PARKSIDE®

SLIDING CROSS CUT MITRE SAW PZKS 1500 A1

(GB)

SLIDING CROSS CUT MITRE SAW PZKS 1500 A1

Operating and Safety Instructions
Translation of Original Operating Manual

(HU)

VONÓ-, FEJEZŐ ÉS SARKALÓ FŰRÉSZ PZKS 1500 A1

Kezelési és biztonsági útmutató
Az eredeti használati útmutató fordítása

(CZ)

KAPOVACÍ A POKOSOVÁ PILA S POJEZDEM PZKS 1500 A1

Pokyny k obsluze a bezpečnostní pokyny
Překlad originálního návodu k obsluze

(DE) (AT) (CH)

ZUG- KAPP- UND GEHRUNGSSÄGE PZKS 1500 A1

Bedienungs- und Sicherheitshinweise
Originalbetriebsanleitung

(PL)

PIŁA UKOŚNA PZKS 1500 A1

Wskazówki dotyczące obsługi i bezpieczeństwa
Tłumaczenie oryginalnej instrukcji obsługi

(SI)

POTEZNA, ČELILNA IN ZAJERALA ŽAGA PZKS 1500 A1

Napotki za upravljanje in varnost
Prevod originalnih navodil za uporabo

(SK)

TESÁRSKA, KAPOVACIA A POKOSOVÁ PÍLA PZKS 1500 A1

Upozornenia k obsluhe a bezpečnostné upozornenia
Preklad originálu návodu na obsluhu

IAN 46876

(PL) (HU) (SI)
(CZ) (SK)

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SLIDING CROSS CUT MITRE SAW PZKS 1500 A1

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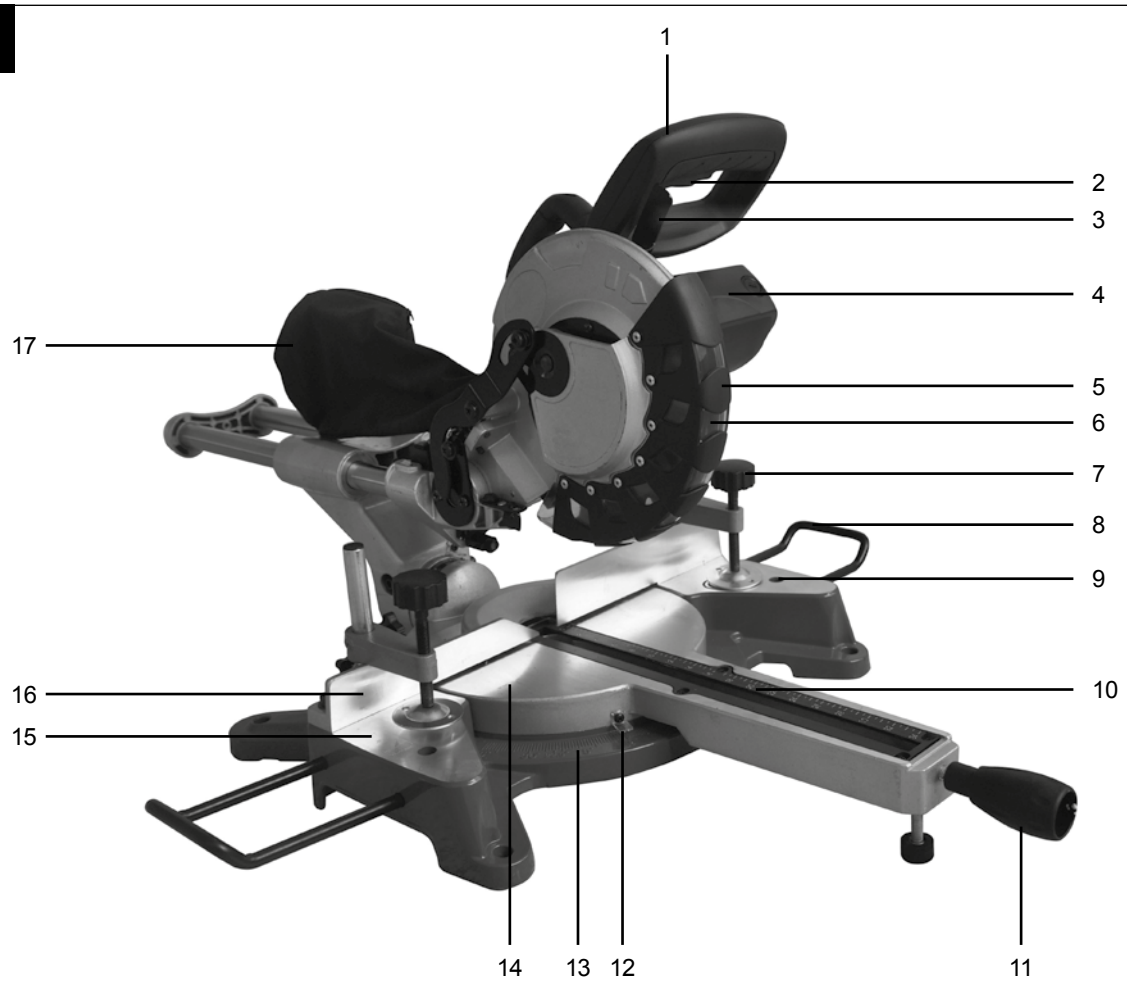

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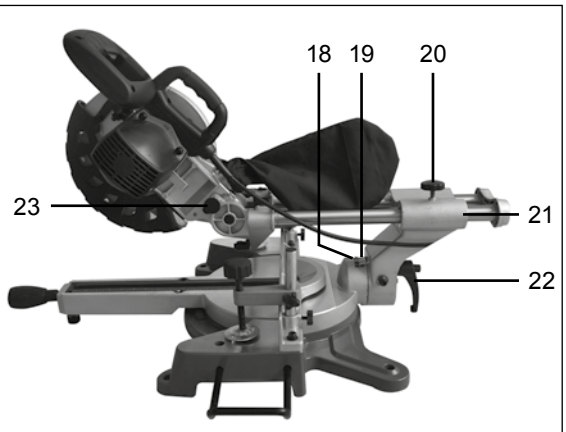

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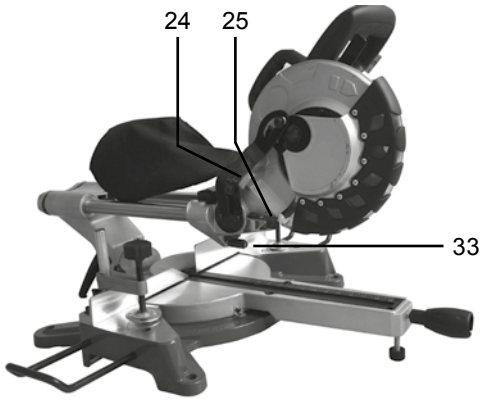

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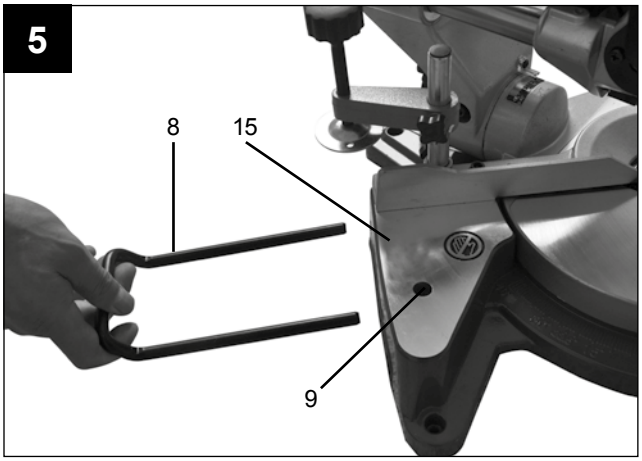

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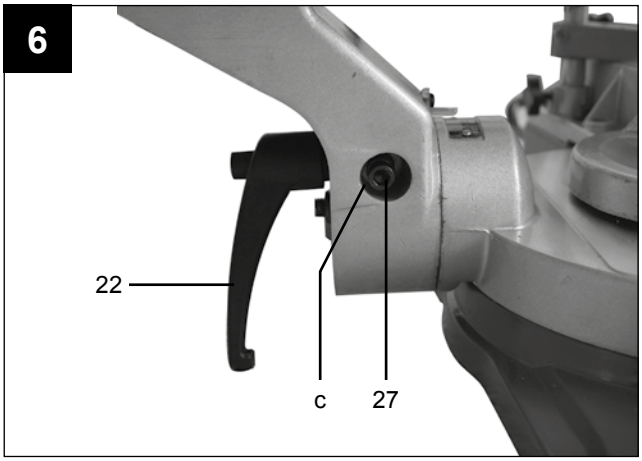

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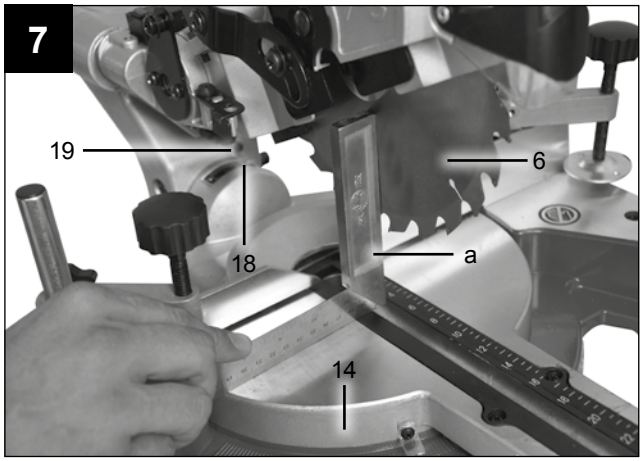

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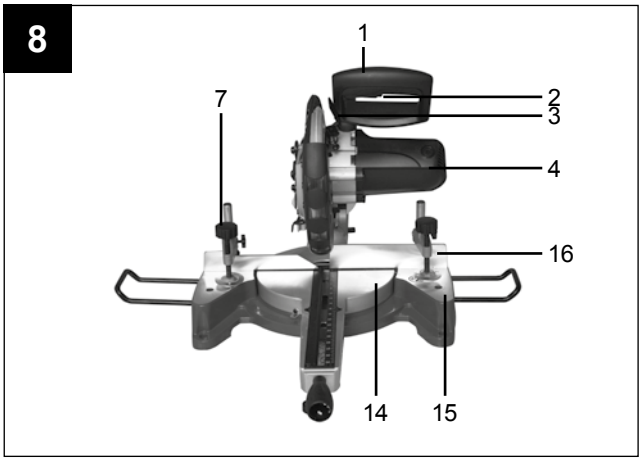

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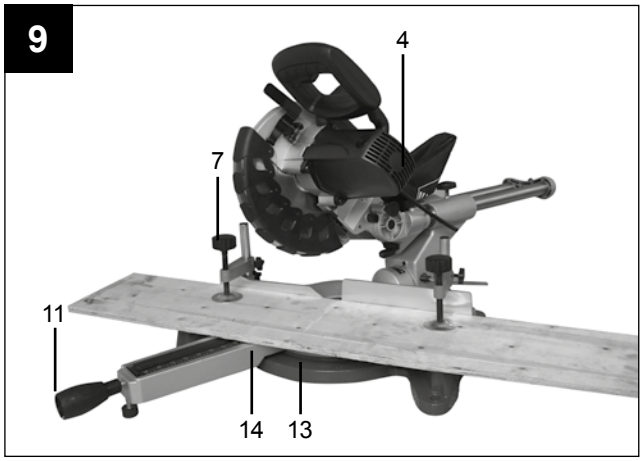

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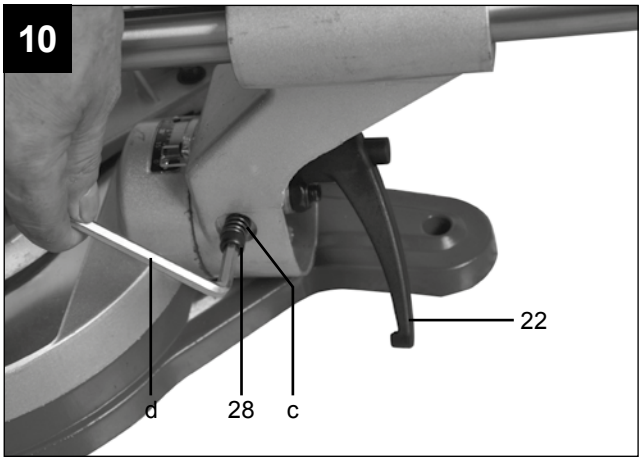

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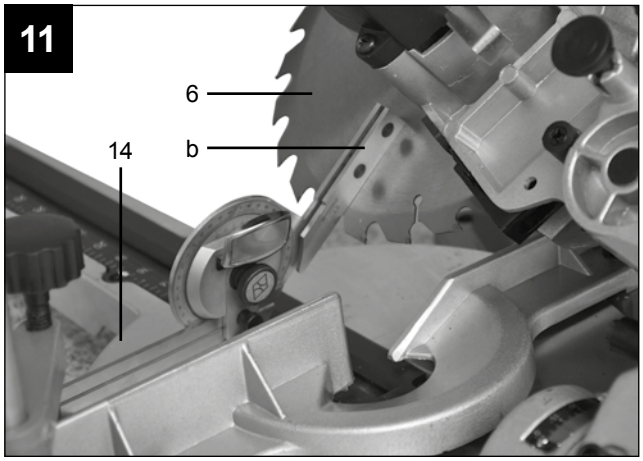

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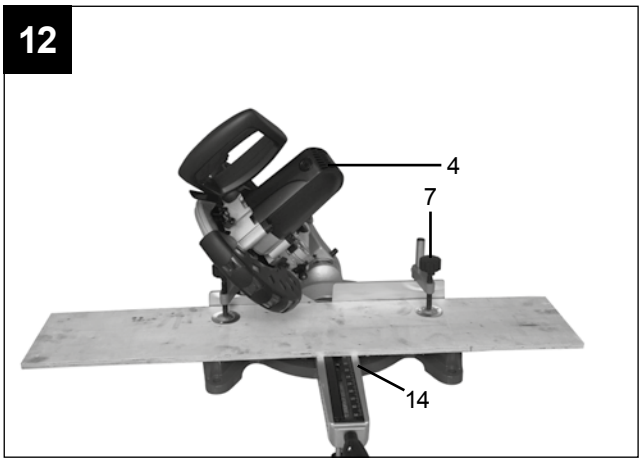

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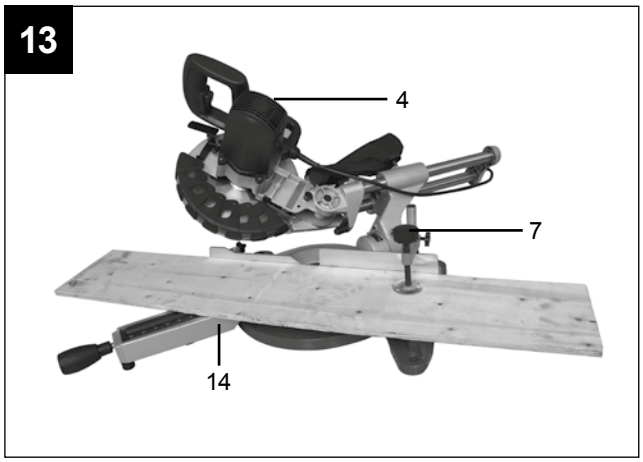

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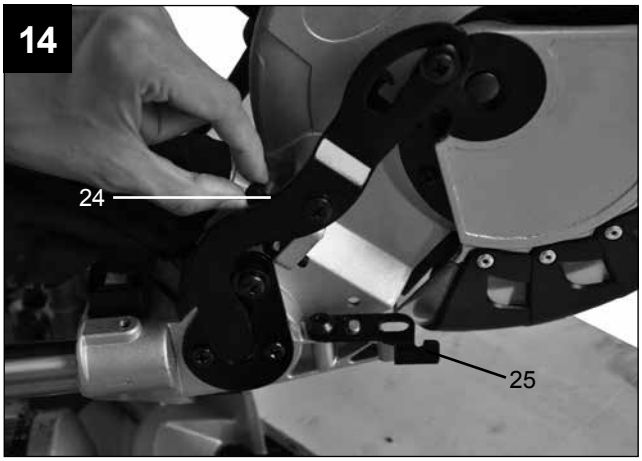

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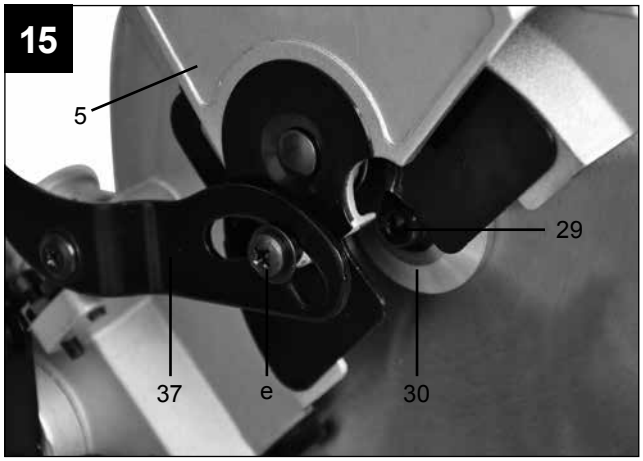

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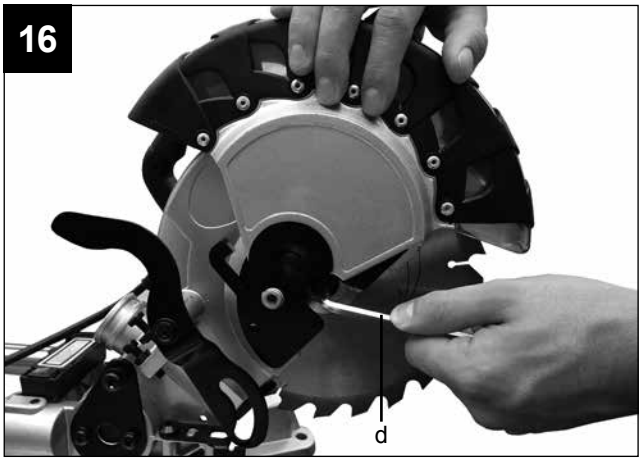

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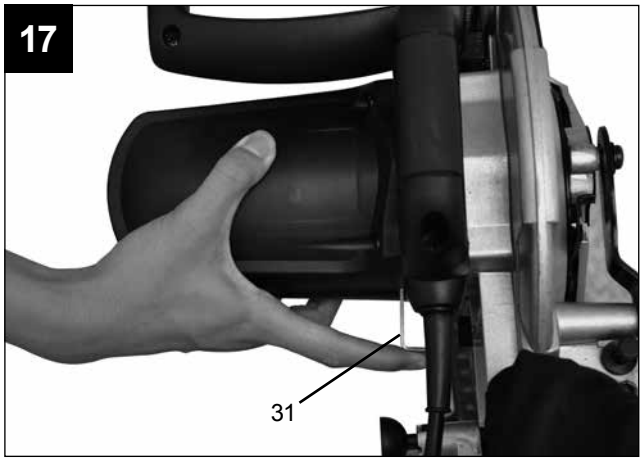

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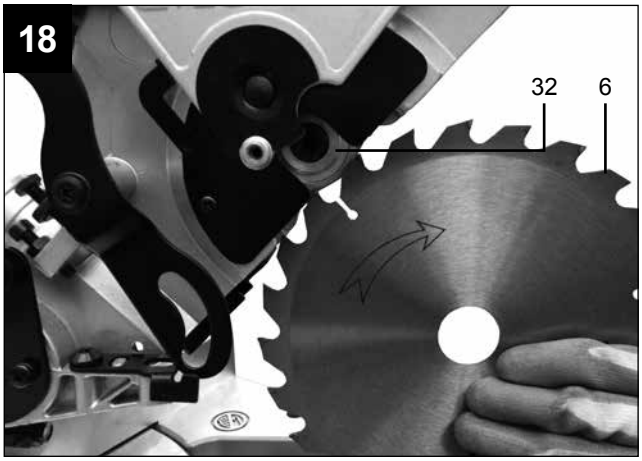

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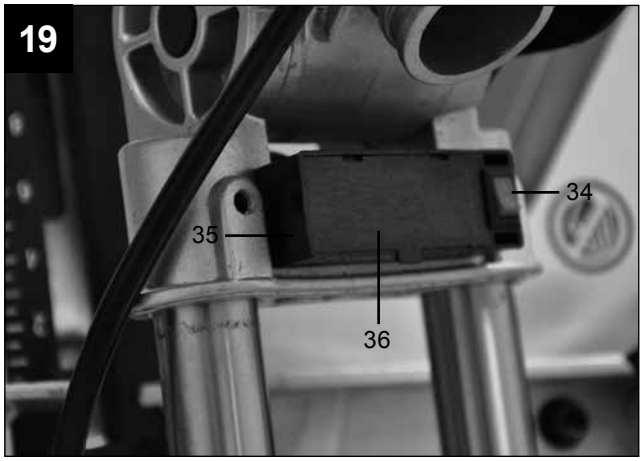

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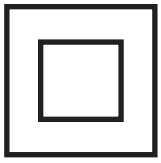
Table of contents:

Explanation of the symbols on the equipment

	GB	Caution - Read the operating instructions to reduce the risk of inquiry
	GB	Wear safety goggles!
	GB	Wear ear-muffs!
	GB	Wear a breathing mask!
	GB	Important! Risk of injury. Never reach into the running saw blade!
	GB	**Important! Laser radiation**
	GB	protection class II

1. Introduction

MANUFACTURER:
scheppach
Fabrikation von Holzbearbeitungsmaschine GmbH
Günzburger Straße 69
D-89335 Ichenhausen

DEAR CUSTOMER,
We hope your new tool brings you much enjoyment and success.

NOTE:
According to the applicable product liability laws, the manufacturer of the device does not assume liability for damages to the product or damages caused by the product that occurs due to:

- Improper handling,
- Non-compliance of the operating instructions,
- Repairs by third parties, not by authorized service technicians,
- Installation and replacement of non-original spare parts,
- Application other than specified,
- A breakdown of the electrical system that occurs due to the non-compliance of the electric regulations and VDE regulations 0100, DIN 57113 / VDE0113.

WE RECOMMEND:
Read through the complete text in the operating instructions before installing and commissioning the device. The operating instructions are intended to help the user to become familiar with the machine and take advantage of its application possibilities in accordance with the recommendations. The operating instructions contain important information on how to operate the machine safely, professionally and economically, how to avoid danger, costly repairs, reduce downtimes and how to increase reliability and service life of the machine.
In addition to the safety regulations in the operating instructions, you have to meet the applicable regulations that apply for the operation of the machine in your country. Keep the operating instructions package with the machine at all times and store it in a plastic cover to protect it from dirt and moisture. Read the instruction manual each time before operating the machine and carefully follow its information. The machine can only be operated by persons who were instructed concerning the operation of the machine and who are informed about the associated dangers. The minimum age requirement must be complied with.

2. Layout (Fig. 1-21)

1. Handle
2. ON/OFF switch
3. Release lever
4. Machine head
5. Movable blade guard
6. Saw blade
7. Clamping device
8. Workpiece support
9. Locking screw for workpiece support
10. Table insert
11. Handle
12. Pointer
13. Scale
14. Turntable
15. Fixed saw table
16. Stop rail
17. Sawdust bag
18. Scale
19. Pointer
20. Locking screw for drag guide
21. Drag guide
22. Locking screw
23. Fastening bolt
24. screw for cutting depth limiter
25. Stop for cutting depth limiter
26. Fastening bolt for turn table
27. Adjustment screw (90°)
28. Adjustment screw (45°)
29. Flange bolt
30. Outer flange
31. Saw shaft lock
32. Inner flange
33. Laser
34. ON/OFF switch for laser
35. Battery compartment
36. Battery compartment cover
37. Guide bar

a) 90° stop angle (not supplied)
b) 45° stop angle (not supplied)
c) spring
d) Allen key, 6 mm

3. Scope of delivery

- Open the packaging and remove the device carefully.
- Remove the packaging material as well as the packaging and transport bracing (if available).
- Check that the delivery is complete.
- Check the device and accessory parts for transport damage.
- If possible, store the packaging until the warranty period has expired.

ATTENTION
The device and packaging materials are not toys! Children must not be allowed to play with plastic bags, film and small parts! There is a risk of swallowing and suffocation!

- Drag, crosscut and mitre Saw
- 2 x Clamping device (7)
- 2 x Workpiece support (8)
- Sawdust bag (17)
- Allen key (d)
- 2 x 1,5 V AAA Battery ⎓
- 2 x carbon brush
- Operating manual

4. Intended use

The drag, crosscut and mitre saw is designed to crosscut wood and plastic respective of the machine's size. The saw is not designed for cutting firewood.
Warning! The supplied saw blade is only intended for the sawing of wood! Do not use this blade for the sawing of plastic!
The equipment is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or injuries of any kind caused as a result of this.
The equipment is to be operated only with suitable saw blades. It is prohibited to use any type of cutting-off wheel.
To use the equipment properly you must also observe the safety information, the assembly instructions and the operating instructions to be found in this manual. All persons who use and service the equipment have to be acquainted with this manual and must be informed about the equipment's potential hazards. It is also imperative to observe the accident prevention regulations in force in your area. The same applies for the general rules of health and safety at work.
The manufacturer will not be liable for any changes made to the equipment nor for any damage resulting from such changes. Even when the equipment is used as prescribed it is still impossible to eliminate certain residual risk factors. The following hazards may arise in connection with the machine's construction and design:

- Contact with the saw blade in the uncovered saw zone.
- Reaching into the running saw blade (cut injuries).
- Kick-back of workpieces and parts of workpieces.
- Saw blade fracturing.
- Catapulting of faulty carbide tips from the saw blade.
- Damage to hearing if ear-muffs are not used as necessary.
- Harmful emissions of wood dust when used in closed rooms.

Please note that our equipment has not been designed for use in commercial, trade or industrial applications.
Our warranty will be voided if the equipment is used in commercial, trade or industrial businesses or for equivalent purposes.

5. Safety information

Attention! The following basic safety measures must be observed when using electric tools for protection against electric shock, and the risk of injury and fire. Read all these notices before using the electric tool and keep the safety instructions for later reference.

Safe work

1 Keep the work area orderly
- Disorder in the work area can lead to accidents.

2 Take environmental influences into account
- Do not expose electric tools to rain.
- Do not use electric tools in a damp or wet environment.
- Make sure that the work area is well-illuminated.
- Do not use electric tools where there is a risk of fire or explosion.

3 Protect yourself from electric shock
- Avoid physical contact with earthed parts (e.g. pipes, radiators, electric ranges, cooling units).

4 Keep children away
- Do not allow other persons to touch the equipment or cable, keep them away from your work area.

5 Securely store unused electric tools
- Unused electric tools should be stored in a dry, elevated or closed location out of the reach of children.

6 Do not overload your electric tool
- They work better and more safely in the specified output range.

7 Use the correct electric tool
- Do not use low-output electric tools for heavy work.
- Do not use the electric tool for purposes for which it is not intended. For example, do not use hand-held circular saws for the cutting of branches or logs.
- Do not use the electric tool to cut firewood.

8 Wear suitable clothing
- Do not wear wide clothing or jewellery, which can become entangled in moving parts.
- When working outdoors, anti-slip footwear is recommended.
- Tie long hair back in a hair net.

9 Use protective equipment
- Wear protective goggles.
- Wear a mask when carrying out dust-creating work.

10 Connect the dust extraction device
- If connections for dust extraction and a collecting device are present, make sure that they are connected and used properly.
- Operation in enclosed areas is only permitted with a suitable extraction system.

11 Do not use the cable for purposes for which it is

not intended
- Do not use the cable to pull the plug out of the outlet. Protect the cable from heat, oil and sharp edges.

12 Secure the workpiece
- Use the clamping devices or a vice to hold the workpiece in place. In this manner, it is held more securely than with your hand.
- An additional support is necessary for long workpieces (table, trestle, etc.) in order to prevent the machine from tipping over.
- Always press the workpiece firmly against the working plate and stop in order to prevent bouncing and twisting of the workpiece.

13 Avoid abnormal posture
- Make sure that you have secure footing and always maintain your balance.
- Avoid awkward hand positions in which a sudden slip could cause one or both hands to come into contact with the saw blade.

14 Take care of your tools
- Keep cutting tools sharp and clean in order to be able to work better and more safely.
- Follow the instructions for lubrication and for tool replacement.
- Check the connection cable of the electric tool regularly and have it replaced by a recognised specialist when damaged.
- Check extension cables regularly and replace them when damaged.
- Keep the handle dry, clean and free of oil and grease.

15 Pull the plug out of the outlet
- Never remove loose splinters, chips or jammed wood pieces from the running saw blade.
- During non-use of the electric tool or prior to maintenance and when replacing tools such as saw blades, bits, milling heads.

16 Do not leave a tool key inserted
- Before switching on, make sure that keys and adjusting tools are removed.

17 Avoid inadvertent starting
- Make sure that the switch is switched off when plugging the plug into an outlet.

18 Use extension cables for outdoors
- Only use approved and appropriately identified extension cables for use outdoors.
- Only use cable reels in the unrolled state.

19 Remain attentive
- Pay attention to what you are doing. Remain sensible when working. Do not use the electric tool when you are distracted.

20 Check the electric tool for potential damage
- Protective devices and other parts must be carefully inspected to ensure that they are fault-free and function as intended prior to continued use of the electric tool.
- Check whether the moving parts function faultlessly and do not jam or whether parts are damaged. All parts must be correctly mounted and all conditions must be fulfilled to ensure fault-free operation of the electric tool.
- The moving protective hood may not be fixed in the open position.
- Damaged protective devices and parts must be properly repaired or replaced by a recognised workshop, insofar as nothing different is specified in the operating manual.
- Damaged switches must be replaced at a customer service workshop.
- Do not use any faulty or damaged connection cables.
- Do not use any electric tool on which the switch cannot be switched on and off.

21 ATTENTION!
- Exercise elevated caution for double mitre cuts.

22 ATTENTION!
- The use of other insertion tools and other accessories can entail a risk of injury.

23 Have your electric tool repaired by a qualified electrician
- This electric tool conforms to the applicable safety regulations. Repairs may only be performed by an electrician using original spare parts. Otherwise accidents can occur.

ADDITIONAL SAFETY INSTRUCTIONS

1 Safety precautions
- Warning! Do not use damaged or deformed saw blades.
- Replace a worn table insert.
- Only use saw blades recommended by the manufacturer which conform to EN 847-1.
- Make sure that a suitable saw blade for the material to be cut is selected.
- Wear suitable personal protective equipment. This includes:
  - Hearing protection to avoid the risk of becoming hearing impaired,
  - Respiratory protection to avoid the risk of inhaling harmful dust,
  - Wear gloves when handling saw blades and rough materials. Carry saw blades in a container whenever practical.
  - Wear goggles. Sparks generated during work or splinters, chippings and dust coming from the device can lead to loss of eyesight.
- Connect a dust collecting device to the electric tool when sawing wood. The emission of dust is influenced, among other things, by the type of material to be processed, the significance of local separation (collection or source) and the correct setting of the hood/guide plates/guides.
- Do not use saw blades made of high-speed alloy steel (HSS steel).

2 Maintenance and repair
- Pull out the mains plug for any adjustment or repair tasks.
- The generation of noise is influenced by various factors, including the characteristics of saw

blades, condition of saw blade and electric tool. Use saw blades which were designed for reduced noise development, insofar as possible. Maintain the electric tool and tool attachments regularly and if necessary, initiate repairs in order to reduce noise.
- Report faults on the electric tool, protective devices or the tool attachment to the person responsible for safety as soon as they are discovered.

3 Safe work
- Only use saw blades for which the maximum permissible speed is not lower than the maximum spindle speed of table saws and which are suitable for the material to be cut.
- Make sure that the saw blade does not touch the rotary table in any position by pulling out the mains plug and rotating the saw blade by hand in the 45° and 90° position. If necessary, readjust the saw head.
- When transporting the electric tool, only use the transport devices. Never use the protective devices for handling or transport.
- Make sure that the lower part of the saw blade is covered during transport, e.g. by the protective device.
- Be sure to only use spacers and spindle rings specified by the manufacturer as suitable for the intended purpose.
- The floor around the machine must be level, clean and free of loose particles, such as chips and cutting residues.
- Do not remove any cutting residues or other parts of workpieces from the cutting zone while the machine is running and the saw unit is not at rest.
- Make sure that the machine is always secured on a workbench or a table if at all possible.
- Support long workpieces (e.g. with a roller table) to prevent them sagging at the end of a cut.

Warning! This electric tool generates an electromagnetic field during operation. This field can impair active or passive medical implants under certain conditions. In order to prevent the risk of serious or deadly injuries, we recommend that persons with medical implants consult with their physician and the manufacturer of the medical implant prior to operating the electric tool.

SAFETY INSTRUCTIONS FOR THE HANDLING OF SAW BLADES

1 Only use insertion tools if you have mastered their use.
2 Observe the maximum speed. The maximum speed specified on the insertion tool may not be exceeded. If specified, observe the speed range.
3 Observe the motor / saw blade direction of rotation.
4 Do not use any insertion tools with cracks. Sort out cracked insertion tools. Repairs are not permitted.
5 Clean grease, oil and water off of the clamping surfaces.
6 Do not use any loose reducing rings or bushes for the reducing of holes on saw blades.
7 Make sure that fixed reducer rings for securing the insertion tool have the same diameter and have at least 1/3 of the cutting diameter.
8 Make sure that fixed reducer rings are parallel to each other.
9 Handle insertion tool with caution. They are ideally stored in the originally package or special containers. Wear protective gloves in order to improve grip and to further reduce the risk of injury.
10 Prior to the use of insertion tools, make sure that all protective devices are properly fastened.
11 Prior to use, make sure that the insertion tool meets the technical requirements of this electric tool and is properly fastened.
12 Only use the supplied saw blade for cutting wood, never for the processing of metals.

Attention: Laser radiation
Do not stare into the beam
Class 2 laser

Protect yourself and you environment from accidents using suitable precautionary measures!
- Do not look directly into the laser beam with unprotected eyes.
- Never look into the path of the beam.
- Never point the laser beam towards reflecting surfaces and persons or animals. Even a laser beam with a low output can cause damage to the eyes.
- Caution - methods other than those specified here can result in dangerous radiation exposure.
- Never open the laser module. Unexpected exposure to the beam can occur.
- If the mitre saw is not used for an extended period of time, the batteries should be removed.
- The laser may not be replaced with a different type of laser.
- Repairs of the laser may only be carried out by the laser manufacturer or an authorised representative.

Safety instructions for handling batteries

1 Always make sure that the batteries are inserted with the correct polarity (+ and –), as indicated on the battery.
2 Do not short-circuit batteries.
3 Do not charge non-rechargeable batteries.
4 Do not overcharge batteries!
5 Do not mix old and new batteries or batteries of different types or manufacturers! Replace an entire set of batteries at the same time.
6 Immediately remove used batteries from the device and dispose of them properly!
7 Do not allow batteries to heat up!
8 Do not weld or solder directly on batteries!

9 Do not dismantle batteries!
10 Do not allow batteries to deform!
11 Do not throw batteries into fire!
12 Keep batteries out of the reach of children.
13 Do not allow children to replace batteries without supervision!
14 Do not keep batteries near fire, ovens or other sources of heat. Do not use batteries in direct sunlight or store them in vehicles in hot weather.
15 Keep unused batteries in the original packaging and keep them away from metal objects. Do not mix unpacked batteries or toss them together! This can lead to a short-circuit of the battery and thus damage, burns or even the risk of fire.
16 Remove batteries from the equipment when it will not be used for an extended period of time, unless it is for emergencies!
17 NEVER handle batteries that have leaked without appropriate protection. If the leaked fluid comes into contact with your skin, the skin in this area should be rinsed off under running water immediately. Always prevent the fluid from coming into contact with the eyes and mouth. In the event of contact, please seek immediate medical attention.
18 Clean the battery contacts and corresponding contacts in the device prior to inserting the batteries:

6. Technical data

AC motor	220 - 240 V ~ 50Hz
Power	1500 Watt
Operating mode	S6 25%*
Idle speed n_0	5000 min^{-1}
Carbide saw blade	ø 210 x ø 30 x 2,6 mm
Number of teeth	24
Swivel range	-45° / 0°/ +45°
Mitre cut	0° bis 45° nach links
Saw width at 90°	340 x 58 mm
Saw width at 45°	240 x 58 mm
Saw width at 2 x 45° (double mitre cut)	240 x 32 mm
Protection class	II
Weight	approx. 17 kg
Laser class	2
Wavelength of laser	650 nm
Laser output	≤ 1 mW
Laser module power supply	2 x 1,5 V Micro (AAA)

*** S6, continuous operation periodic duty.**
Identical duty cycles with a period at load followed by a period at no load. Running time 10 minutes; duty cycle is 25% of the running time.
The work piece must have a minimum height of 3mm and a minimum width of 10 mm.
Make sure that the workpiece is always secured with the clamping device.

Noise and vibration

Total vibration values determined in accordance with EN 61029.

sound pressure level L_{pA}	99.6 dB(A)
uncertainty K_{pA}	3 dB
sound power level L_{WA}	112.6 dB(A)
uncertainty K_{WA}	3 dB

Wear hearing protection.
The effects of noise can cause a loss of hearing. Total vibration values (vector sum - three directions) determined in accordance with EN 61029.

Vibration emission value a_h	4.51 m/s²
uncertainty K	1,5 m/s²

- The specified vibration value was established in accordance with a standardized testing method. It may change according to how the electric equipment is used and may exceed the specified value in exceptional circumstances;
- The specified vibration value can be used to compare the equipment with other electric power tools.
- The specified vibration value can be used for initial assessment of a harmful effect.

Reduce noise generation and vibration to a minimum!
- Use only equipment that is in perfect condition.
- Maintain and clean the equipment regularly.
- Adopt your way of working to the equipment.
- Do not overload the equipment.
- Have the equipment checked if necessary.
- Switch off the equipment when not in use.

Residual risks

The machine has been built according to the state of the art and the recognised technical safety requirements. However, individual residual risks can arise during operation.
- Health hazard due to electrical power, with the use of improper electrical connection cables.
- Furthermore, despite all precautions having been met, some non-obvious residual risks may still remain.
- Residual risks can be minimised if the „safety instructions“ and the „Proper use“ are observed along with the whole of the operating instructions.
- Do not load the machine unnecessarily: excessive pressure when sawing will quickly damage the saw blade, which results in reduced output of the machine in the processing and in cut precision.
- When cutting plastic material, please always use clamps: the parts which should be cut must always be fixed between the clamps.
- Avoid accidental starting of the machine: the operating button may not be pressed when inserting the plug in an outlet.

- Use the tool that is recommended in this manual. In doing so, your mitre saw provides optimal performance.
- Hands may never enter the processing zone when the machine is in operation. Release the handle button and switch off the machine prior to any operations.

7. Before starting the equipment

- The equipment must be set up where it can stand securely, i.e. it should be bolted to a workbench, a universal base frame or similar.
- All covers and safety devices have to be properly fitted before the equipment is switched on.
- It must be possible for the blade to run freely.
- When working with wood that has been processed before, watch out for foreign bodies such as nails or screws, etc.
- Before you press the ON/OFF switch check that the saw blade is fitted correctly. Moving parts must run smoothly.
- Before you connect the equipment to the power supply make sure the data on the rating plate are dentical to the mains data.

8. Attachment and operation

8.1 Attaching the saw (Fig1/2/3/4/5)

- In order to adjust the rotary table (14) loosen the set screw (26) approx. 2 turns.
- Turn the rotary table (14) and pointer (12) to the desired angle measurement on the scale (13) and secure with the set screw (26).
- Pressing the machine head (4) lightly downwards and removing the locking bolt (23) from the motor bracket at the same time disengages the saw from the lowest position.
- Swing the machine head (4) up until the release lever (3) latches into place.
- It is possible to secure the clamping device (7) to the left or right on the stationary saw bench (15).
- Attach the workpiece supports (8) to the fixed saw table (15) as shown in Figure 5 and fasten with the screw (9).
- It is possible to tilt the machine head (4) a max. 45° to the left by loosening the set screw (22).

8.2 Precision adjustment of the stop for crosscut 90° (Fig. 1/6/7)

- **No stop angle included.**
- Lower the machine head (4) and secure using the locking bolt (23).
- Loosen the set screw (22).
- Position the angle stop (a) between the saw blade (6) and the rotary table (14).
- Adjust the adjusting screw (27) until the angle between the saw blade (6) and rotary table (14) is 90°.
- It is not necessary to fix this setting because it is maintained by the spring pretension.
- Subsequently check the position of the angle indicator. If necessary loosen the pointer (19) using a Philips screwdriver, set to position 0° on the angle scale (18) and re-tighten the retaining screw.

8.3 Cross cut 90° and turntable 0° (Fig.8)

In the case of cutting widths up to approx. 100 mm it is possible to fix the traction function of the saw with the set screw (20) in the rear position. In this position the machine can be operated in cross cutting mode. If the cutting width is over 100 mm then it is necessary to ensure that the set screw (20) is loose and the machine head (4) can move.

- Move the machine head (4) to its upper position.
- Use the handle (3) to push back the machine head (4) and fix it in this position if required (dependent on the cutting width).
- Place the piece of wood to be cut at the stop rail (16) and on the turntable (14).
- Lock the material with the clamping device (7) on the fixed saw table (15) to prevent the material from moving during the cutting operation.
- Push down the release lever (3) to release the machine head (4).
- Press the ON/OFF switch (2) to start the motor.
- With the drag guide (21) fixed in place:
- use the handle (1) to move the machine head (4) steadily and with light pressure downwards until the saw blade (6) has completely cut through the work piece.
- With the drag guide (21) not fixed in place:
- pull the machine head (4) all the way to the front. Lower the handle (1) to the very bottom by applying steady and light downward pressure. Now push the machine head (4) slowly and steadily to the very back until the saw blade (6) has completely cut through the work piece.
- When the cutting operation is completed, move the machine head (4) back to its upper (home) position and release the ON/OFF button (2).
  Attention! The machine executes an upward stroke automatically due to the return spring, i.e. do not release the handle (1) after completing the cut; instead allow the machine head to move upwards slowly whilst applying light counter pressure.

8.4 Cross cut 90° and turntable 0° - 45° (Fig. 9)

The crosscut saw can be used to make crosscuts of 0° -45° to the left and 0° -45° to the right in relation to the stop rail.

- Loosen set screw (26).
- Use the handle (11) to adjust the rotary table (14) to the desired angle. The pointer (12) on the rotary table must match the desired angle on the scale (13) on the fixed saw table (15).
- Re-tighten the set screw (26) in order to secure the rotary table (14).
- Cut as described under section 8.3.

8.5 Precision adjustment of the stop for mitre cut 45° (Fig. 1/10/11)

- **No stop angle included.**
- Lower the machine head (4) and secure using the locking bolt (23).
- Fix the rotary table (14) in the 0° position.
- Loosen the set screw (22) and use the handle (1) to angle the machine head (4) 45° to the left.
- 45° - position angle stop (b) between the saw blade (6) and rotary table (14).
- Adjust the adjusting screw (28) until the angle between the saw blade (6) and rotary table (14) is precisely 45°.
- It is not necessary to fix this setting because it is maintained by the spring pretension.
- Subsequently check the position of the angle indicator. If necessary loosen the pointer (19) using a Philips screwdriver, set to position 0° on the angle scale (18) and re-tighten the retaining screw.

8.6 Mitre cut 0°- 45° and turntable 0° (Fig. 1/2/12)

The crosscut saw can be used to make mitre cuts of 0° - 45° in relation to the work face.

- Move the machine head (4) to the top position.
- Fix the rotary table (14) in the 0° position.
- Loosen the set screw (22) and use the handle (1) to angle the machine head (4) to the left, until the pointer (19) indicates the desired angle measurement on the scale (18).
- Re-tighten the fixing screw (22).
- Cut as described in section 8.3.

8.7 Mitre cut 0°- 45° and turntable 0°- 45° (Fig. 2/4/13)

The crosscut saw can be used to make mitre cuts to the left of 0°- 45° in relation to the work face and, at the same time, 0° - 45° to the left or 0° - 45° to the right in relation to the stop rail (double mitre cut).

- Move the machine head (4) to its upper position.
- Release the rotary table (14) by loosening the set screw (26).
- Using the handle (11), set the rotary table (14) to the desired angle (refer also to point 8.4 in this regard).
- Re-tighten the set screw (26) in order to secure the rotary table.
- Undo the locking screw (22) and use the handle (1) to tilt the machine head (4) to the left until it coincides with the required angle value (in this connection see also section 8.6).
- Re-tighten the fixing screw (22).
- Cut as described under section 8.3.

8.8 Limiting the cutting depth (Fig. 3/14)

- The cutting depth can be infinitely adjusted using the screw (24). To do this loosen the knurled nut on the screw (24). Move the stop for the cutting depth limitre (25) to the outside. Turn the screw (24) in or out to set the required cutting depth. Then re-tighten the knurled nut on the screw (24).
- Check the setting by completing a test cut.

8.9 Sawdust bag (Fig. 1)

The saw is equipped with a debris bag (17) for sawdust and chips.
Squeeze together the metal ring on the dust bag and attach it to the outlet opening in the motor area.
The debris bag (17) can be emptied by means of a zipper at the bottom.

8.10 Changing the saw blade (Fig. 15/16/17/18)

Remove the power plug!
Important.
Wear safety gloves when changing the saw blade. Risk of injury!

- Swing up the machine head (5).
- Undo the screw (e) on the guide bar (37), so that it can move freely and be pivoted downwards.
- Press the release lever (3). Swing up the saw blade guard (6) to the point where the recess in the saw blade guard (6) is above the flange bolt (31).
- Press the saw shaft lock (4) with one hand. With the other hand insert the allen key (c) in the flange bolt (31).
- Hold the Allen key (d) and slowly close the saw blade guard until it touches the Allen key.
- Firmly press the saw shaft lock (4) and slowly rotate the flange bolt (31) in clockwise direction. The saw shaft lock (4) engages after no more than one rotation.
- Now, using a little more force, slacken the flange bolt (31) in the clockwise direction.
- Turn the flange screw (31) right out and remove the external flange (32).
- Take the blade (7) off the inner flange (38) and pull out downwards.
- Carefully clean the flange screw (31), outer flange (32) and inner flange (38).
- Fit and fasten the new saw blade (7) in reverse order.
- Important! The cutting angle of the teeth, in other words the direction of rotation of the saw blade (7) must coincide with the direction of the arrow on the housing.
- Move the guide bar (37) into position and tighten the screw (e) again.
- Before continuing your work make sure that all safety devices are in good working condition.
- Important! Every time that you change the saw blade (7), check to see that it spins freely in the table insert (11) in both perpendicular and 45° angle settings.
- Important! The work to change and align the saw blade (7) must be carried out correctly.

8.11 Using the laser (Fig. 3/19/20/21)

- **To switch on:** Move the ON/OFF switch of the laser (34) to the “1” position. A laser line is projected onto the material you wish to process, providing an exact guide for the cut.
- **To switch off:** Move the ON/OFF switch of the laser (34) to the “0” position.

- **Replacing the battery:** Switch off the laser (33). Remove the battery compartment cover (36). Remove the batteries and replace with new batteries (2 x 1.5 Volt Type LR 03 Micro, AAA) Check that the battery terminals are positioned correctly when inserting new batteries. Close the battery compartment (35) again.

9. Transport

- Tighten the set screw (26) in order to lock the rotary table (14)
- Activate the release lever (3), press the machine head (4) downwards and secure with the safety pin (23). The saw is now locked in its bottom position.
- Fix the saw's drag function with the locking screw for drag guide (20) in rear position.
- Carry the equipment by the fixed saw table (15).
- When reassembling the equipment proceed as described under section 7.1.

10. Maintenance

⚠ **Warning!** Prior to any adjustment, maintenance or service work disconnect the mains power plug!

General maintenance measures
Wipe chips and dust off the machine from time to time using a cloth. In order to extend the service life of the tool, oil the rotary parts once monthly. Do not oil the motor.
When cleaning the plastic do not use corrosive products.

Brush inspection
Check the carbon brushes after the first 50 operating hours with a new machine, or when new brushes have been fitted. After carrying out the first check, repeat the check every 10 operating hours.
If the carbon is worn to a length of 6 mm, or if the spring or contact wire are burned or damaged, it is necessary to replace both brushes. If the brushes are found to be usable following removal, it is possible to reinstall them.

11. Storage

Store the device and its accessories in a dark, dry and frost-proof place that is inaccessible to children. The optimum storage temperature is between 5 and 30˚C.
Store the electrical tool in its original packaging.
Cover the electrical tool in order to protect it from dust and moisture.
Store the operating manual with the electrical tool.

12. Electrical connection

The electrical motor installed is connected and ready for operation. The connection complies with the applicable VDE and DIN provisions.
The customer's mains connection as well as the extension cable used must also comply with these regulations.

- The product meets the requirements of EN 61000-3-11 and is subject to special connection conditions. This means that use of the product at any freely selectable connection point is not allowed.
- Given unfavorable conditions in the power supply the product can cause the voltage to fluctuate temporarily.
- The product is exclusively intended for use at connection points that have a continuous current-carrying capacity of at least 100 A per phase.
- As the user, you are required to ensure, in consultation with your electric power company if necessary, that the connection point at which you wish to operate the product meets the specified requirements.

Important information
n the event of an overloading the motor will switch itself off. After a cool-down period (time varies) the motor can be switched back on again.

Damaged electrical connection cable
The insulation on electrical connection cables is often damaged.
This may have the following causes:
- Passage points, where connection cables are passed through windows or doors.
- Kinks where the connection cable has been improperly fastened or routed.
- Places where the connection cables have been cut due to being driven over.
- Insulation damage due to being ripped out of the wall outlet.
- Cracks due to the insulation ageing.

Such damaged electrical connection cables must not be used and are life-threatening due to the insulation damage.
Check the electrical connection cables for damage regularly. Make sure that the connection cable does not hang on the power network during the inspection.
Electrical connection cables must comply with the applicable VDE and DIN provisions. Only use connection cables with the marking „H05VV-F".
The printing of the type designation on the connection cable is mandatory.

AC motor
- The mains voltage must be 230 V~
- Extension cables up to 25 m long must have a cross-section of 1.5 mm2.

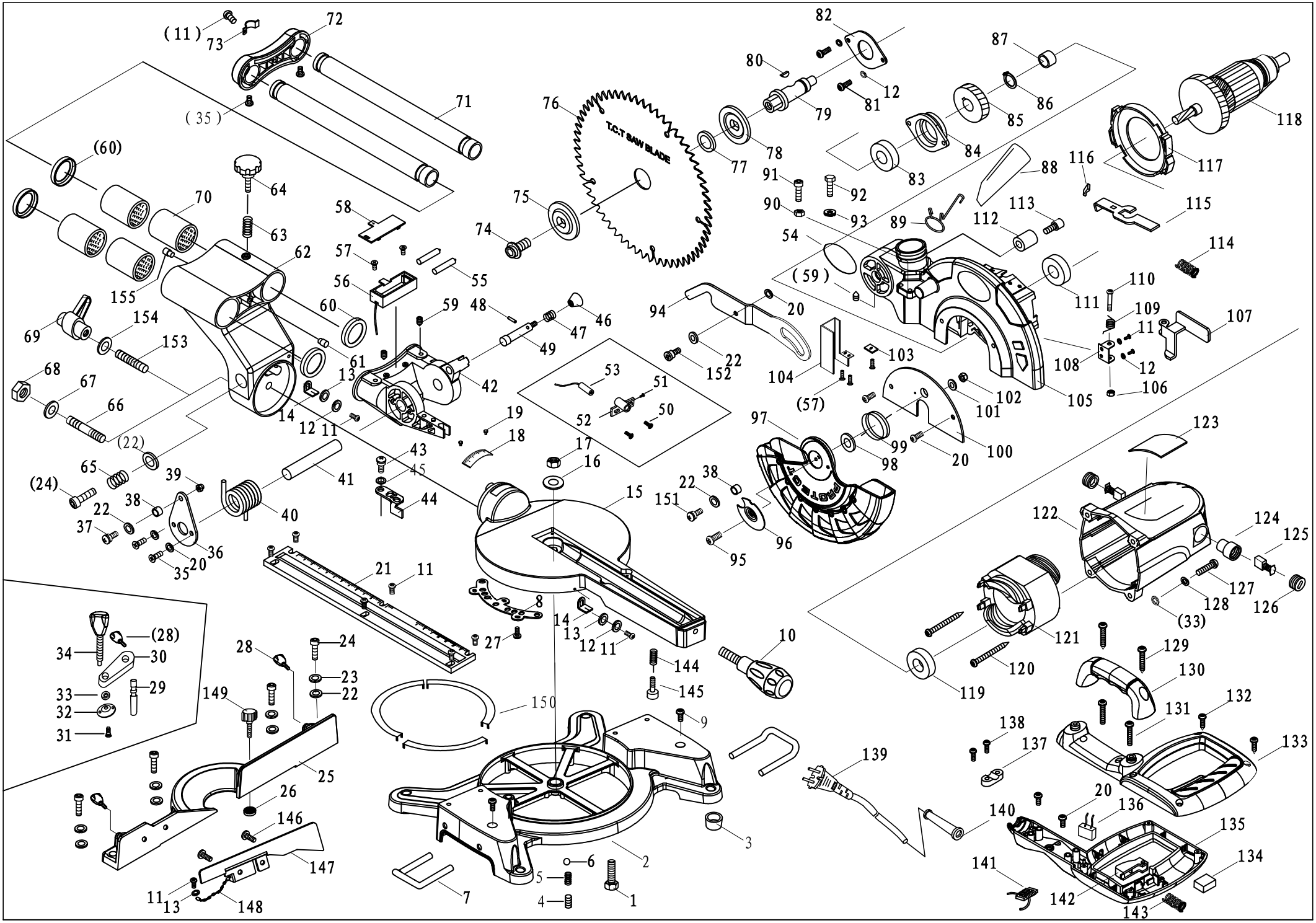
Connections and repairs of electrical equipment may only be carried out by an electrician.
Please provide the following information in the event of any enquiries:
- Type of current for the motor
- Machine data - type plate
- Machine data - type plate

13. Disposal and recycling

The equipment is supplied in packaging to prevent it from being damaged in transit. The raw materials in this packaging can be reused or recycled. The equipment and its accessories are made of various types of material, such as metal and plastic. Defective components must be disposed of as special waste. Ask your
dealer or your local council.

14. Troubleshooting

Fault	Possible cause	Remedy
Motor does not work	Motor, cable or plug defective, fuses burnt	Arrange for inspection of the machine by a specialist. Never repair the motor yourself. Danger! Check fuses and replace as necessary
The motor starts up slowly and does not reach operating speed.	Voltage too low, coils damaged, capacitor burnt	Contact the utility provider to check the voltage. Arrange for inspection of the motor by a specialist. Arrange for replacement of the capacitor by a specialist
Motor makes excessive noise	Coils damaged, motor defective	Arrange for inspection of the motor by a specialist
The motor does not reach its full power.	Circuits in the network are overloaded (lamps, other motors, etc.)	Do not use any other equipment or motors on the same circuit
Motor overheats easily.	Overloading of the motor, insufficient cooling of the motor	Avoid overloading the motor while cutting, remove dust from the motor in order to ensure optimal cooling of the motor
Reduced cutting power when sawing	Saw blade too small (ground too much)	Readjust end stop of the saw unit
Saw cut is rough or wavy	Saw blade dull, tooth shape not appropriate for the material thickness	Resharpen saw blade and/or use suitable saw blade
Workpiece pulls away and/or splinters	Excessive cutting pressure and/or saw blade not suitable for use	Insert suitable saw blade


T.C.T SAW BLADE
PROTEC.CUT