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Originalfassung
DE BETRIEBSANLEITUNG **TISCHKREISSÄGE**

Übersetzung / Translation
EN USER MANUAL **TABLE SAW**

ZI-TS315-230 | **ZI-TS**315-400

EAN: 9120039235004 (230V) | EAN: 9120039235011 (400V)

YOUR JOB. OUR TOOLS.

Edition: 23.02.2024 – Revision 00 – EcC – DE/EN

2 SICHERHEITSZEICHEN / SAFETY SIGNS

DE	SICHERHEITSZEICHEN BEDEUTUNG DER SYMBOLE	EN	SAFETY SIGNS DEFINITION OF SYMBOLS

DE **CE-KONFORM**: Dieses Produkt entspricht den EU-Richtlinien.

EN **EC-CONFORM**: This product complies with the EC-directives.

DE **BETRIEBSANLEITUNG LESEN!** Lesen Sie die Betriebs- und Wartungsanleitung Ihrer Maschine aufmerksam durch und machen Sie sich mit den Bedienelementen der Maschine gut vertraut, um die Maschine ordnungsgemäß zu bedienen und so Schäden an Mensch und Maschine vorzubeugen.

EN **READ THE MANUAL!** Read the user and maintenance carefully and get familiar with the controls in order to use the machine correctly and to avoid injuries and machine defects.

DE Maschine vor Wartung und Pausen ausschalten und Netzstecker ziehen!

EN Switch off the machine before maintenance and breaks and pull out the mains plug!

DE Persönliche Schutzausrüstung tragen!

EN Wear personal protektive equipment!

DE Warnung vor spitzem (scharfem) Werkzeug!

EN Warning of pointed (sharp) tool!

DE Benutzen von Handschuhen verboten!

EN Do not use wearing gloves!

DE **Warnschilder und/oder Aufkleber an der Maschine, die unleserlich sind oder entfernt wurden, sind umgehend zu erneuern.**

EN **Missing or non-readable security stickers have to be replaced immediately.**

3 TECHNIK / TECHNICS

3.1 Komponenten / Components

Nr.	Bezeichnung / description	Nr.	Bezeichnung / description
1	Arbeitstischerweiterung / table extension	8	Anschlussstecker / power plug supply
2	Spaltkeil / riving knife	9	Sägeblatteinstellung / saw blade adjustment
3	Absaugschlauch / suction hose	10	Transportgriffe / transport handle
4	Sägeblattschutz / saw blade protection cover	11	Absauganschluss / dust collector plug
5	Sägeblatt / saw blade	12	Transportrad / transport wheel
6	Anschlag / fence	13	Schiebestock / push stick
7	Ein/Ausschalter / on/off switch	14	Sägeblattschlüssel / saw blade wrench

3.2 Technische Daten / Technical data

Spezifikation / Specification	TS315_230	TS315_400
Spannung / voltage	230 V / 1 / 50Hz	400 V / 3 / 50Hz
Motorleistung /motor power	2000 W S2 (20 min)	3000 W S2 (10 min)
Sägeblattdimension / saw blade dimension	Ø 315 x 30 x 3 mm	
Sägeblattgeschwindigkeit / saw blade speed	2950 min^{-1}	
max. Schnitthöhe / max. cutting height	83 mm @ 90°	
max. Schnitthöhe / max. cutting height	50 mm @ 45°	
max. Schnittbreite am Parallelanschlag / max. cutting width on rip fence	285 mm	
Arbeitstischgröße / work table size	800 x 550 mm	
Tischverlängerung / table extension	800 x 400 mm	
Tischhöhe / table height	850 mm	
notwendiger Luftvolumenstrom Absauganlage / necessary air volume	565 m^3/h	
notwendiger Unterdruck Absauganlage / vacuum dust collector	1000 Pa	
Schutzart / protection mode	IP54	
Schutzklasse / class of protection	I	
Absauganschluss ø / dust collector port	ø 100 mm	
Gewicht netto / weight net	48 kg	
Gewicht brutto / weight gross	52 kg	
Maschinenmaße (LxBxH) / machine dimension (LxWxH)	1660 x 675 x 970 mm	
Verpackungsmaße / packing dimensions	870 x 590 x 445 mm	
Schalldruckpegel L_{PA} / sound pressure level L_{PA}	93 dB(A) k: 4 dB(A)	
Schallleistungspegel L_{WA} / sound power level L_{WA}	109 dB(A) k: 4 dB(A)	

(DE) Hinweis Geräuschangaben: Die angegebenen Werte sind Emissionswerte und müssen damit nicht zugleich auch sichere Arbeitsplatzwerte darstellen. Obwohl es eine Korrelation zwischen Emissions- und Immissionspegeln gibt, kann daraus nicht zuverlässig abgeleitet werden, ob zusätzliche Vorsichtsmaßnahmen notwendig sind oder nicht. Faktoren, welche den am Arbeitsplatz tatsächlich vorhandenen Immissionspegel beeinflussen, beinhalten die Eigenart des Arbeitsraumes und andere Geräuschquellen, d. h. die Zahl der Maschinen und anderer benachbarter Arbeitsvorgänge. Die zulässigen Arbeitsplatzwerte können ebenso von Land zu Land variieren. Diese Information soll jedoch den Anwender befähigen, eine bessere Abschätzung von Gefährdung und Risiko vorzunehmen.

(EN) Notice noise emission: The values given are emission values and therefore do not have to represent safe workplace values at the same time. Although there is a correlation between emission and immission levels, it cannot be reliably deduced whether additional precautions are necessary or not. Factors influencing the actual immission level at the workplace include the nature of the workspace and other noise sources, i.e. the number of machines and other adjacent operations. The permissible workplace values may also vary from country to country. However, this information should enable the user to make a better assessment of hazard and risk.

11 PREFACE (EN)

Dear Customer!

This manual contains information and important notes for safe commissioning and handling of the table saw ZI-TS315-230 & ZI-TS315-400, hereinafter referred to as “machine” in this document.

This manual is part of the machine and must not be removed. Save it for later reference and if you let other people use the machine, add this manual to the machine.

Please read and note the safety instructions!
Before first use read this manual carefully. It eases the correct use of the machine and prevents misunderstanding and damages of machine.

Due to constant advancements in product design, construction, illustrations and contents may deviate slightly. If you notice any errors, please inform us.
We reserve the right to make technical changes!

Check the goods immediately after receipt and note any complaints on the consignment note when taking over the goods from the deliverer!
Transport damage must be reported to us separately to us within 24 hours.
ZIPPER MASCHINEN GmbH cannot accept any liability for transport damage that has not been reported.

Copyright

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12 SAFETY

This section contains information and important notes on the safe commissioning and handling of the machine.

For your safety, read this manual carefully before commissioning. This will enable you to handle the machine safely and thus prevent misunderstandings as well as personal injury and damage to property. Pay special attention to the symbols and pictograms used on the machine as well as the safety information and danger warnings!

12.1 Intended use of the machine

The machine is designed exclusively for the following activities:
For cutting wood or wood-based materials with similar physical properties and within the technical limits.

NOTE

ZIPPER MASCHINEN GmbH assumes no responsibility or warranty for any other use or use beyond this and for any resulting damage to property or injury.

12.1.1 Technical restrictions

The machine is designed for the work under the following conditions:

Relative humidity	max. 70 %
Temperature (operation)	+5 °C to +40 °C
Temperature (storage)	-25 °C to +55 °C

12.1.2 Prohibited applications / Dangerous misuse

- Operating the machine without adequate physical and mental fitness.
- Operating the machine without knowledge of the manual.
- Modifying the machine design.
- Operating the machine in a potentially explosive environment.
- Operating the machine in closed rooms without chip and dust extraction (a normal household vacuum cleaner is not suitable as an extraction device).
- Operating the machine outside the technical limits specified in these operating instructions.
- Removing the safety markings attached to the machine.
- Modifying, bypassing or deactivating the machine's safety devices.
- Operating the machine with materials that are not expressly specified in these operating instructions.
- Machining workpieces with dimensions outside the limits specified in these operating instructions.
- Using tools that do not comply with the safety requirements of the standard for machine tools for woodworking (EN847-1).

The non-intended use or the disregard of the explanations and instructions described in this manual will result in the expiration of all warranty claims and compensation claims for damages against ZIPPER MASCHINEN GmbH.

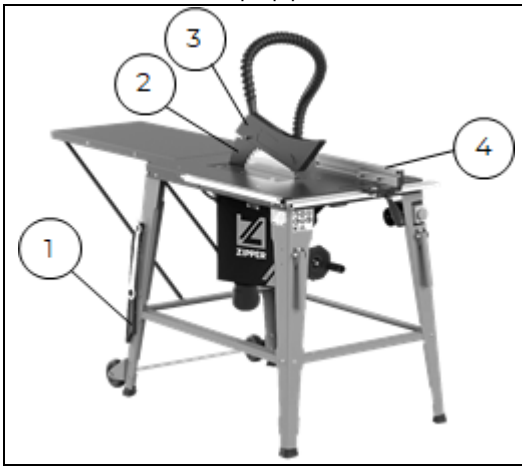
12.2 User requirements

The machine is designed to be operated by one person. The prerequisites for operating the machine are physical and mental fitness as well as knowledge and understanding of the operating instructions. Persons who, due to their physical, sensory or mental capabilities, inexperience or lack of knowledge, are unable to operate the machine safely must not use the machine without supervision or instruction by a responsible person.

Please note that locally applicable laws and regulations determine the minimum age of the operator and may restrict the use of this machine!
Work on electrical components or equipment may only be carried out by a qualified electrician or under the guidance and supervision of a qualified electrician.
Put on your personal protective equipment before working on the machine.

12.3 Safety devices

The machine is equipped with the following safety device:



- Push stick (1): For feeding/pushing workpieces where less than 120 mm is cut off.
- Riving knife (2): This is intended to prevent the workpiece from wedging.
- Saw blade guard (3): Adjustable guard to prevent contact with the saw blade.
- Rip fence (4): For precise guidance of workpieces that are cut lengthwise.

12.4 General safety instructions

To avoid malfunctions, damage and health impairments when working with the machine, the following points must be observed in addition to the general rules for safe working:

- Check the machine for completeness and function before starting. Only use the machine if the separating and other non-separating protective devices required for machining have are fitted.
- Make sure that the guards are in good working order and properly maintained.
- Select a level, vibration-free surface as the installation area.
- Ensure sufficient space around the machine.
- Ensure sufficient lighting conditions at the workplace to avoid stroboscopic effects.
- Ensure a clean working environment.
- Keep the area around the machine free of obstacles (e.g. dust, chips, cut-off workpiece parts, etc.).
- Only use tools that are in perfect condition and free of cracks and other defects (e.g. deformations).
- Remove tool keys and other setting tools before switching on the machine.
- Check the machine's connections for strength before each use.
- Never leave the running machine unattended. Switch off the machine before leaving the working area and secure it against unintentional or unauthorized restarting.
- The machine may only be operated, maintained or repaired by persons who are familiar and who have been informed about the dangers arising from this work.
- Ensure that unauthorized persons keep a safety distance from the machine and keep children away from the machine.
- Always work with care and the necessary caution and never use excessive force.
- Do not overload the machine.
- Hide long hair under hair protection.
- Wear close fitting protective work clothing and suitable protective equipment (eye protection, face protection, ear protection).
- Never wear loose jewellery, loose clothing or accessories (e.g. tie, scarf).
- Do not work on the machine if you are tired, not concentrated or under the influence of medication, alcohol or drugs!

- Do not use the machine in areas where vapours of paints, solvents or flammable liquids represent a potential danger (danger of fire or explosion!).
- Do not smoke in the immediate vicinity of the machine (fire hazard!).
- Shut down the machine and disconnect it from the power supply, before adjustment, changeover, cleaning, maintenance or repair work, etc. Before starting work on the machine, wait until all tools or machine parts have come to a complete standstill and secure the machine against unintentional restart.

12.5 Electrical safety

- Make sure that the machine is grounded.
- Only use suitable extension cables.
- A damaged or tangled cable increases the risk of electric shock. Handle the cable with care. Never use the cable to carry, pull or disconnect the power tool. Keep the cable away from heat, oil, sharp edges or moving parts.
- Proper plugs and outlets reduce the risk of electric shock.
- Water entry into the machine increases the risk of electric shock. Do not expose the machine to rain or moisture.
- The machine may only be used if the power supply is protected by a residual current circuit breaker.
- Before connecting the machine always make sure that the main switch is switched off.
- Use the machine only when the ON-OFF switch is in good working order.

12.6 Special safety instructions for this machine

- Working with gloves on rotating parts is not permitted!
- Wood dust is generated when operating the machine. Therefore, connect the machine to a suitable dust and chip extraction system during installation!
- Always switch on the extraction system before you start processing the workpiece!
- Never remove sections or other parts of the workpiece from the cutting area while the machine is running.
- When using milling tools with a diameter ≥ 16 mm and circular saw blades, these must comply with EN 847-1:2013 and EN 847-2:2013; tool carriers must comply with EN 847-3:2013.
- Excessive noise can lead to hearing damage and temporary or permanent loss of hearing. Wear hearing protection certified to health and safety regulations to limit noise exposure.
- Only use saw blades approved for the machine (EN 847-1).
- Replace cracked and deformed saw blades immediately, they cannot be repaired.
- Use a push stick for cutting operations where less than 120 mm is cut off, i.e. less than 120 mm distance to the right of the saw blade to the rip fence. In this case, do not feed the wood by hand, but with the push stick!
- Select the number of teeth on the saw blade so that at least 2-3 teeth cut through the workpiece at the same time. A smaller number of teeth will result in an unclean cut and also increase the risk of vibrations and noise pollution due to increased kickback.

12.7 Hazard warnings

12.7.1 Residual risks

Despite intended use, certain residual risk factors remain.

- Risk of injury to hands/fingers from the rotating circular saw blade during operation.
- Risk of injury due to contact with live components.
- Risk of injury due to breakage or ejection of the circular saw blade or parts of the circular saw blade, especially in the event of overloading.
- Risk of injury: Hair and loose clothing etc. can be caught and wound up! Always observe the safety regulations regarding work clothing.
- Hearing damage if the user has not taken precautions for hearing protection.
- Risk of injury due to kickback of the cut material, ejection of the cut material or parts thereof.

- Risk of eye injury from flying parts, even when wearing safety goggles.
- Risk of inhalation of toxic wood dust from treated workpieces.

12.7.2 Hazardous situations

Due to the structure and construction of the machine, hazardous situations may occur which are identified in this manual as follows:

DANGER

A safety instruction designed in this way indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

A safety instruction designed in this way indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

A safety instruction designed in this way indicates a possibly hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE

A safety notice designed in this way indicates a potentially hazardous situation which, if not avoided, may result in property damage.

Regardless of all safety regulations, your common sense and your appropriate technical aptitude/training are and remain the most important safety factor in the error-free operation of the machine. **Safe working depends on you!**

13 TRANSPORT

Transport the machine in its packaging to the place of installation. To manoeuvre the machine in the packaging, a pallet truck or forklift truck with the appropriate lifting force (the fork must have a length of at least 1200 mm) can be used, for example. The specifications can be found in the chapter Technical data. For proper transport, also observe the instructions and information on the transport packaging regarding centre of gravity, lifting points, weight, means of transport to be used as well as the prescribed transport position etc. Ensure that the selected lifting equipment (crane, forklift, pallet truck, load sling, etc.) is in perfect condition.
Lifting and transporting the machine may only be carried out by qualified personnel with appropriate training for the lifting equipment used.

WARNING

Risk of injury from suspended or unsecured load!
Damaged or insufficiently strong hoists and load slings can result in serious injury or even death.

→ Before use, therefore, check hoists and load slings for adequate load-bearing capacity and perfect condition. Secure the load carefully. Never stand under suspended load!

14 ASSEMBLY

14.1 Preparation

14.1.1 Check delivery content

Check the delivery immediately for transport damage and missing parts. Report any damage or missing parts to your dealer or the shipping company immediately. Visible transport damage must also be noted immediately on the delivery note in accordance with the provisions of the warranty, otherwise the goods are deemed to have been properly accepted.

14.1.2 Requirements for the installation site

The selected installation site must ensure a suitable connection to the power supply.
Place the machine on a level, solid surface.
The space requirement by the machine including a distance of approx. 50 centimetres to walls and other objects result from the technical data (dimensions, weight) of your machine. When dimensioning the required space, take into account that an unobstructed air supply to the machine must be ensured and that the operation, maintenance and repair of the machine must be possible without restrictions at all times.
The chosen installation site of the machine must comply with the local safety regulations as well as the ergonomic requirements for a workplace with sufficient lighting conditions.

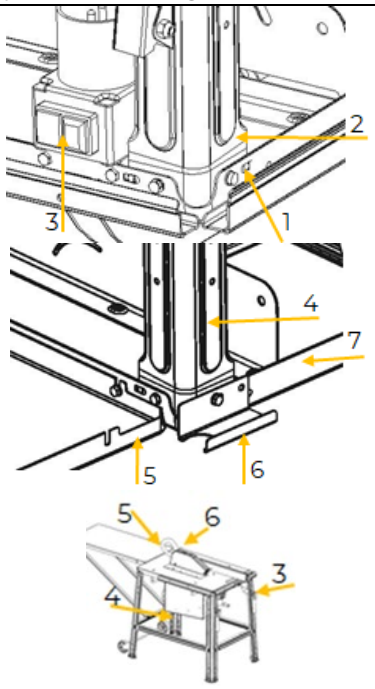
14.1.3 Preparation of the surfaces

Before putting the machine into operation, carefully remove the corrosion protection or grease residues from the bare metal parts. This can be done with the usual solvents. Under no circumstances should you use nitro thinners or other cleaning agents, as these can attack the machine´s finish.

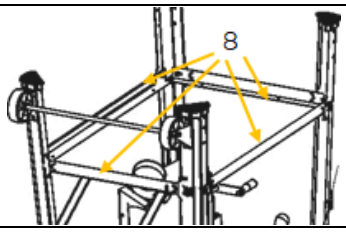
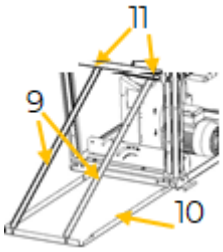
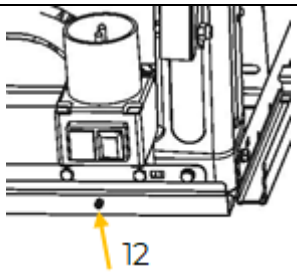
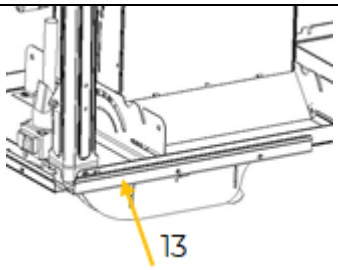
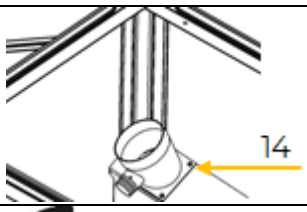
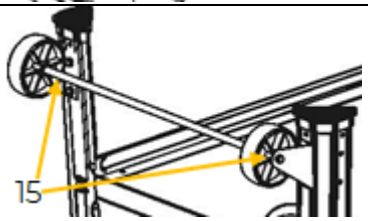
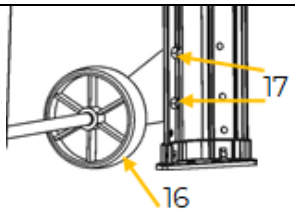
NOTE	
	The use of paint thinners, petro, aggressive chemicals or scouring agents will damage the surfaces! **Therefore: Use only mild cleaning agents!**

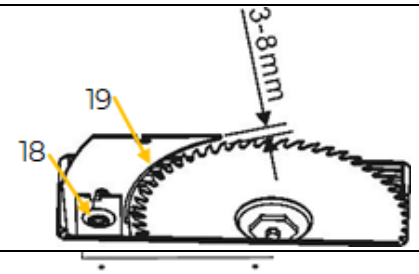
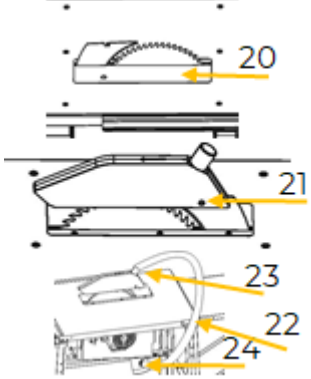
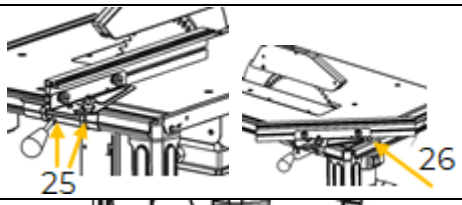
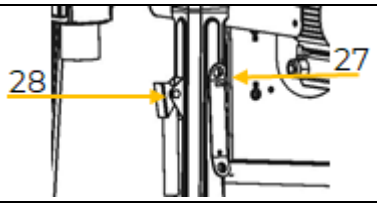
14.2 Assemble

The machine comes pre-assembled, it is necessary to assemble the components dismantled for transport according to the following instructions and to make the electrical connection.



- Place the worktop with the motor on its side so that you have easy access to the underside of the worktop.
- Fix the 4 supporting legs to the holes provided using 2 M6×16 hexagon head screws with washers and nuts. Do not overtighten the screws.
  - Fix the switch (3) to the holes provided in the worktop using the 2 M4 nuts and washers.
  - Attach the third leg (4) together with the hose clamp (6) to the long side and together with the extension table (5) to the narrow side of the worktop (7).

	• Attach the 4 braces (8) to the 4 supporting legs using 12 M6×16 hexagon bolts with washers and nuts. Do not overtighten the screws.
	• Fit the supports (9) for the extension table (10) to the strut (11) using 4 hexagon nuts M6×16 together with washers and nuts.
	• Mount the guide rail short (12) for the stop on the front of the machine using s M6×30 screws.
	• Fit the guide rail long (13) on the left-hand side of the machine. **NOTE:** The fence can be changed between these guides during use (longitudinal and transverse fence).
	• Attach the funnel for the suction connection (14) to the holder provided using 4 M4×10 hexagon head screws.
	• Fix the wheels (15) to the two feet with 4 hexagon head screws M6×16. Do not overtighten the screws yet. • Tighten the screws firmly except for the connection of the wheels.
	• Turn the machine over so that it is standing on its feet. • Position the axle with the wheels (16) so that both wheels are touching the ground. • Now tighten the screws (17) on both sides.

	• Loosen the screw (18) and fix the riving knife (19) so that the required distance between the saw blade and riving knife is set.
	• Use the handwheel to move the saw blade to the lowest position. • Fasten the guard (20) with 4 M6×16 cross-head countersunk screws. • Fasten the saw blade guard (21) to the riving knife with an M6×25 round-head screw and nut. • Connect the suction hose to the connection on the saw blade guard (23) and the connection (24) on the funnel. • Secure the suction hose in the guide (22) provided.
	• Fix the fence holder to the worktable (25) using 2 M6×20 screws. • Press the fence holder into the edge of the guide (26).
	• Secure the tool (push stick and saw blade wrench) to the base (27) using the 2 M6 screws. • Secure both transport handles to the feet on the front of the table (28) using 4 M6×16 hexagon head screws, washers and nuts.

14.3 Electrical connection

WARNING

Dangerous electrical voltage!
Risk of injury due to dangerous electrical voltage!
→ The machine may only be connected to the power supply and the associated checks carried out by a qualified electrician or under the instruction and supervision of a qualified electrician!

- Check, whether the neutral connection (if existing) and the protective grounding function properly.
- Check, whether the supply voltage and the frequency correspond to the specifications of the machine.

NOTE

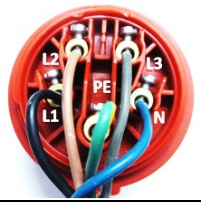
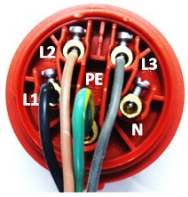
Deviation of the supply voltage and frequency!
A deviation from the value of the supply voltage of ±5 % is permissible.
A short-circuit fuse must be provided in the power supply system of the machine!

- Use a supply cable that fulfils the electrical requirements (e.g. H07RN, H05RN) and take the required cross-section of the supply cable from a current carrying capacity table. Pay attention to the measures for protection against mechanical damage.
- Make sure that the power supply is protected by a residual current circuit breaker.
- Connect the machine only to a properly grounded outlet.

- When using an extension cable, make sure that the dimension matches the connected load of the machine. The connection power can be found in the technical data, the correlation of cable cross-section and cable lengths can be found in the technical literature or obtain information from a specialist electrician.
- A damaged cable must be replaced immediately.

14.3.1 Setting up a 400 V machine

- The grounding conductor is yellow-green.
- Connect the supply cable to the corresponding terminals in the input box (L1, L2, L3, N and PE), see the figure below. If a CEE plug is available, the connection to the power supply is made through an appropriately powered CEE coupling (L1, L2, L3, N and PE).

Plug connection 400V:	5-wire: **with** N-conductor 	4-wire: **without** N-conductor 

- After the electrical connection, check the correct running direction. If the machine runs in the wrong direction, swap two conductive phases, e.g. L1 and L2, at the connection plug.

NOTE

Operation is only permitted with residual current device (RCD) with maximum residual current of 30 mA.

15 OPERATION

WARNING

Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.
→ Always disconnect the machine from the power supply before adjustments, cleaning, maintenance or repair work and secure it against unintentional reconnection.

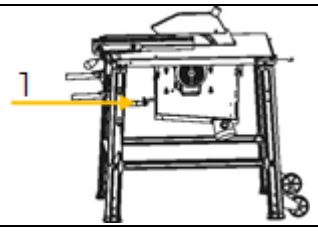
Only operate the machine when it is in a perfect condition. Before each operation, a visual inspection of the machine must be carried out. Safety devices and operating elements must be checked carefully. Check screw connections for damage and tight fit.

15.1 Operating instructions

- Check that the saw blade is firmly seated before starting.
- Check the running direction of the saw blade (direction of arrow!).
- Never start the machine with the workpiece pressed down.
- Always operate the machine with the extraction system switched on.
- Always adjust the cutting speed to the respective workpiece (material, size).
- Use the push stick to avoid the risk of contact with the saw blade.
- Guide the workpiece evenly to the end of the cut without pulling it back.

15.2 Adjustments

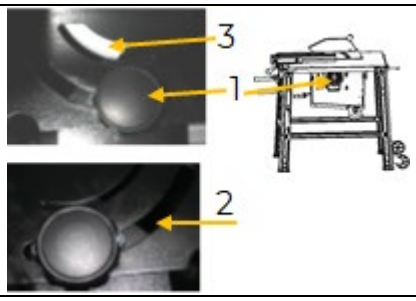
15.2.1 Cutting depth



- Set the cutting depth using the handwheel on the front of the machine (1). Read the set cutting depth on the scale.

Set the cutting depth so that the saw blade protrudes approx. 2-3 cm above the workpiece.

15.2.2 Saw blade inclination



- Loosen the clamping screw (2) and open the clamping screw (1).

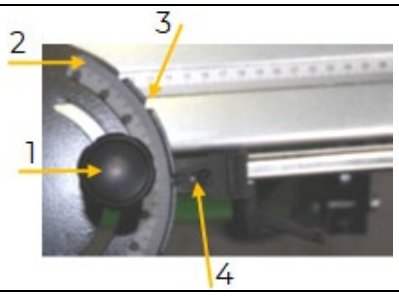
NOTE: Clamping screw 2 is located on the other side of the motor, opposite clamping screw 1.

- - Set the blade inclination with clamping screw 1. Read off the set value on the scale (3).
- Fix the clamping screws again (1, 2).

15.2.3 Rip fence

- Loosen the clamping screw (1).
- Move the rip fence (2) along the guide to the desired dimension (scale).
- Secure the clamping screw (1).

15.2.4 Angle fence



- Open the clamping screw (1).
- The angle can be read off the scale (2).
- There are notches for the most important angles (3), which can be easily adjusted using the notch (4).
- Finally, tighten the clamping screw (1) again.

15.3 Handling

15.3.1 Placing the machine

- Lift the machine by the transport handles (1) and push the machine to the desired work location.
- Choose a level work location with sufficient space around the machine.

15.3.2 Switching the machine on/off

Switch on
- Press the switch-on button (1) on the switch unit (3).

Switch off
- Press the switch-off button (2) on the switch unit (3).

15.3.3 Connecting the extraction system

- Connect the hose of the extraction system to the funnel of the machine (1). The necessary information can be found in the Technical data chapter.

When positioning the extraction system and the hose guide, ensure that they do not obstruct your work with the table saw.

15.3.4 Cutting the workpiece

- Position the machine.
- Connect the extraction system to the machine.
- Set the cutting depth, the saw blade inclination and the fence. Make sure that the adjusting screws are tight.
- Establish the electrical connection and switch on the machine.
- Switch on the extraction system.
- Place the workpiece on the machine and guide it evenly. Use the push stick for cuts < 12 mm.

After cutting
- Switch off the machine and wait until the machine has come to a complete standstill.
- Switch off the extraction system.
- Remove the workpiece.
- Clean the machine.

16 CLEANING, MAINTENANCE, STORAGE, DISPOSAL

WARNING

Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.
→ Always disconnect the machine from the power supply before cleaning, maintenance or repair work and secure it against unintentional reconnection.

16.1 Cleaning

Regular cleaning guarantees the long service life of your machine and is a prerequisite for its safe operation.

NOTE

Incorrect cleaning products can attack the finish of the machine. Do not use any solvents, nitro thinners or other cleaning products that could damage the machine's finish.
Observe the specifications and instructions of the cleaning agent manufacturer.

- After each use, remove dust and dirt particles from the machine.
- Clean the machine with a damp cloth and, if necessary, some commercial detergent or blow it out with compressed air at low pressure.
- Lubricate bare machine parts with an acid-free lubricating oil (e.g. WD40 rust inhibitor).

16.2 Maintenance

The machine is low-maintenance and only a few parts need to be serviced. Malfunctions or defects that could affect your safety must be repaired immediately!

- Before each operation, check the perfect condition of the safety devices.
- Regularly check the perfect and legible condition of the warning and safety labels of the machine.
- Use only original spare parts recommended by the manufacturer.

16.2.1 Maintenance plan

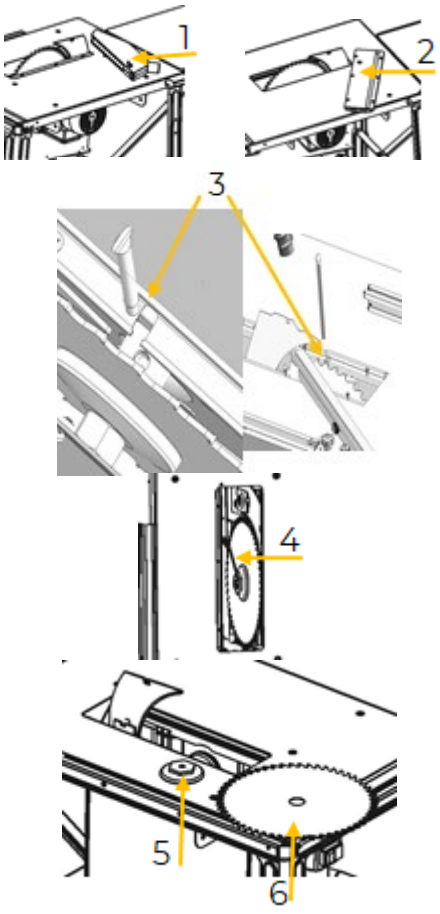
The type and degree of machine wear depends to a large extent on the operating conditions. The following intervals apply when the machine is used within the technical limits:

Interval	Components	Action
before usage	• screws	• tighten if necessary or replace if lost
	• machine parts	• check for damage, especially rost
after usage	• machine	• clean

16.2.2 Saw blade replacement

CAUTION

When handling circular saw blades when changing tools, use safety gloves to avoid risk of injury.



- Set the saw blade to the vertical position.
- Loosen the screw and remove the saw blade guard saw blade guard (1).
- Loosen the screws and remove the table cover (2).
- Insert the narrow cap of the fixing rod (3) through the hole in the work table into the inner chuck.
- Use the saw blade wrench (4) to loosen the fixing screw of the saw blade.
- Remove the nut (5) and the saw blade (6).
- Place the new saw blade on the fastening screw and proceed in reverse order.

NOTE: Pay attention to the direction of rotation when inserting the saw blade. Ensure that the saw blade is in a vertical position and firmly seated.

16.3 Storage

- Disconnect the machine from the power supply and from the extraction system.
- Set the saw blade to the vertical position and lower it as far as possible. The saw blade guard should cover the saw blade as far as possible.
- Clean and cover the machine.

Store the machine in a dry, frost-proof and lockable place when not in use. Make sure that unauthorised persons and especially children do not have access to the machine.

NOTE

Improper storage can damage and destroy important components. Only store packed or already unpacked parts under the intended ambient conditions!

16.4 Disposal

Observe the national waste disposal regulations. Never dispose of the machine, machine components or operating equipment in the residual waste. If necessary, contact your local authorities for information regarding available disposal options.
If you purchase a new machine or equivalent equipment from your specialist dealer, he is obliged in certain countries to dispose of your old machine properly.

17 TROUBLESHOOTING

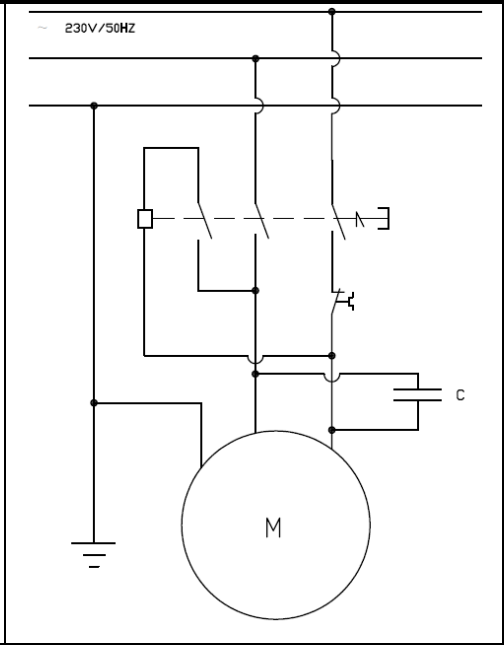
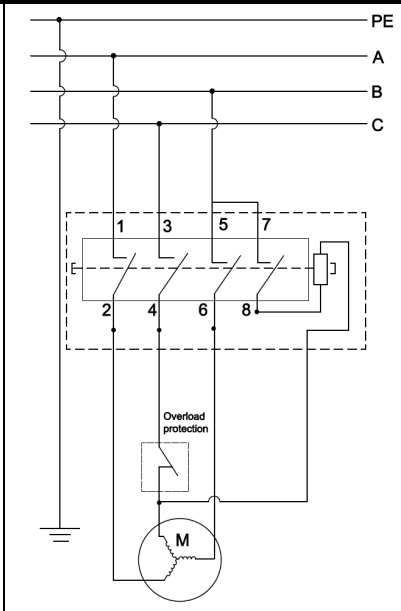
WARNING

Danger due to electrical voltage!
Handling the machine with connected power supply may result in serious injury or death.
→ Disconnect the machine from the power supply before starting work to eliminate defects!

Many possible sources of error can be eliminated in advance if the machine is properly connected to the power supply.
If you are unable to carry out the necessary repairs properly and/or do not have the required training, always consult a specialist to solve the problem.

Trouble	Possible cause	Solution
Motor does not run or does not run properly	• Cable or extension cable defective or too long	• Unplug, check with another machine (minimum cross-section 1.5 mm² and max. length 10 m)
	• Incorrect power supply (voltage, frequency)	• Adjust power supply (see chapter Technical data)
	• Motor defective	• External influence (overvoltage, lightning strike, etc.) or overload. Take the machine to your dealer.
Saw blade gets stuck	• Incorrectly adjusted riving knife	• Set riving knife distance
	• Incorrect saw blade	• 3-8 mm to circular saw blade
	• Blunt saw blade	• Use a circular saw blade recommended for your material
	• Material too hard or cutting too fast.	• Sharpen or replace
Material setback	• Blunt saw blade	• Sharpen or replace
	• Material-related (knots, direction of growth, etc...)	• Switch off machine, remove material, check
Cutting angle is not correct; Mitre angle is not correct	• Incorrectly adjusted angle stop	• Readjust
	• Incorrectly adjusted rip fence	• Fix the rip fence in place. Measure the angle to the circular saw blade (0° target angle) in the fixed state. If the angle deviates, readjust the fence guide (fixing screws guide to table + washers)

18 ELEKTRISCHER SCHALTPLAN / WIRING DIAGRAM

ZI-TS315_230		ZI-TS315_400	
Schaltplan, einphasig, mit Kontaktschalter / Wiring Diagram, single phase, with contactor		Schaltplan, dreiphasig, mit Kontaktschalter / Wiring Diagram, three phase, with contactor	

19 ERSATZTEILE / SPARE PARTS

19.1 Ersatzteilbestellung / Spare parts order

(DE) Mit ZIPPER-Ersatzteilen verwenden Sie Ersatzteile, die ideal aufeinander abgestimmt sind. Die optimale Passgenauigkeit der Teile verkürzen die Einbauzeiten und erhöhen die Lebensdauer.

HINWEIS

Der Einbau von anderen als Originalersatzteilen führt zum Verlust der Garantie!
Daher gilt: Beim Tausch von Komponenten/Teile nur vom Hersteller empfohlene Ersatzteile verwenden.

Bestellen Sie die Ersatzteile direkt auf unserer Homepage – Kategorie ERSATZTEILE,
oder kontaktieren Sie unseren Kundendienst

- über unsere Homepage – Kategorie SERVICE – ERSATZTEILANFORDERUNG,
- per Mail an eg01@zipper-maschinen.at.

Geben Sie stets Maschinentype, Ersatzteilnummer sowie Bezeichnung an. Um Missverständnissen vorzubeugen, empfehlen wir, mit der Ersatzteilbestellung eine Kopie der Ersatzteilzeichnung beizulegen, auf der die benötigten Ersatzteile eindeutig markiert sind, falls Sie nicht über den Online-Ersatzteilkatalog anfragen.

(EN) With original ZIPPER spare parts you use parts that are attuned to each other shorten the installation time and elongate your products lifespan.

NOTE

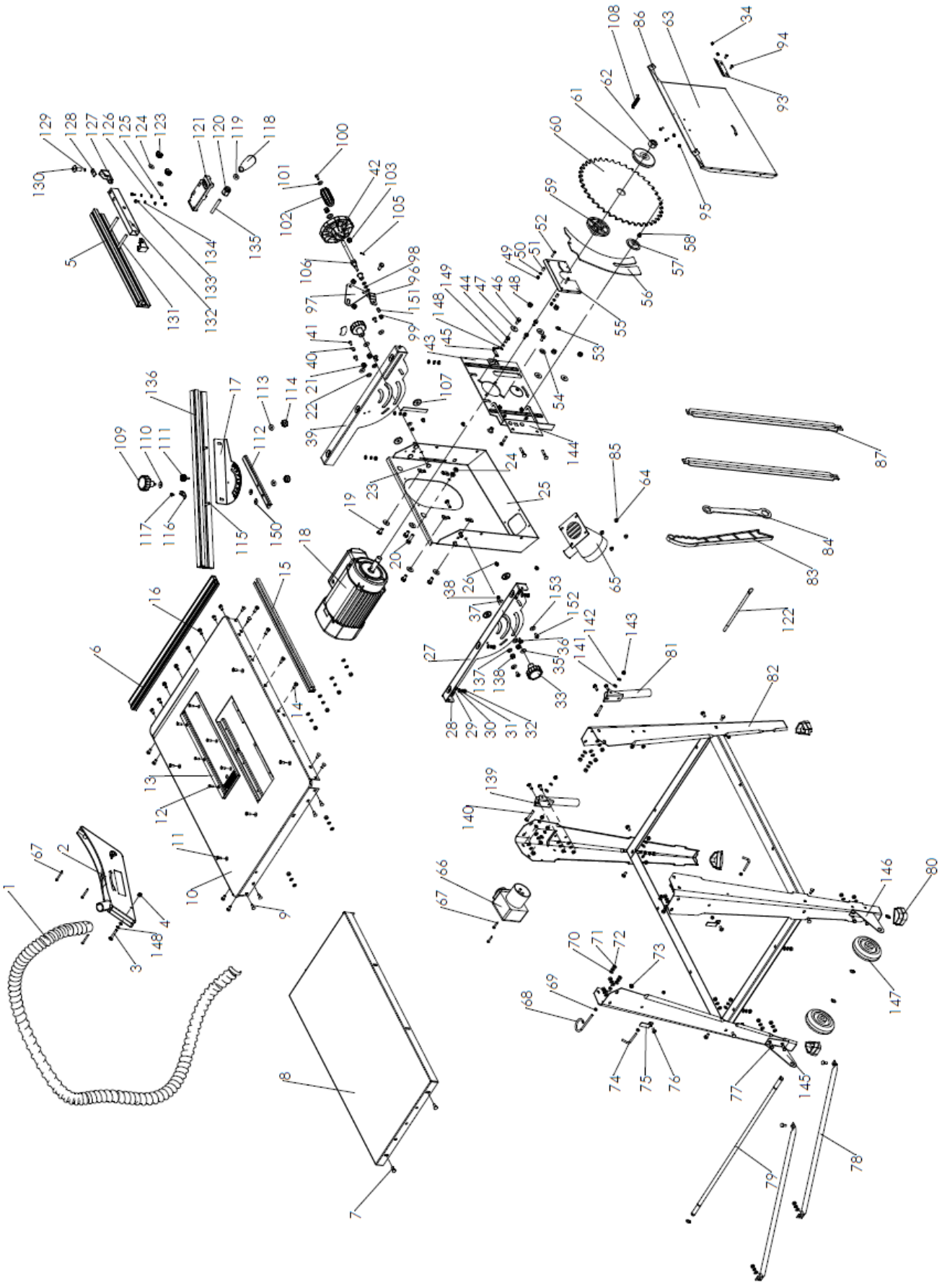
The installation of parts other than original spare parts leads to the loss of the guarantee!
Therefore: When replacing components/parts, only use spare parts recommended by the manufacturer.

Order the spare parts directly on our homepage – category SPARE PARTS or contact our customer service

- via our Homepage – category SERVICE/NEWS - SPARE PARTS REQUEST,
- by e-mail to eg01@zipper-maschinen.at.

Always state the machine type, spare part number and designation. To prevent misunderstandings, we recommend that you add a copy of the spare parts drawing with the spare parts order, on which the required spare parts are clearly marked, especially when not using the online-spare-part catalogue.

19.2 Explosionszeichnung / Exploded view



19.3 Ersatzteilliste / Spare part list

No.	Description	Qty.	No.	Description	Qty.	No.	Description	Qty.
1	corrugated pipe	1	**52**	cross screw M4x22	2	**103**	self -locking screws M8	3
2	guard	1	**53**	shaft ring Ø10	1	**104**	adjusting screw rod	1
3	square neck screw M5x40	1	**54**	flat pad Ø10	1	**105**	elastic pin M3x30	1
4	nut M5	1	**55**	saw blade guard	1	**106**	self -locking screws M10	2
5	movable guide ruler	1	**56**	distributor	1	**107**	stop sleeve	2
6	table board	1	**57**	stamping chuck	1	**108**	drag spring	1
7	square neck screw M6x12	4	**58**	nut M12	1	**109**	handle	1
8	external surface	1	**59**	in chuck	1	**110**	flat washer Ø6xØ18	1
9	square neck screw M6x16	28	**60**	saw blade	1	**111**	handle	1
10	Working table	1	**61**	the wild card disc	1	**112**	guide block	1
11	inner six angle head screw M6x20	6	**62**	nut M16	1	**113**	flat washer Ø6xØ18	2
12	cross recessed head screws M5x16	6	**63**	door plank	1	**114**	handle M6	2
13	plastic knife groove	1	**64**	cross screw M5x8	4	**115**	coach nut M6x12	2
14	outer six angle screw M6x16	4	**65**	ash outlet pipe	1	**116**	guide block	1
15	guide slot slide	1	**66**	switch	1	**117**	screws M5x10x12	1
16	outer six angle screw M6x16	8	**67**	self tapping screws ST4.2x20	5	**118**	handle	1
17	guide ruler	1	**68**	circular hook	1	**119**	flat washer Ø6xØ18	1
18	motor	1	**69**	nut M5	6	**120**	rotating sleeve	1
19	outer six angle screw M8x16	4	**70**	flat pad Ø6	50	**121**	sliding body	1
20	outer six angle screw M8x30	1	**71**	spring washer Ø6	50	**122**	manual lever	1
21	nut Ø8	4	**72**	nut M6	50	**123**	handle M6	2
22	flat pad Ø8xØ12	4	**73**	nut M6	2	**124**	flat washer Ø6xØ18	2
23	square neck screw M6x25	2	**74**	right angle hook	2	**125**	self -locking screws M5	2
24	nut M8	2	**75**	push rod clamp	2	**126**	flat washer Ø5	2
25	rotating plate	1	**76**	cross screw M6x12	2	**127**	blanket-cap	2
26	cross slot three combination M5x10	4	**77**	outer six angle screw M6x16	10	**128**	guilder' needle	1
27	rear bracket	1	**78**	long support	2	**129**	flat washer Ø5	1
28	nut M6	4	**79**	roller shaft	1	**130**	self tapping screws ST4.2x8	1
29	outer six angle screw M6x20	4	**80**	rubber foot	4	**131**	coach nut M6x35	2
30	flat pad Ø6xØ18	6	**81**	hand	2	**132**	fixed fence	1
31	spring washer Ø6	6	**82**	supporting legs	1	**133**	screws M5x14	2
32	nut M6	6	**83**	push rod	1	**134**	spring washer Ø5	2
33	lock handle	2	**84**	big wrench	1	**135**	locking mandrel	1
34	nut M4	2	**85**	widened flat pad Ø75xØ9	4	**136**	fence	1
35	flat pad Ø6xØ18	2	**86**	door panel rotary plate	1	**137**	flat washer Ø8xØ22	4
36	special screw M5x14	2	**87**	short connecting rod	2	**138**	screw M6x16	8
37	flat pad Ø5xØ9	2	**88**	supporting legs	1	**139**	handle fixing plate	2
38	nut M5	2	**89**	supporting legs	1	**140**	screws M6x40	2
39	front bracket	1	**90**	supporting legs	1	**141**	flat washer Ø6	2
40	plastic pointer	1	**91**	short transverse brace	2	**142**	spring washer Ø6	2
41	cross screw M5x12	1	**92**	long transverse brace	2	**143**	nut M6	2
42	adjustment handle	1	**93**	hinge	1	**144**	moving plate 2 welding assembly	1
43	moving plate	1	**94**	bolt M4x10	4	**145**	right wheel fixing plate	1
44	outer six angle three combination M5x10	1	**95**	nut M4	4	**146**	wheel left fixing plate	1
45	pointer	1	**96**	screw rod fixing plate	1	**147**	iron core wheel	2
46	outer six angle three combination M6x16	4	**97**	connecting plate	1	**148**	flat washer Ø5	3
47	flat pad Ø8xØ22	4	**98**	flat washer Ø6	3	**149**	spring washer Ø5	1
48	nut M8	4	**99**	nut M6	1	**150**	flat washer Ø6xØ18x1.5	2
49	nut M4	2	**100**	bolt M8x65	1	**151**	nut M6	1
50	nut M4	2	**101**	flat washer Ø8	1	**152**	screw M6x12	4
51	pallet	2	**102**	turning handle	1	**153**	flat washer Ø6x Ø18	4

20 EU-KONFORMITÄTSERKLÄRUNG / CE-CERTIFICATE OF CONFORMITY

CE

Inverkehrbringer / Distributor

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Bezeichnung / name
TISCHKREISSÄGE / TABLE SAW
Typ / model
ZI-TS315-230 | ZI-TS315-400
EU-Richtlinien / EC-directives
• 2006/42/EC • 2014/30/EC • 2011/65/EC
Angewandte Normen / applicable Standards
EN ISO 19085-1:2021; EN ISO 19085-9:2020; EN IEC 55014-1:2021; EN IEC 55014-2:2021; EN IEC 61000-3-2:2019/A1:2021; EN IEC 61000-3-11: 2019;

(DE) Hiermit erklären wir, dass die oben genannten Maschinen aufgrund ihrer Bauart in der von uns in Verkehr gebrachten Version den grundlegenden Sicherheits- und Gesundheitsanforderungen der angeführten EU-Richtlinien entsprechen. Diese Erklärung verliert ihre Gültigkeit, wenn Veränderungen an der Maschine vorgenommen werden, die nicht mit uns abgestimmt wurden.

(EN) Hereby we declare that the above mentioned machines meet the essential safety and health requirements of the above stated EC directives. Any manipulation or change of the machine not being explicitly authorized by us in advance renders this document null and void.

Technische Dokumentation
ZIPPER MASCHINEN GmbH
4170 Haslach, Marktplatz 4

Schlüsslberg, 23.02.2024
Ort / Datum place/date

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