scheppach HM140L Sliding Cross Cut Mitre Saw Instruction Manual

Contents

1 scheppach HM140L Sliding Cross Cut Mitre Saw
2 Explanation of the symbols on the equipment
3 Introduction
4 Layout
5 Scope of delivery
6 Intended use
7 Safety information
8 Technical data
9 Before starting the equipment
10 Attachment and operation
11 Transport
12 Maintenance
13 Storage
14 Electrical connection
15 Disposal and recycling
16 Troubleshooting
17 Warranty
18 Documents / Resources
18.1 References
19 Related Posts

scheppach HM140L Sliding Cross Cut Mitre Saw

Explanation of the symbols on the equipment

	Read instruction manual and safety instructions before starting up and pay attention!
	Wear safety goggles!
	Wear ear-muffs!
	Wear a breathing mask!
	Important! Risk of injury. Never reach into the running saw blade!
	Important! Laser radiation
	Protection Class II (double shielded)

Introduction

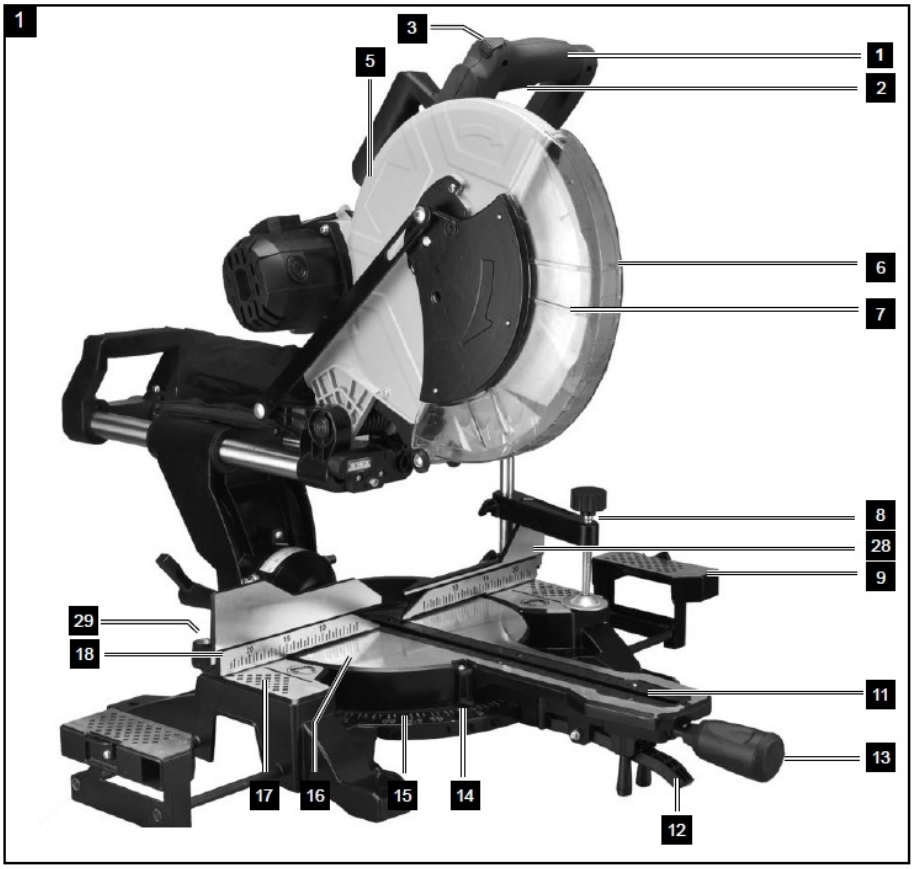
Manufacturer:
scheppach
Fabrikation von Holzbearbeitungsmaschine GmbH Günzburger Straße 69
D-89335 Ichenhausen
Dear customer,
We hope your new tool brings you much enjoyment and success.
Note: According to the applicable product liability laws, the manufacturer of the device does not assume liability 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 regu-lations 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, cost-ly repairs, reduce downtimes, and how to increase the 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 to 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.
In addition to the safety instructions contained in this operating manual and the specific regulations of your country, the technical rules generally accepted for the operation of machines of the same type must be observed.
We accept no liability for damage or accidents which arise due to non-observance of these instructions and the safety information.

Layout

1. Handle
2. ON/OFF switch
3. Lock switch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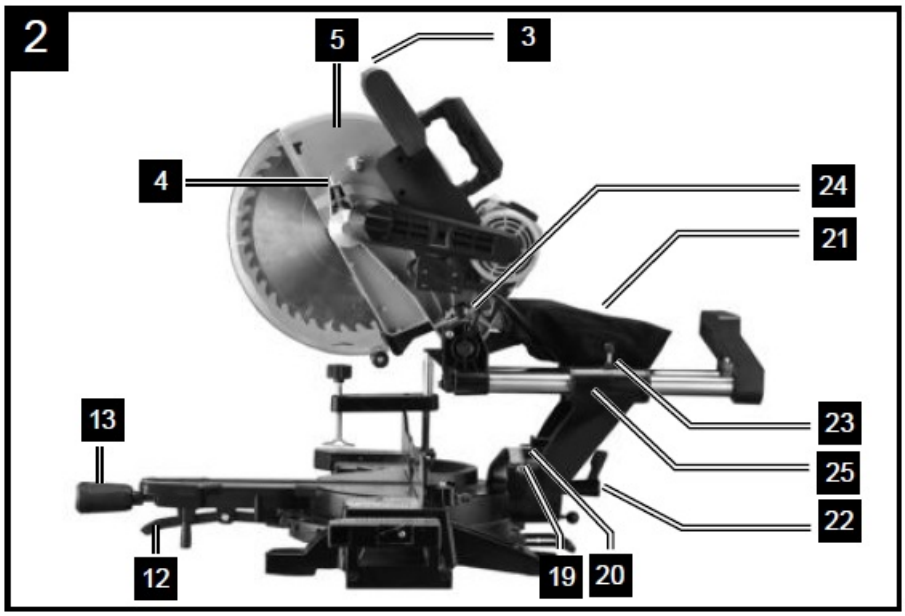
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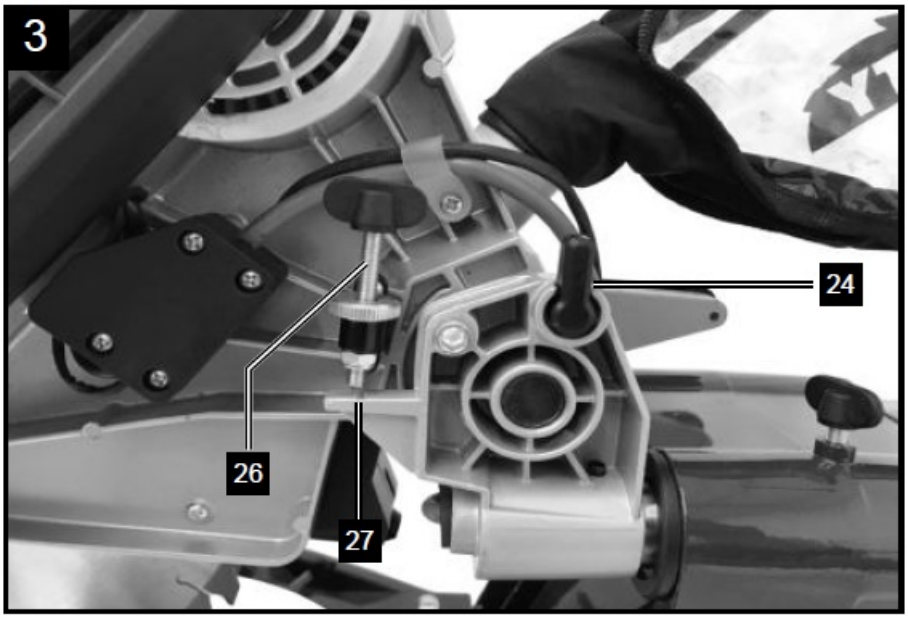
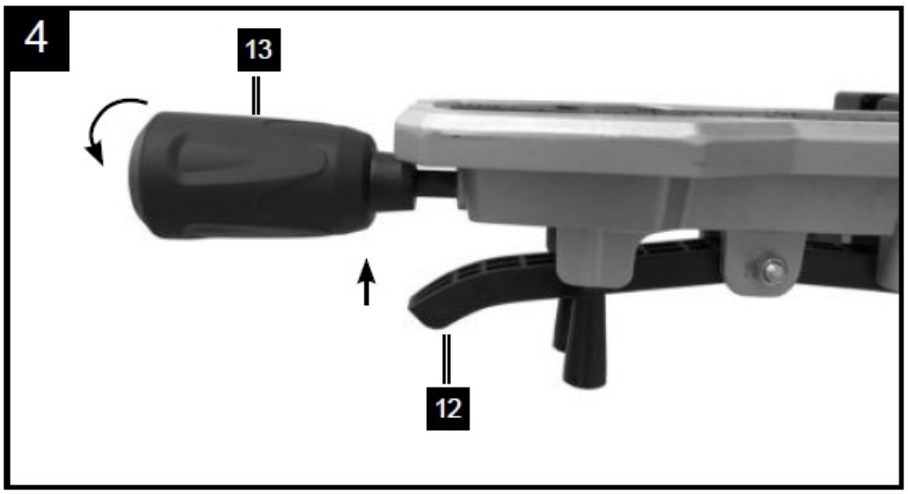
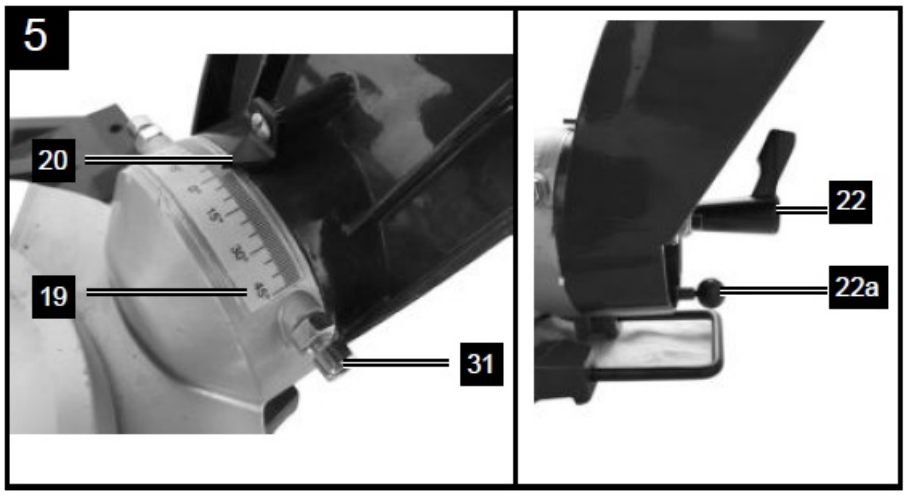
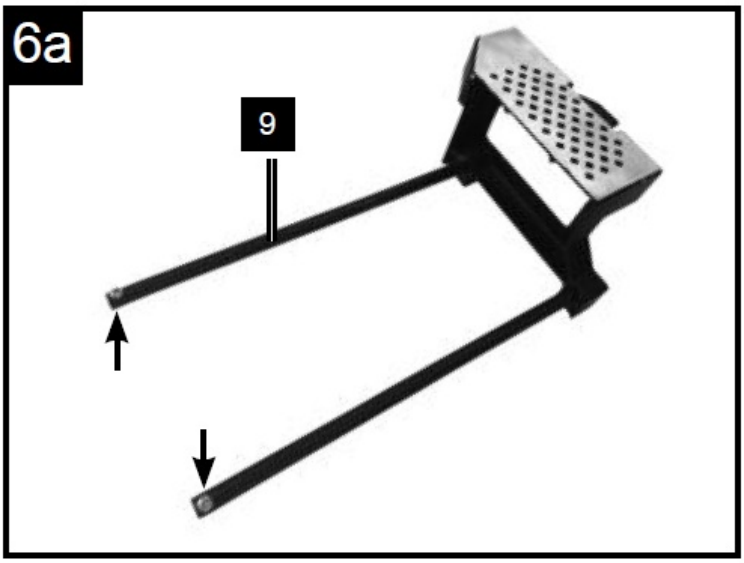


4. Saw shaft lock
5. Machine head
6. Movable blade guard



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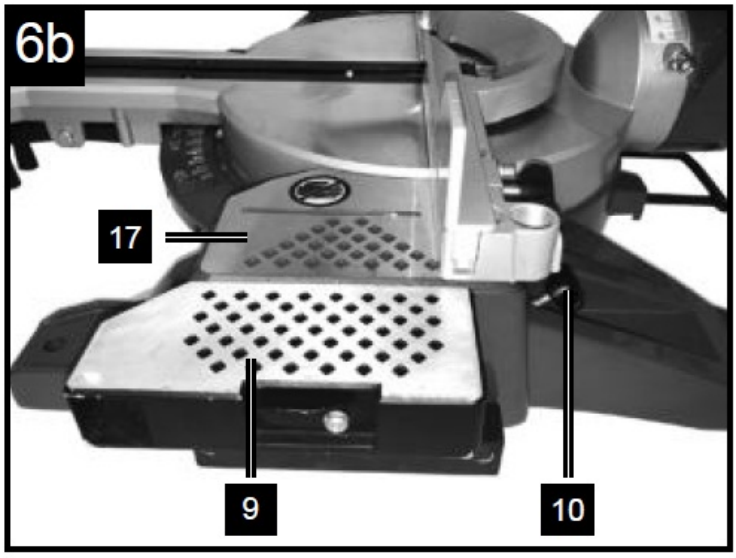
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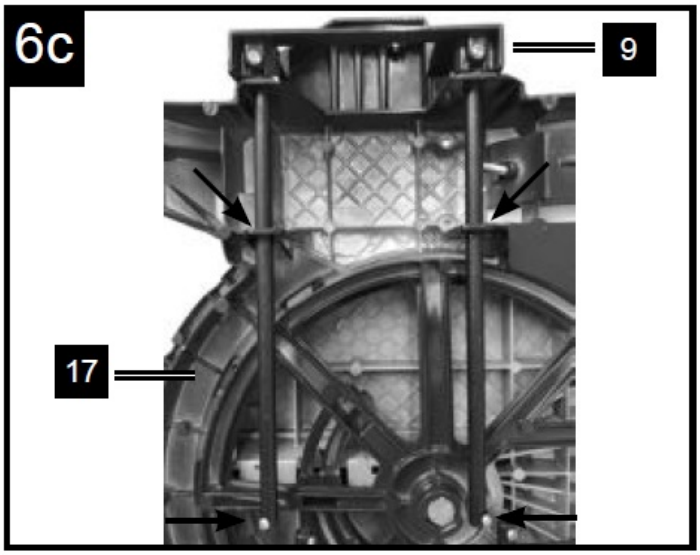
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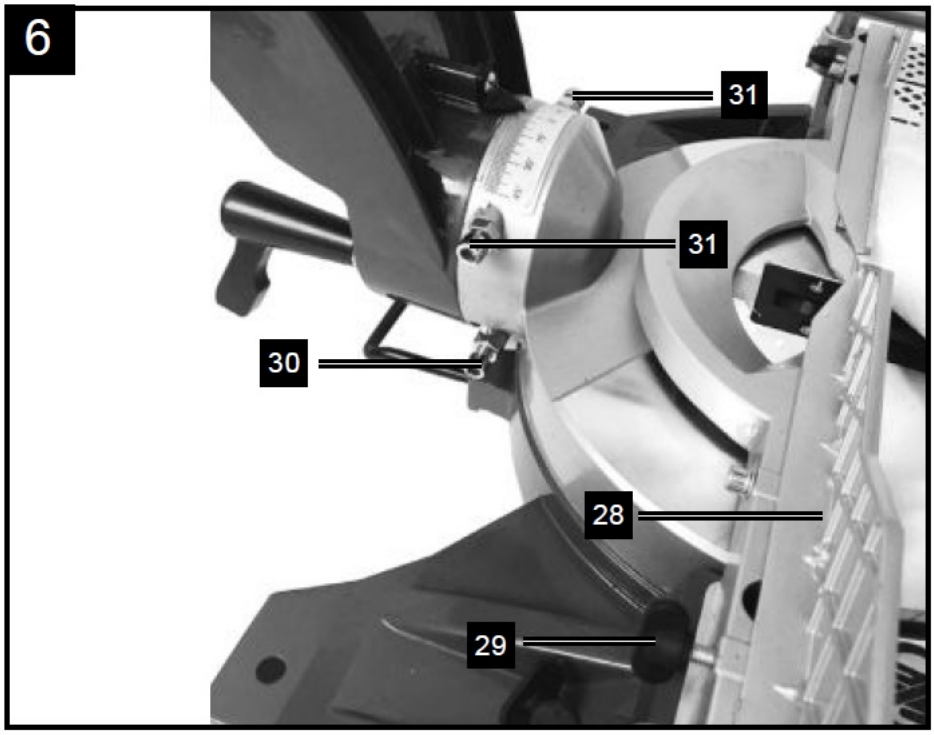
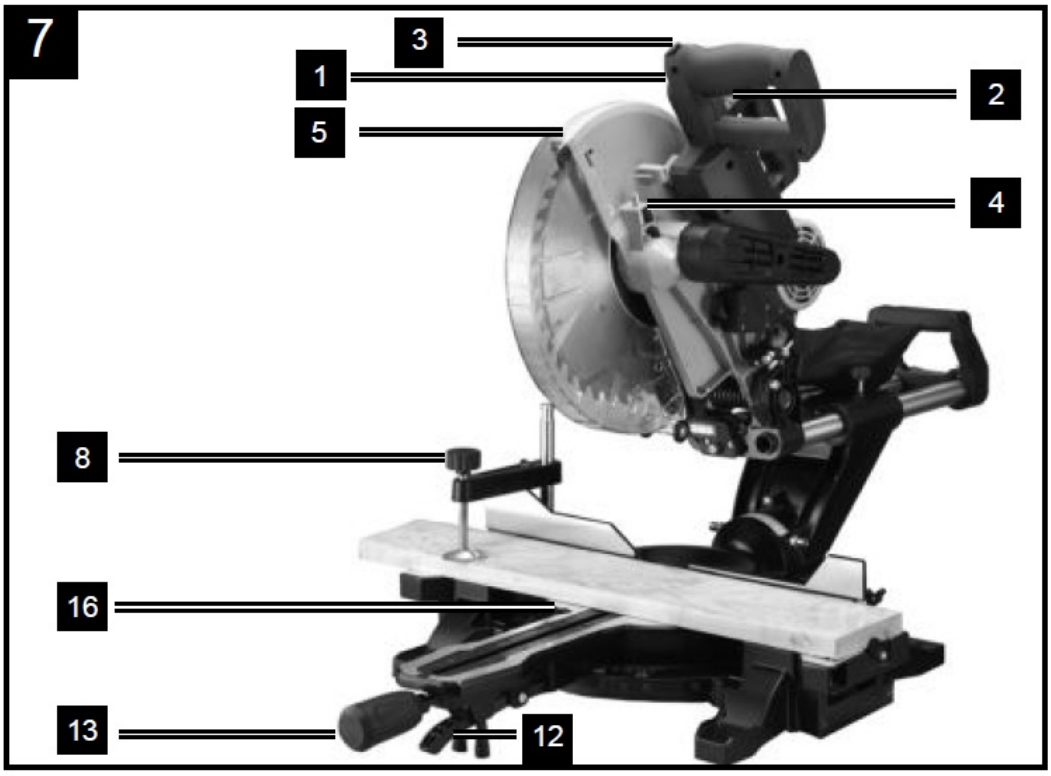
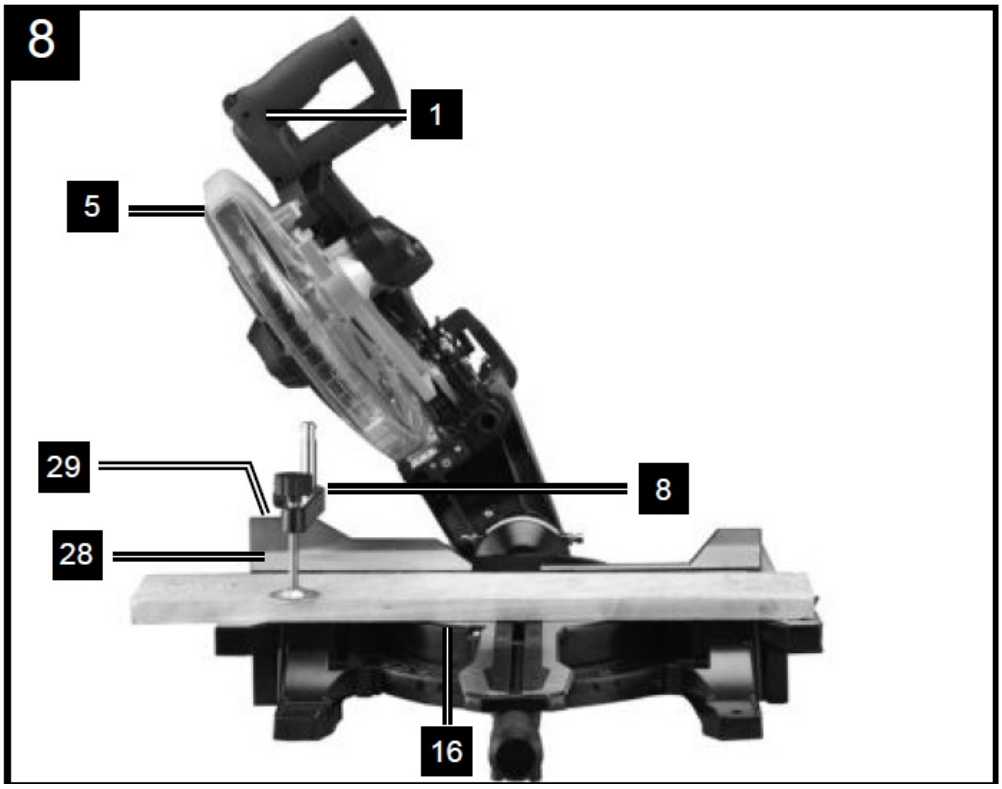
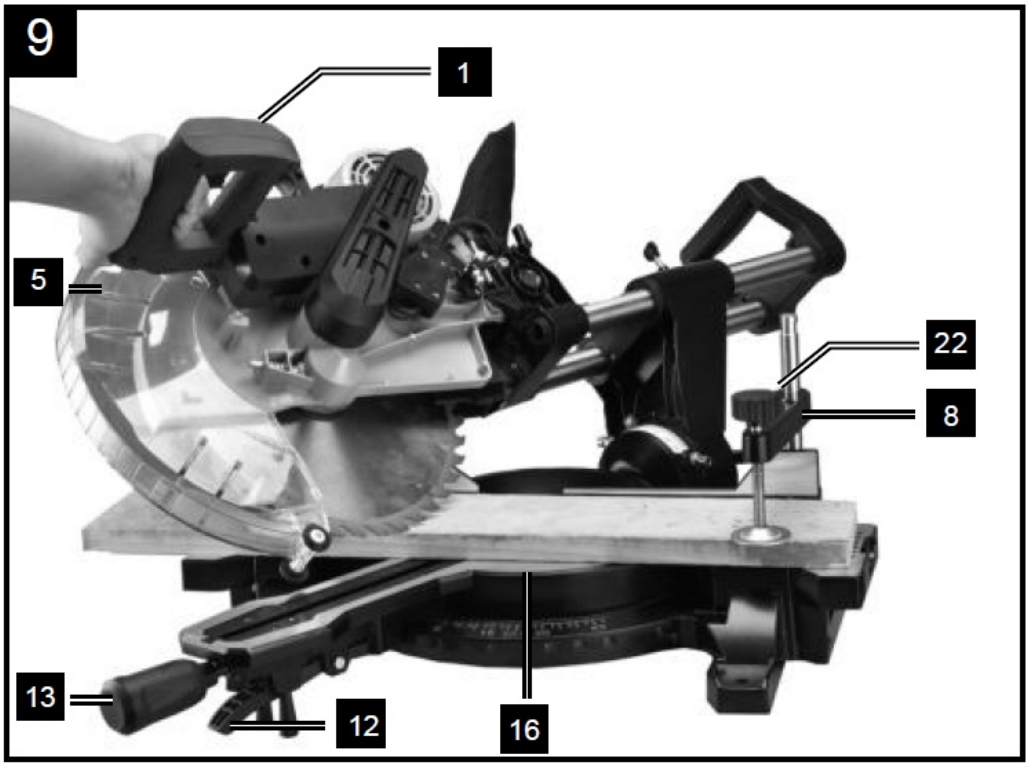


7. Saw blade
8. Clamping device
9. Workpiece support







10. Locking screw for workpiece support
11. Table insert
12. Indexed position lever

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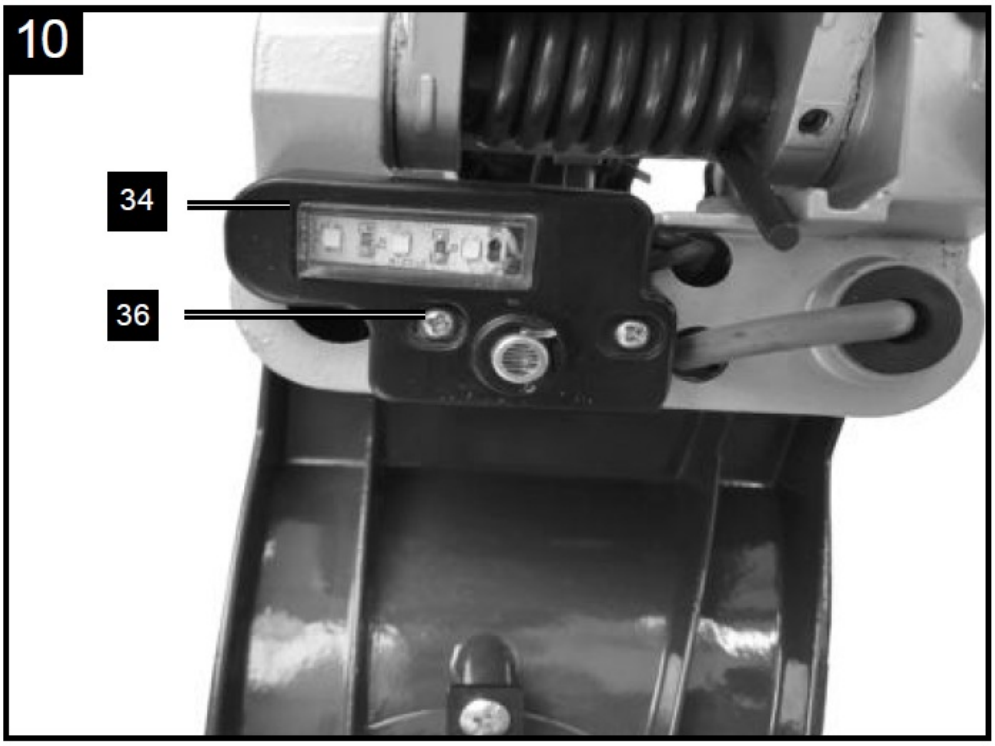

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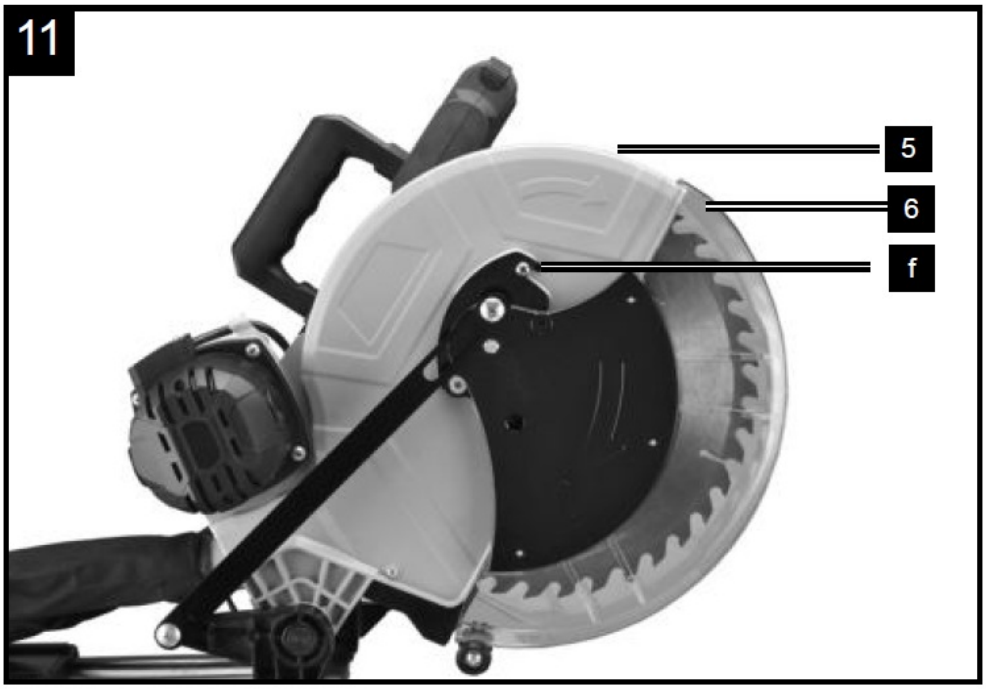
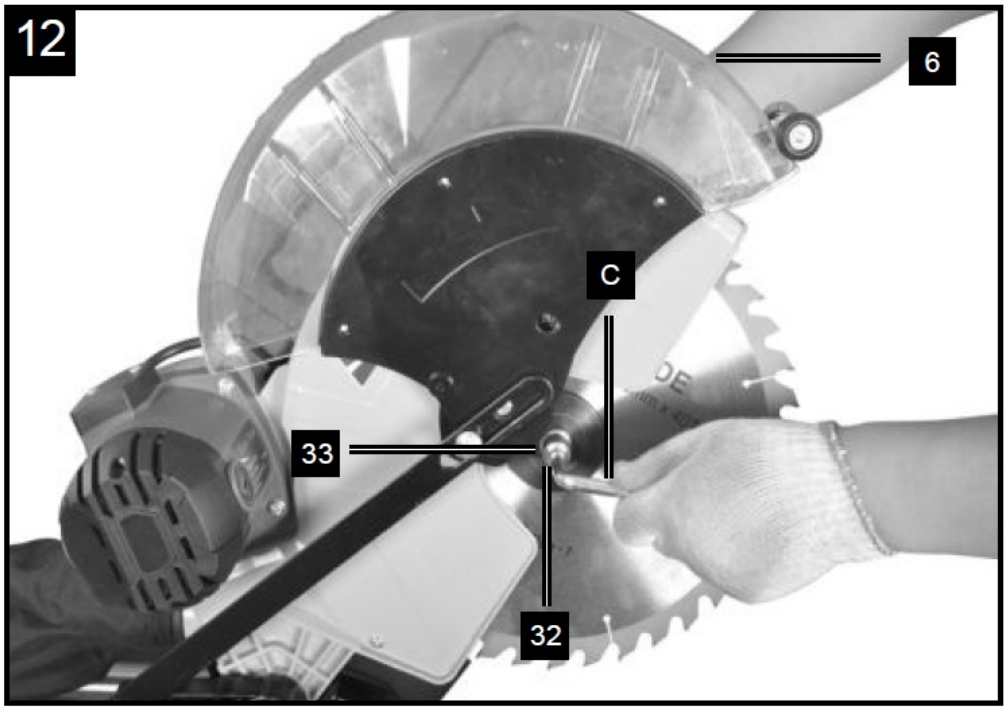
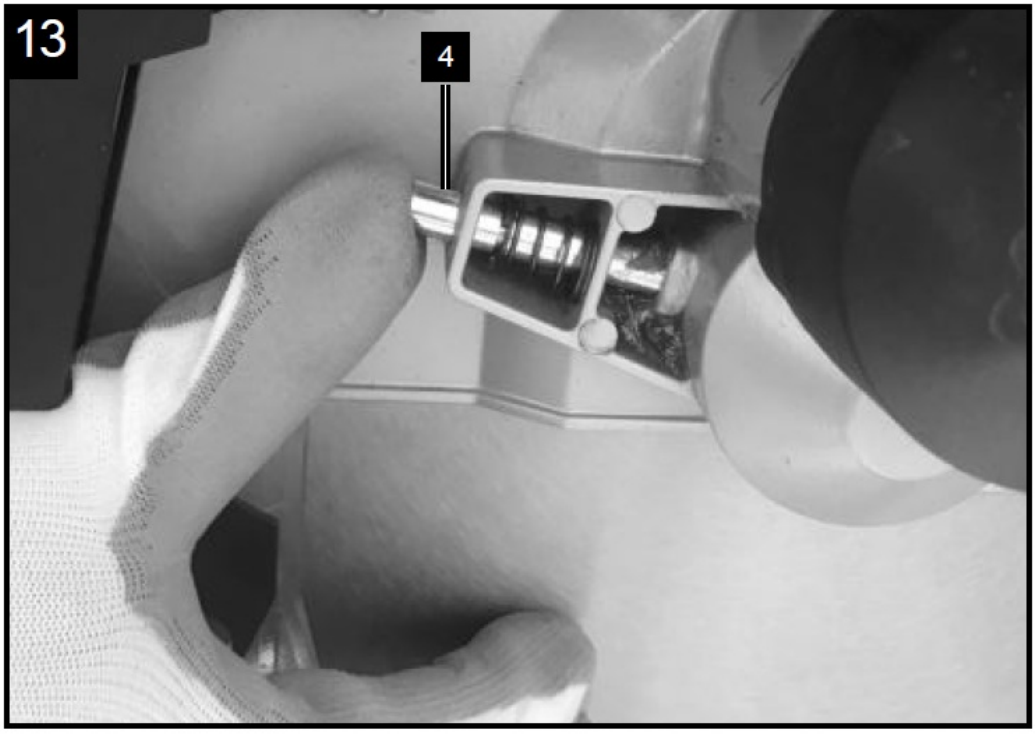
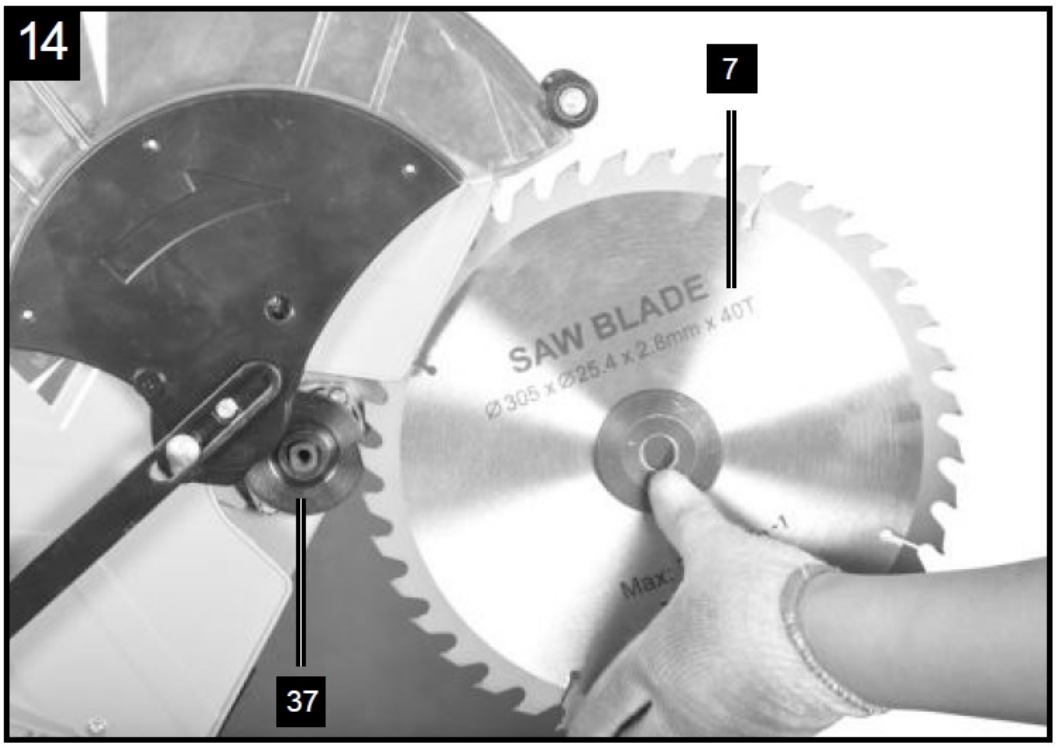




13. Locking lever
14. Pointer
15. Scale

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SAW BLADE
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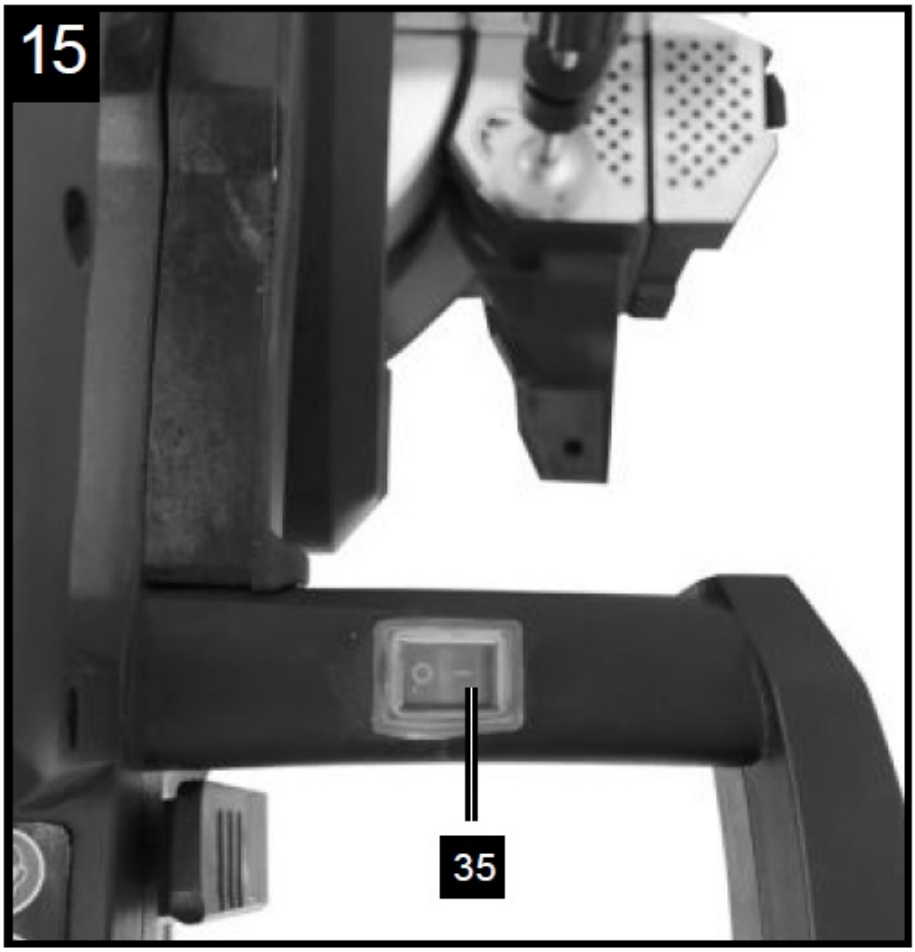
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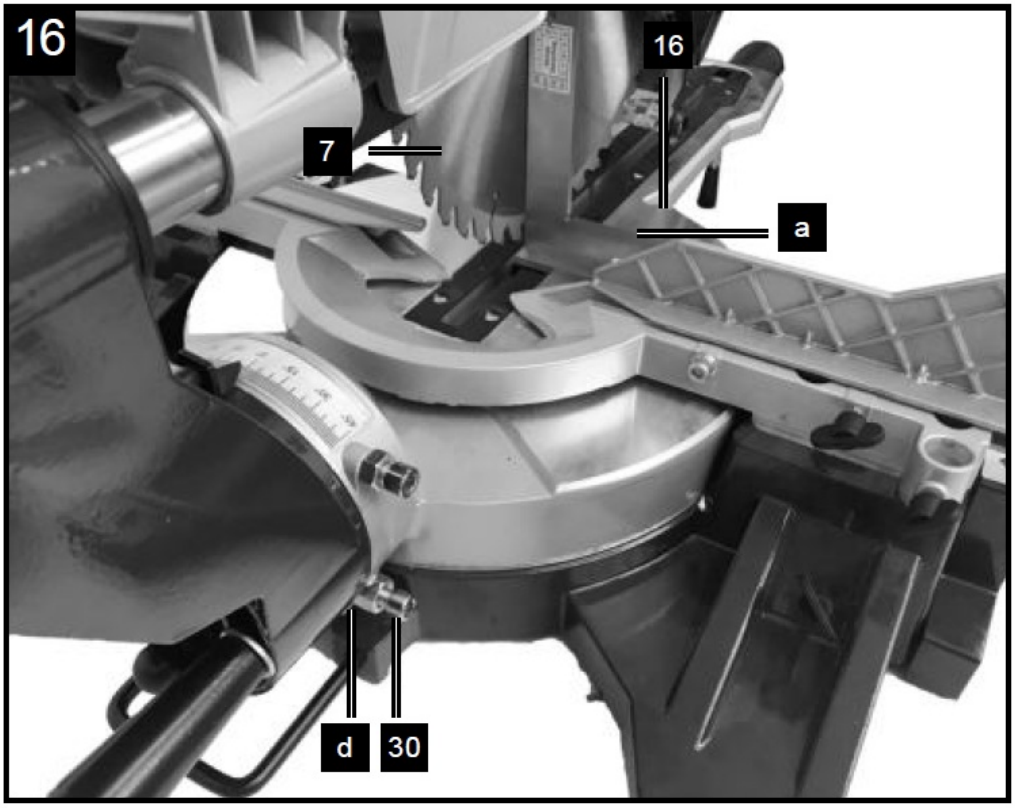
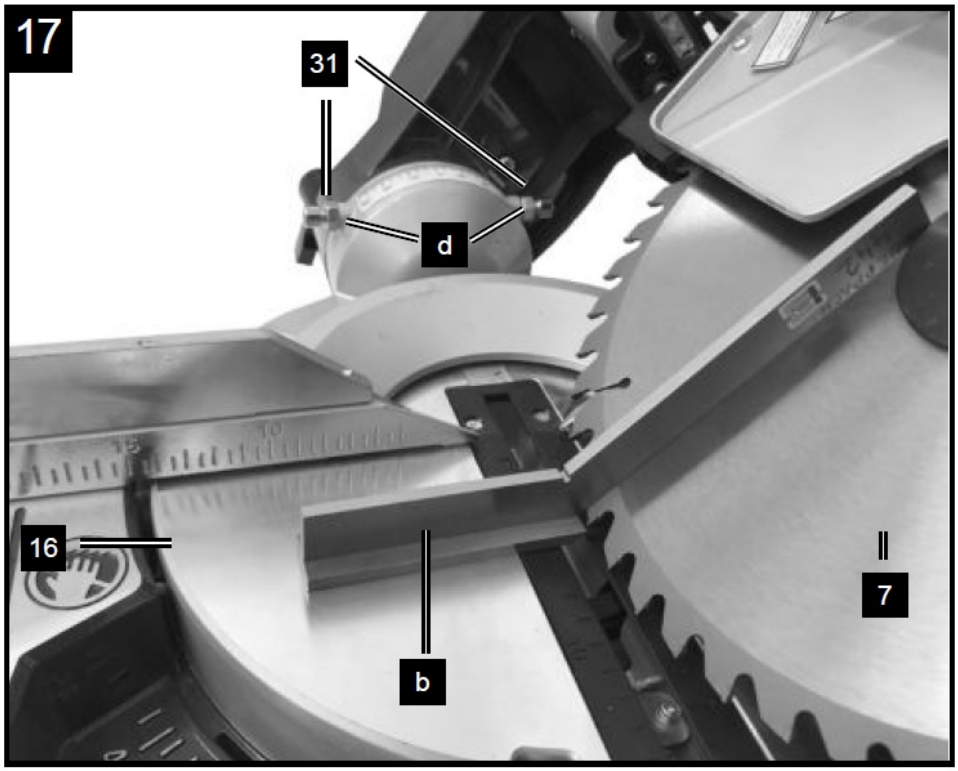


16. Turntable
17. Fixed saw table



18. Stop rail
19. Scale
20. Pointer
21. Sawdust bag
22. Locking screw
23. Safety bolt
24. Locking screw for drag guide
25. Fastening bolt

26. Drag guide
27. Screw for cutting depth limiter
28. Stop for cutting depth limiter
29. Movable stop rail
30. Set screw for moveable stop rail
31. Adjustment screw (90°)
32. Adjustment screw (45°)
33. Flange screw
34. Outer flange
35. Laser/LED
36. ON/OFF switch for laser
37. Screw
38. Inner flange
    a. 90° stop angle (not supplied)
    b. 45° stop angle (not supplied)
    c. Hexagonal key

Scope of delivery

- Drag, crosscut and mitre Saw
- 1 x Clamping device (8)
- 2 x Workpiece support (9)
- Sawdust bag (21)
- Hexagonal key (c)
- Operating manual

Intended use

The crosscut, drag 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! Do not use the saw to cut materials other than those specified described in manual. The supplied saw blade is only intended for the sawing of wood! Do not use this blade for the sawing of firewood!

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 in-formed 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 fac-tors. 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 de-signed for use in commercial, trade, or industrial applications. Our warranty will be voided if the equipment is used in commercial, trade, or industrial business or for equivalent purposes.

Safety information

General power tool safety warnings

WARNING: Read all safety warnings, instructions, illustrations, and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire, and/or serious injury.
Save all warnings and instructions for future reference.
The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-oper-ated (cordless) power tool.

Work area safety

- Keep work area clean and well-lit. Cluttered or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks that may ignite the dust or fumes.
- Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

Electrical safety

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet con-ditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the pow-er tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduc-es the risk of electric shock.

Personal safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medi-cation. A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate condi-tions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connect-ing to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites acci-dents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, en-sure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

Power tool use and care

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that can not be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool’s operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

Service

Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

Warning!
This electric tool generates an electromag-netic field during operation. This field can impair ac-tive or passive medical implants under certain condi-tions. In order to prevent the risk of serious or deadly injuries, we recommend that persons with medical implants consult with their physician and the manu-facturer of the medical implant prior to operating the electric tool.

Safety instructions for miter saws

- Mitre saws are intended to cut wood or wood-like products, they cannot be used with abra-sive cut-off wheels for cutting ferrous mate-rial such as bars, rods, studs, etc. Abrasive dust causes moving parts such as the lower guard to jam. Sparks from abrasive cutting will burn the lower guard, the kerf insert and other plastic parts.
- Use clamps to support the workpiece when-ever possible. If supporting the workpiece by hand, you must always keep your hand at least 100 mm from either side of the saw blade. Do not use this saw to cut pieces that are too small to be securely clamped or held by hand. If your hand is placed too close to the saw blade, there is an increased risk of injury from blade contact.
- The workpiece must be stationary and clamped or held against both the fence and the table. Do not feed the workpiece into the blade or cut “freehand” in any way. Unrestrained or moving workpieces could be thrown at high speeds, causing injury.
- Push the saw through the workpiece. Do not pull the saw through the workpiece. To make a cut, raise the saw head and pull it out over the workpiece without cutting, start the motor, press the saw head down and push the saw through the workpiece. Cutting on the pull stroke is likely to cause the saw blade to climb on top of the workpiece and violently throw the blade assembly towards the operator.
- Never cross your hand over the intended line of cutting either in front or behind the saw blade. Supporting the workpiece “cross handed”
  i. e. holding the workpiece to the right of the saw blade with your left hand or vice versa is very dan-gerous.
- Do not reach behind the fence with either hand closer than 100 mm from either side of the saw blade, to remove wood scraps, or for any other reason while the blade is spinning. The proximity of the spinning saw blade to your hand may not be obvious and you may be seri-ously injured.
- Inspect your workpiece before cutting. If the workpiece is bowed or warped, clamp it with the outside bowed face toward the fence. Al-ways make certain that there is no gap be-tween the workpiece, fence and table along the line of the cut. Bent or warped workpieces can twist or shift and may cause binding on the spinning saw blade while cutting. There should be no nails or foreign objects in the workpiece.
- Do not use the saw until the table is clear of all tools, wood scraps, etc., except for the work-piece. Small debris or loose pieces of wood or other objects that contact the revolving blade can be thrown with high speed.
- Cut only one workpiece at a time. Stacked mul-tiple workpieces cannot be adequately clamped or braced and may bind on the blade or shift dur-ing cutting.
- Ensure the mitre saw is mounted or placed on a level, firm work surface before use. A level and firm work surface reduces the risk of the mitre saw becoming unstable.
- Plan your work. Every time you change the bevel or mitre angle setting, make sure the ad-justable fence is set correctly to support the workpiece and will not interfere with the blade or the guarding system. Without turning the tool “ON” and with no workpiece on the table, move the saw blade through a complete simulated cut to assure there will be no interference or danger of cutting the fence.
- Provide adequate support such as table ex-tensions, saw horses, etc. for a workpiece that is wider or longer

than the table top. Workpieces longer or wider than the mitre saw ta-ble can tip if not securely supported. If the cut-off piece or workpiece tips, it can lift the lower guard or be thrown by the spinning blade.

- Do not use another person as a substitute for a table extension or as additional support. Un-stable support for the workpiece can cause the blade to bind or the workpiece to shift during the cutting operation pulling you and the helper into the spinning blade.
- The cut-off piece must not be jammed or pressed by any means against the spinning saw blade. If confined, i.e. using length stops, the cut-off piece could get wedged against the blade and thrown violently.
- Always use a clamp or a fixture designed to properly support round material such as rods or tubing. Rods have a tendency to roll while be-ing cut, causing the blade to “bite” and pull the work with your hand into the blade.
- Let the blade reach full speed before contact-ing the workpiece. This will reduce the risk of the workpiece being thrown.
- If the workpiece or blade becomes jammed, turn the mitre saw off. Wait for all moving parts to stop and disconnect the plug from the power source and/or remove the battery pack. Then work to free the jammed material. Continued sawing with a jammed workpiece could cause loss of control or damage to the mitre saw.
- After finishing the cut, release the switch, hold the saw head down and wait for the blade to stop before removing the cut-off piece. Reaching with your hand near the coasting blade is dangerous.
- Hold the handle firmly when making an incom-plete cut or when releasing the switch before the saw head is completely in the down posi-tion. The braking action of the saw may cause the saw head to be suddenly pulled downward, causing a risk of injury.

Safety Instructions for the handling of saw blades

- Do not use damaged or deformed saw blades.
- Do not use any insertion tools with cracks. Sort out cracked insertion tools. Repairs are not per-mitted.
- Do not use saw blades made of high speed steel.
- Check the condition of the saw blades before using the sliding compound mitre saw.
- Make sure that a suitable saw blade for the material to be cut is selected.
- Only use saw blades recommended by the manufacturer.

Saw blades designed to cut wood and similar materials must comply with EN 847-1.

- Do not use saw blades made of high-speed alloy steel (HSS steel).
- Only use saw blades for which the maximum per-missible speed is not lower than the maximum spindle speed of the sliding compound mitre saw and which are suitable for the material to be cut.
- Observe the saw blade direction of rotation. 10 Only insertion the saw blade if you have mastered their use.
- Observe the maximum speed. The maximum speed specified on the insertion tool may not be exceeded. If specified, observe the speed range.
- Clean grease, oil and water off of the clamping surfaces.
- Do not use any loose reducing rings or bushes for the reduction of holes on saw blades.
- 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.
- Make sure that fixed reducer rings are parallel to each other.
- Handle the insertion tool with caution. They are ide-ally stored in the original package or special containers. Wear protective gloves in order to improve grip and to further reduce the risk of injury.

- Prior to the use of insertion tools, make sure that all protective devices are properly fastened.
- Prior to use, make sure that the insertion tool meets the technical requirements of this electric tool and is properly fastened.
- Only use the supplied saw blade for cutting wood, never for the processing of metals.
- Only use saw blade diameters in accordance with the markings on the saw.
- Use additional workpiece supports, if required for workpiece stability.
- Workpiece support extensions must always be secured and used during work.
- Replace table inserts when worn!
- Avoid overheating of the saw teeth.
- When sawing plastic, avoid melting of the plastic.
  Use the appropriate saw blades for this purpose. Replace damaged or worn saw blades immediately.
  When the saw blade overheats, stop the machine. Allow the saw blade to cool down before using the machine again.

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

Protect yourself and you environment from ac-cidents using suitable precautionary measures!

- Do not look directly into the laser beam with un-protected eyes.
- Never look into the path of the beam.
- Never point the laser beam towards reflecting sur-faces 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 expo-sure to the beam can occur.
- If the miter 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 authorized representative.

Technical data

- AC motor
  - 220 – 240 V~ 50Hz
- Power
  - 2000 Watt / S6 40%* 1800 Watt / S1
- Idle speed n0
  - 3800 min -1
- Carbide saw blade
  - ø 305 x ø 30 x 3 mm
- Number of teeth
  - 24
- Swivel range
  - -45° / 0°/ +45°
- Mitre cut
  - 0° bis 45° to the left

- Saw width at 90°
  - 330 x 105 mm
- Saw width at 45°
  - 230 x 60 mm
- Saw width at 2 x 45° right
  (double mitre cut)
  - 230 x 35 mm
- Saw width at 2 x 45° left
  (double mitre cut)
  - 230 x 60 mm
- Protection class
  - II
- Weight
  - 20,8 kg0
- Laser class
  - 2
- Wavelength of laser
  - 650 nm
- Laser output
  - ≤ 1 mW

* S6, continuous operation periodic duty. Identical duty cycles with a period at load fol-lowed by a period at no load. Running time 5 minutes; duty cycle is 40% of the running time.

The work piece must have a minimum height of 3 mm 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 62841.

- Sound pressure level LpA
  - 95 dB(A)
- Uncertainty KpA
  - 3 dB
- Sound power level LWA
  - 108 dB(A)
- Uncertainty KWA
  - 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 62841.

Residual risks
The machine has been built according to the state of the art and the recognized technical safety requirements. However, individual residual risks can arise during operation.

- Health hazards 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 re-main.
- Residual risks can be minimized 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 ma-chine 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 op-erations.

Before starting the equipment

- Open the packaging and remove the device care-fully.
- 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 trans-port 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 plas-tic bags, film and small parts! There is a risk of swallowing and suffocation!

- 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. Use the holes in the frame of the machine.
- 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.

Attachment and operation

Attaching the saw (Fig. 1 – 6)

- To adjust the rotary table (16), push the locking lever (13) downwards and pull the lower indexed position lever (12) upwards with your index finger.
- Rotate the rotary table (16) and pointer (14) to the desired angle on the scale (15) and lock in place by folding

up the locking lever (13).

- Pressing the machine head (5) lightly downwards and removing the locking bolt (24) from the motor bracket at the same time disengages the saw from the lowest position.
- It is possible to secure the clamping device (8) to the left or right on the stationary saw bench (17).
- Attach the workpiece supports (9) to the fixed saw table (17) as shown in Figure 6a,b,c and push all the way through. Secure the shafts with the retain-ing springs to prevent them from slipping out accidentally. The fasten in the desired position with the screw (10).
- It is possible to tilt the machine head (5) a max. 45° to the left by loosening the set screw (22), to tilt the machine head (5) to the right to max. 45°the safety bolt (22a) must be loosened.

Precision adjustment of the stop for crosscut 90° (Fig. 3, 5, 16)
No stop angle included.

- Lower the machine head (5) and secure using the locking bolt (24).
- Loosen the set screw (22).
- Position the angle stop (a) between the saw blade (7) and the rotary table (16).
- Slacken the counternut (d). Adjust the adjusting screw (30) until the angle between the saw blade (7) and rotary table (16) is 90°.
- Retighten the counternut (d) to secure this setting.
- Subsequently check the position of the angle indi-cator. If necessary loosen the pointer (20) using a Philips screwdriver, set to position 0° on the angle scale (19) and re-tighten the retaining screw.

Precision adjustment of the stop for mitre cut 45° (Fig. 1, 3, 5, 17)
No stop angle included.

- Lower the machine head (5) and secure using the locking bolt (24).
- Fix the rotary table (16) in the 0° position.
- Loosen the set screw (22) and use the handle (1) to angle the machine head (5) 45° to the left.
- 45° – position angle stop (b) between the saw bladen (7) and rotary table (16).
- Slacken the counternut (c). Adjust the adjusting screw (31) until the angle between the saw blade (7) and rotary table (16) is precisely 45°.
- Retighten the counternut (d) to secure this setting.

Cross cut 90° and turntable 0° (Fig. 1, 2, 6, 7)
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 (23) 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 neces-sary to ensure that the set screw (23) is loose and the machine head (5) can move.
Attention! For 90° mitre cuts, the moveable stop rail (28) must be fixed in the inner position.

- Open the set screw (29) on the moveable stop rail (28) and push the moveable stop rail (28) inwards.
- The moveable stop rail (28) must be locked in a position far enough from the inner position that the distance between the stop rail (28) and the saw blade (7) is no more than 5 mm.
- Before making the cut, check that no collision could occur between the stop rail (28) and the saw blade (7).
- Tighten the set screw (29) again. (2x 8.3 +8.4)
- Move the machine head (5) to its upper position.

- Use the handle (1) to push back the machine head (5) 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 (18) and on the turntable (16).
- Lock the material with the clamping device (8) on the fixed saw table (16) to prevent the material from moving during the cutting operation.
- Release the lock switch (3) and press the ON/OFF-switch (2) to start the motor.
- **With the drag guide (23) fixed in place:**
  use the handle (1) to move the machine head (5) steadily and with light pressure downwards until the saw blade (7) has completely cut through the work piece.
- **With the drag guide (23) not fixed in place:**
  pull the machine head (5) 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 (5) slowly and steadily to the very back until the saw blade (7) has completely cut through the work piece.
- When the cutting operation is completed, move the machine head (5) 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 up-wards slowly whilst applying light counter pres-sure.

Cross cut 90° and turntable 0° – 45° (Fig. 1, 6, 7)

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.
Attention! For bevel cuts (inclined saw head), the moveable stop rail (28) must be fixed in the outer position.

- Open the set screw (29) on the moveable stop rail (28) and push the moveable stop rail (28) out-wards.
- The moveable stop rail (28) must be locked in a position far enough from the inner position that the distance between the stop rail (28) and the saw blade (7) is no more than 5 mm.
- Before making the cut, check that no collision could occur between the stop rail (28) and the saw blade (7).
- Tighten the set screw (29) again. (2x 8.6 + 8.7)
- Use the handle (13) to adjust the rotary table (16) to the desired angle. The pointer (14) on the rota-ry table (16) must match the desired angle on the scale (15) on the fixed saw table (17).
- Tilt the locking lever (13) back up again to fix the rotary table (16) in place.
- Cut as described under section 8.3.

Mitre cut 0°- 45° and turntable 0° (Fig. 1, 2, 6, 8)

The crosscut saw can be used to make mitre cuts of 0° – 45° in relation to the work face.
Important. To make miter cuts (inclined saw head), the adjustable stop rail (28) must be fixed at the outer position.

- Open the locking lever (29) for the adjustable stop rail (28) and push the adjustable stop rail outwards.
- The adjustable stop rail (28) must be fixed far enough in front of the innermost position that the distance between the stop rail (28) and the saw blade (7) amounts to a maximum of 5 mm.
- Before making a cut, check that the stop rail (28) and the saw blade (7) cannot collide.
- Secure the locking lever (29) again.
- Move the machine head (5) to the top position.

- Fix the rotary table (16) in the 0° position.
- Loosen the set screw (22) and use the handle (1) to angle the machine head (5) to the left, until the pointer (20) indicates the desired angle measure-ment on the scale (19).
- Re-tighten the fixing screw (22).
- Cut as described in section 8.3.

Mitre cut 0°- 45° and turntable 0°- 45° (Fig. 1, 2, 6, 9)

The crosscut saw can be used to make mitre cuts to the left and right 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).
Important. To make miter cuts (inclined saw head), the adjustable stop rail (28) must be fixed at the outer position.

- Open the locking lever (29) for the adjustable stop rail (28) and push the adjustable stop rail outwards.
- The adjustable stop rail (28) must be fixed far enough in front of the innermost position that the distance between the stop rail (28) and the saw blade (7) amounts to a maximum of 5 mm.
- Before making a cut, check that the stop rail (28) and the saw blade (7) cannot collide.
- Secure the locking lever (29) again.
- Move the machine head (5) to its upper position.
- Release the rotary table (16) by loosening the set screw (26).
- Using the handle (13), set the rotary table (16) 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 (5) to the left until it co-incides with the required angle value (in this con-nection see also section 8.6).
- Re-tighten the fixing screw (22).
- Cut as described under section 8.3.

Limiting the cutting depth (Fig. 3)

- The cutting depth can be infinitely adjusted using the screw (26). To do this loosen the knurled nut on the screw (26). Turn the screw (26) in or out to set the required cutting depth. Then re-tighten the knurled nut on the screw (26).
- Check the setting by completing a test cut.

Sawdust bag (Fig. 2)

- The saw is equipped with a debris bag (21) 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 (21) can be emptied by means of a zipper at the bottom.

Changing the saw blade (Fig. 11 – 14)

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

- Swing up the machine head (5).
- Loosen the screw (f) of the flange cover so that it is free to move.
- Swing up the saw blade guard (6) to the point where the recess in the saw blade guard (6) is above the flange bolt (32).
- Insert the hexagonal key (c) in the flange bolt (32).
- Firmly press the saw shaft lock (4) and slowly ro-tate the flange bolt (32) 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 (32) in the clockwise direction.
- Turn the flange screw (32) right out and remove the external flange (33).
- Take the blade (7) off the inner flange (37) and pull out downwards.
- Carefully clean the flange screw (32), outer flange (33) and inner flange (37).
- Fit and fasten the new saw blade (6) 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 into position and tighten the screw (f) 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° an-gle settings.
- **Important!** The work to change and align the saw blade (7) must be carried out correctly.

Using the laser/LED (Fig. 10, 15)

- **To switch on:** Move the ON/OFF switch of the la-ser (35) 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 la-ser (35) to the “0” position.

Adjusting the laser (Fig. 10)
If the laser (34) ceases to indicate the correct cutting line, you can readjust the laser. To do so, open the screws (36) and set the laser by moving sideways to that the laser beam strikes the teeth of the saw blade (7).

Transport

(Fig. 1, 2)

- Tighten the set screw (26) in order to lock the ro-tary table (16)
- Press the machine head (5) downwards and se-cure with the safety pin (24). The saw is now locked in its bottom position.
- Fix the saw’s drag function with the locking screw for drag guide (23) in rear position.
- Carry the equipment by the fixed saw table (17).
- When reassembling the equipment proceed as de-scribed under section 7.1.

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 operat-ing 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 pos-sible to reinstall them.

Service information

Please note that the following parts of this product are subject to normal or natural wear and that the fol-lowing parts are therefore also required for use as consumables.
Wear parts*: Carbon brushes, saw blade, table in-serts, dust collecting bags, V-belts
* Not necessarily included in the scope of delivery!

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.

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.

Important information
In 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 im-properly 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 aging.

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 220 – 240 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

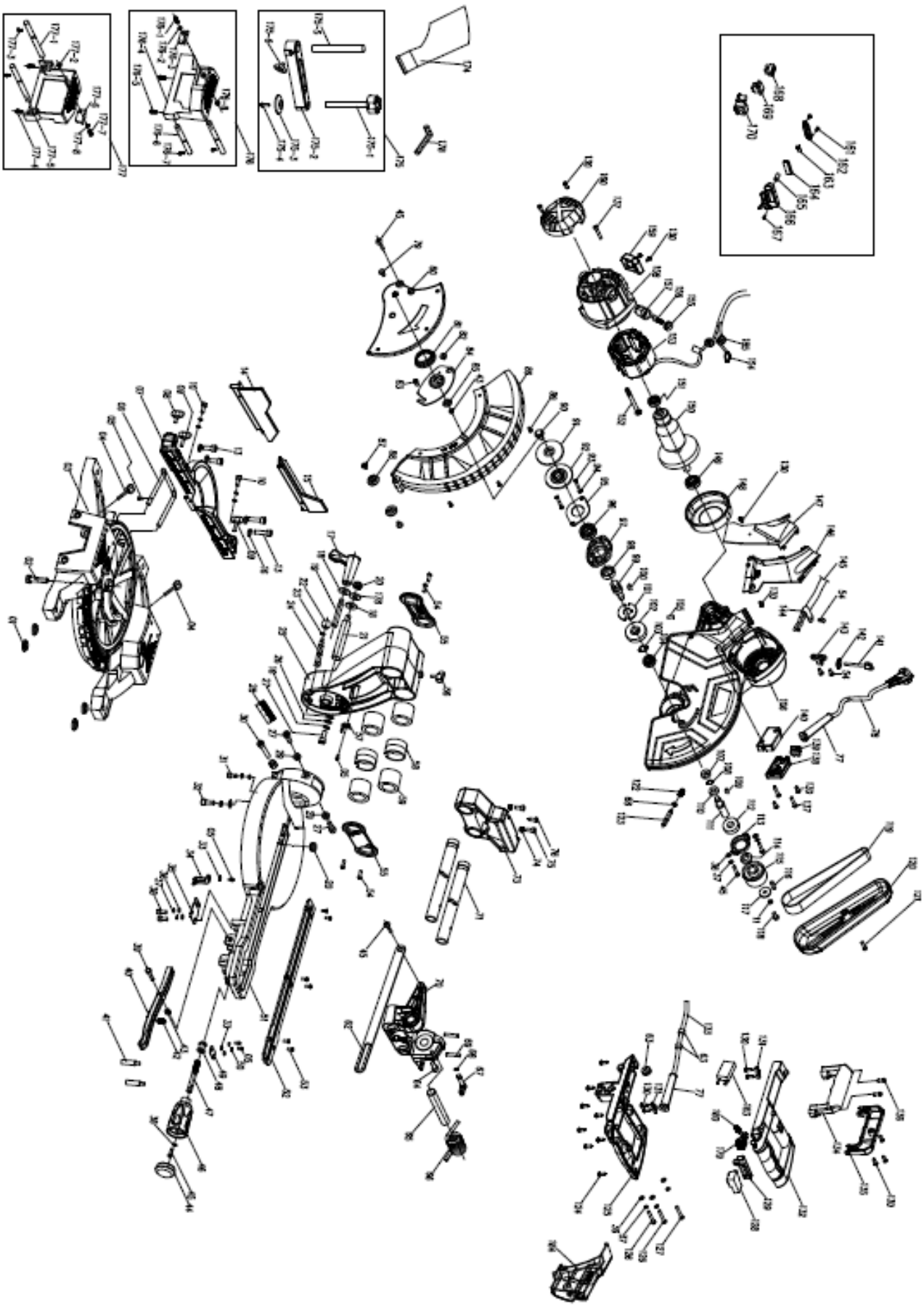
Disposal and recycling

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 equip-ment 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.

Old devices must not be disposed of with household waste!
This symbol indicates that this product must not be disposed of together with domestic waste in compliance with Directive 2012/19/EU) pertaining to waste electrical
and electronic equipment (WEEE). This product must be disposed of at a designated collection point. This can occur, for example, by handing it in at an authorised collecting point for the recycling of waste electrical and electronic equipment. Improper handling of waste equipment may have negative consequences for the environment and human health due to potentially hazardous substances that are often contained in electrical and electronic equipment. By properly disposing of this product, you are also contributing to the effective use of natural resources.
You can obtain information on collection points for waste equipment from your municipal administration, public waste disposal authority, an authorized body for the disposal of waste electrical and electronic equipment or your waste disposal company.

Troubleshooting

Fault	Possible cause	Remedy
Motor does not work	Motor, cable or plug defective, fus es burnt	Arrange for inspection of the machine by a specialist. Never repair the motor yourself. Dange r! Check fuses and replace as necessary
The motor starts up sl owly and does not rea ch operating speed.	Voltage too low, coils damaged, capacitor burnt	Contact the utility provider to check the voltage. A r- range for inspection of the motor by a specialist. Ar- range for replacement of the capacitor by a sp ecialist
Motor makes excessiv e noise	Coils damaged, motor defective	Arrange for inspection of the motor by a specialist
The motor does not re ach its full power.	Circuits in the network are overloa d- ed (lamps, other motors, etc.)	Do not use any other equipment or motors on the same circuit
Motor overheats easily .	Overloading of the motor, insuffici ent cooling of the motor	Avoid overloading the motor while cutting, remove dust from the motor in order to ensure optimal coo l- ing of the motor
The saw cut is rough o r wavy	Saw blade was dull, tooth shape not appropriate for the material’s t hickness	Re-sharpen saw blade and/or use a suitable saw blade
The workpiece pulls a way and/or splinters	Excessive cutting pressure and/or saw blade not suitable for use	Insert the suitable saw blade



Warranty

Apparent defects must be notified within 8 days from the receipt of the goods. Otherwise, the buyerís rights of claim due to such defects are invalidated. We guarantee for our machines in case of proper treatment for the time of the statutory warranty period from delivery in such a way that we replace any machine part free of charge

which provably becomes unusable due to faulty material or defects of fabrication within such period of time. With respect to parts not manufactured by us we only warrant insofar as we are entitled to warranty claims against the upstream suppliers. The costs for the installation of the new parts shall be borne by the buyer. The cancellation of sale or the reduction of the purchase price as well as any other claims for damages shall be excluded.

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Documents / Resources

	**scheppach HM140L Sliding Cross Cut Mitre Saw** [pdf] Instruction Manual HM140L, Sliding Cross Cut Mitre Saw, Cross Cut Mitre Saw, Sliding Mitre Saw, Mitre Saw, Saw

References

- **scheppach | scheppach**