of the overheating, allow to cool for a few minutes and then switch on again</li> </ol>
Saw blade turns upside down (three-phase motor only)	Phases at connection reversed	Swap two of three phase conductors at the connection
Sawing power decreasing	Saw blade is blunt, the saw blade may have burn marks on the sides.	Replace the saw blade
Saw vibrates, saw blade beats	<ol style="list-style-type: none"> <li>1.Saw blade does not comply with specification</li> <li>2.Saw blade not sufficiently fastened</li> <li>3.Saw blade is defective.</li> </ol>	<ol style="list-style-type: none"> <li>1.Check whether the saw blade is suitable for installation using the specifications in the technical data</li> <li>2.Tighten the fixing screw</li> <li>3.Check the saw blade for mechanical damage and replace if necessary</li> </ol>
The workpiece is knocked back by the saw blade.	<ol style="list-style-type: none"> <li>1.Fences are not correctly positioned</li> <li>2.Cutting knife not aligned with the saw blade</li> <li>3.Defective saw blade</li> </ol>	<ol style="list-style-type: none"> <li>1.Adjust the fences</li> <li>2.Adjust the knife with the saw blade</li> <li>3.Replace the saw blade</li> </ol>
The saw braking time is longer than 10 seconds.	Brake components worn out.	Replace the motor.

## 12 Disposal, reusing used machines

In your own interest and to protect the environment make sure that all machine components are exclusively disposed of in as intended and permitted.

### 12.1 Decommissioning

Disused machines must be decommissioned immediately to prevent misuse at a later point and putting the environment or persons at risk.

Step 1: Remove all environmentally hazardous processing materials from the used machine.

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.

### 12.2 Disposal of electrical equipment

Note that electrical equipment contains a variety of recycling-capable materials and also environmentally hazardous components.

Please help to separate these components and dispose of them responsibly. In case of doubt, contact your local waste disposal authority. Consult a specialist disposal agent for recycling if needed.

### 12.3 Disposing of lubricants

Lubricant manufacturers provide disposal information for the lubricants used. If necessary, request 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!

#### Risk of injury caused by the use of incorrect spare parts!

The use of incorrect or faulty replacement parts may cause danger to the operator and cause damage and malfunction.

- Only original spare parts from the manufacturer or replacement parts approved by the manufacturer must be used.
- In case of doubt, always contact the manufacturer.



### Tips and recommendations

The manufacturer warranty shall be rendered void in the event of a use of unauthorised spare parts.

### 13.1 Ordering Spare parts

Spare parts are available from authorised retailers or directly from the manufacturer.

The following key data is required for queries or spare parts orders:

- Device type
- Item number
- Position number
- Year of construction
- Quantity
- Desired shipping type (post, freight, sea, air, express)
- Shipping address

Spare parts orders without the aforementioned data cannot be taken into account. The supplier shall determine the shipping type if no relevant data was provided.

Data on the machine type, item number and year of manufacture is listed on the type plate attached to the machine.

### Example

The engine for the Table Saw TKS 316 PRO 400V must be ordered. The engine has the number 68 in the spare parts drawing 2.

By ordering spare parts, send a copy of the spare parts drawing (2) with the marked part (engine) and marked position number (68) to the dealer or spare parts department and provide the following information:

- Type of device: **Table Saw TKS 316 PRO 400V**
- Item number: **5902323**
- Drawing number: **2**
- Position number: **68**

### Item number of your device:

TKS 316 PRO 230V	5902321
TKS 316 PRO 400V	5902323

### 13.2 Spare parts drawings

The following spare parts drawings are intended to help identify the necessary spare parts. To order, please send a copy of the list of spare parts with the marked components to your dealer.

#### Spare parts drawing 1

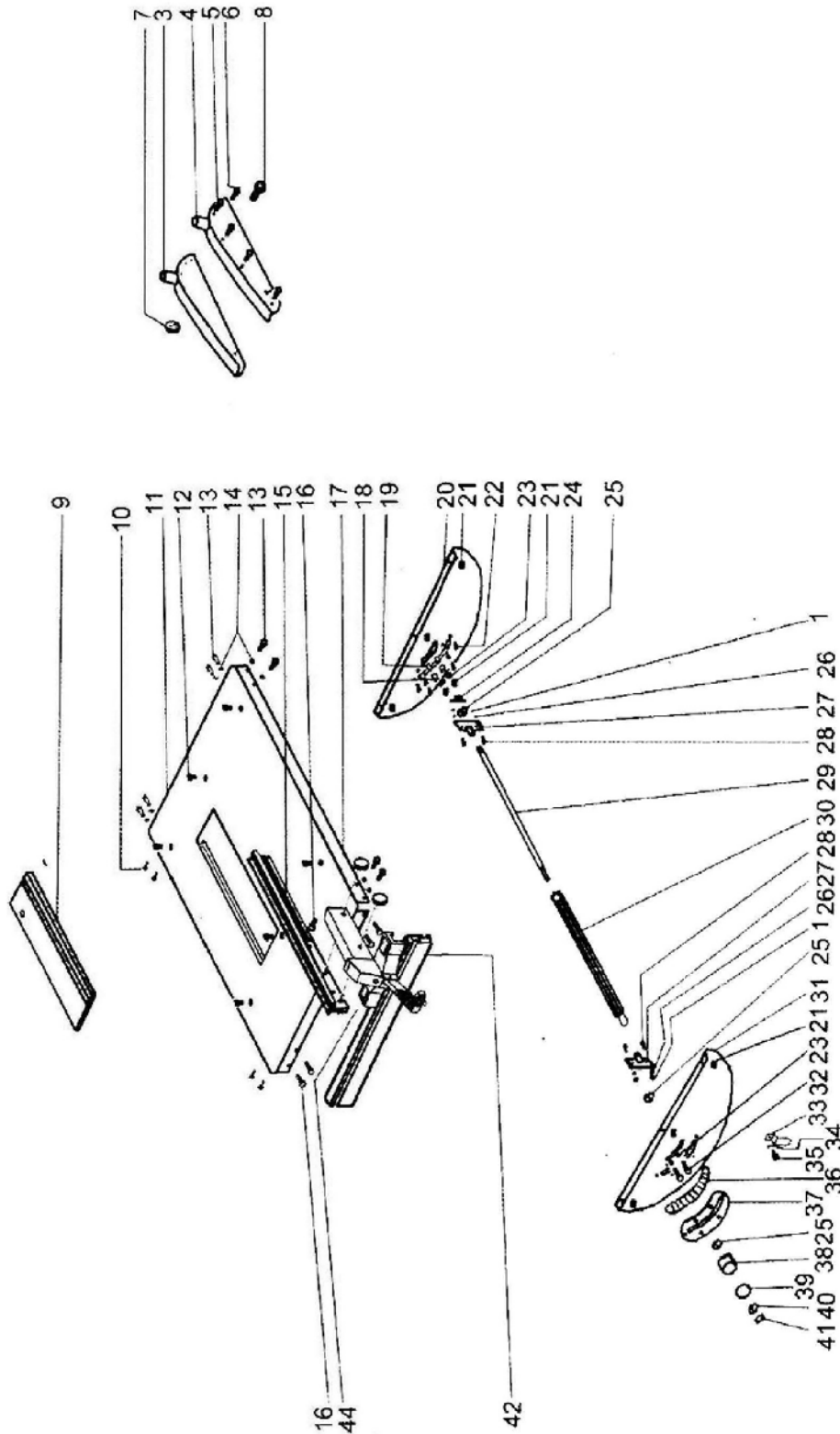


Fig. 34: Spare parts drawing 1 Table Saw TKS 316 PRO





## 14 Electrical circuit diagrams

### Electrical circuit diagram TKS 316 PRO (230V)

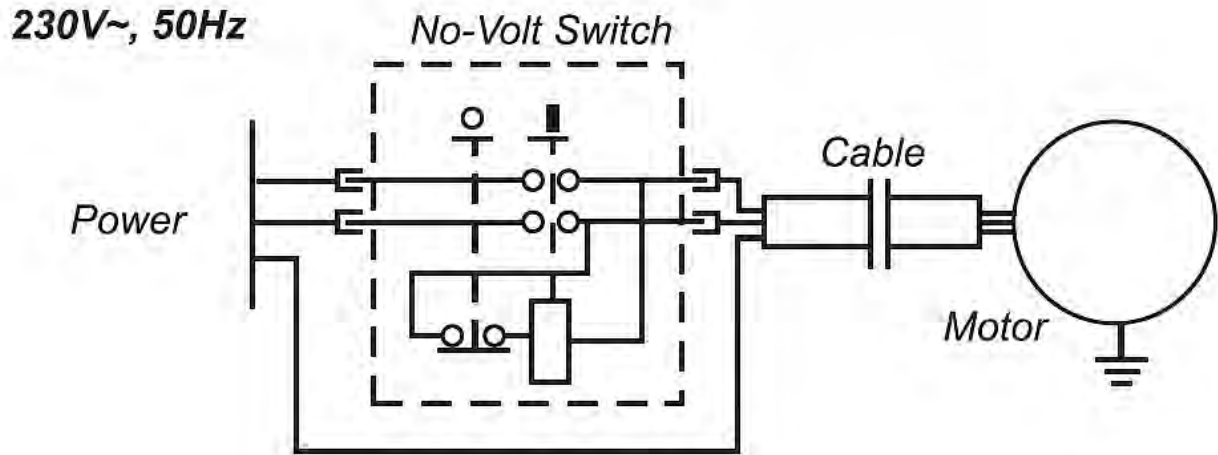


Fig. 37: Electrical circuit diagram TKS 316 PRO 230V Model

### Electrical circuit diagram TKS 316 PRO (400V)

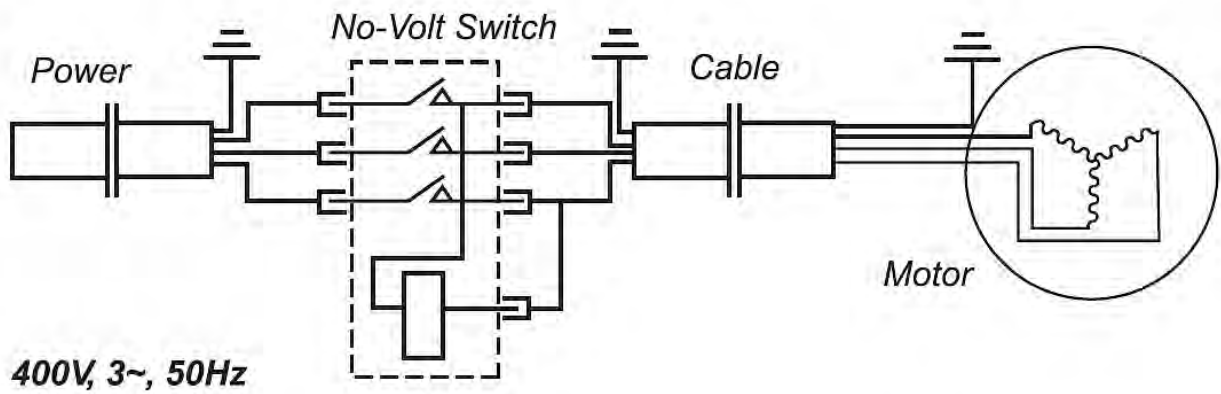


Fig. 38: Electrical circuit diagram TKS 316 PRO 400 V Model

## 15 EC-Declaration of Conformity

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

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

herewith declares that the following product

**Product group:** Holzstar® Wood working machines

**Machine type:** Table Saw

**Designation of the machine\*:** **Item number \*:**

TKS 316 PRO (230V)

5902321

TKS 316 PRO (400V)

5902323

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

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

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

complies with all relevant provisions of the above mentioned directive as well as the other applied directives (below) - including their applicable modifications at the time of the declaration.

**EU directives:**

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

### The following harmonized standards were applied:

DIN EN 62841-1:2023-03	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 1: General requirements
DIN EN 62841-3-1:2022-08	Electric motor-operated hand-held tools, transportable tools and lawn and garden machinery - Safety - Part 3-1: Particular requirements for transportable table saws
DIN EN IEC 55014-1:2022-12	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission
DIN EN IEC 55014-2:2022-10	Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity - Product family standard
DIN EN IEC 61000-3-2:2019-12	Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase)
DIN EN 61000-3-3:2023-02	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 $\leq 16$ 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, 09.03.2023



Kilian Stürmer  
General Manager



