

TOLSEN X20

96060/96460

LI-ION CORDLESS CUTTING SAW

INSTRUCTION MANUAL

20V LITHIUM-ION

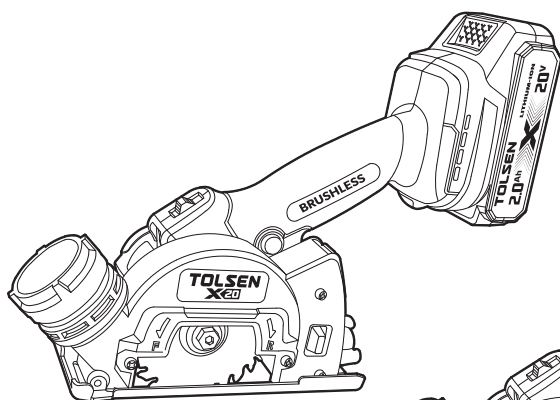


RoHS

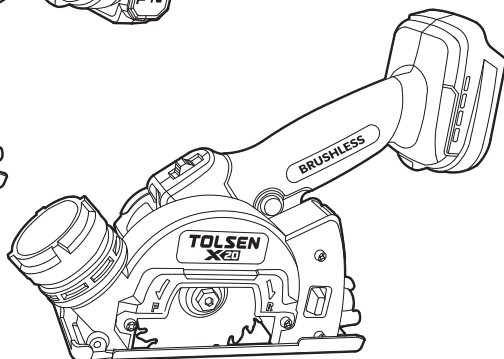
BL

**BRUSHLESS
MOTOR**

INDUSTRIAL



96460



96060

SAVE THIS MANUAL !

You will need this manual for safety instructions, operating procedures and warranty.

Put it and the original sales receipt in a safe dry place for future reference.

IMPORTANT SAFETY INFORMATION

General Power Tool Safety Warnings

WARNING Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

WARNING: This appliance is not intended for use by persons (including children) with reduced, physical or mental capabilities or lack of experience or knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children must be supervised to ensure that they do not play with the appliance.

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-operated (cordless) power tool.

Work area safety

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

Electrical safety

1. 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.
2. 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.
3. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
4. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
5. 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.
6. If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) or ground fault circuit interrupter (GFCI) protected supply. Use of an RCD or GFCI reduces the risk of electric shock.
7. Power tools can produce electromagnetic fields [EMF] that are not harmful to the user. However, users of pacemakers and other similar medical devices should contact the maker of their device and/or doctor for advice before operating this power tool.

Personal safety

1. 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 medication. A moment of inattention while operating power tools may result in serious personal injury.
2. Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.
4. 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.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
7. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
8. 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

1. 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.
2. Do not use the power tool if the switch could not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. Disconnect the plug from the power source and/or the battery pack 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.
4. 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.
5. Maintain power tools. 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.
6. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. 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.
8. 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.

Battery Tool Use and Care

1. Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
2. Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
3. When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
4. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
5. Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
6. Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130 °C may cause explosion.
7. Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions. Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

Service

1. 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.
2. Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.
3. Follow instruction for lubricating and changing accessories.

POWER TOOL-SPECIFIC SAFETY WARNINGS

Special requirements for DC circular saws -Safety instructions for all circular saws

Sawing steps:

- a) Danger: Keep hands away from the cutting area and saw blade at all times. Always hold the auxiliary handle or motor casing with the other hand. If both hands hold the circular saw, they won't cut their hands.
- b) Do not touch the underside of the workpiece. The protective cover cannot prevent the danger of the saw blade below the workpiece.
- c) Adjust the sawing depth to the thickness of the workpiece. The saw teeth exposed below the workpiece should be less than one tooth height.
- d) Do not hold the workpiece or place it on the leg for sawing. The workpiece should be fixed on a stable platform. Proper support of the workpiece is crucial in reducing personal injury, saw blade jamming, or loss of control during operation.
- e) When operating in situations where sawing attachments may touch dark lines, the tool should be held with an insulated grip surface. Cutting attachments that come into contact with live wires can cause the exposed metal parts of the tool to become electrified, resulting in electric shock to the operator.
- f) When sawing, always use a splitting saw with a grid and straight edge guide. This will improve the cutting accuracy and reduce the probability of the saw blade getting stuck. Always use saw blades with the correct shaft hole size and shape (square or circular). If the saw blade and circular saw clamping components do not match, it will cause eccentric operation and lead to loss of control.
- g) Do not use damaged or oversized washers or bolts. To achieve optimal operational performance and ensure safe operation, saw blade washers and bolts are specifically designed for the circular saw used.

Further safety instructions for all circular saws Reasons for rebound and related warnings

Rebound is a sudden reaction that occurs when the saw blade is compressed, stuck, or off center, causing the circular saw to lift uncontrollably and detach from the workpiece, rushing towards the operator.

When the saw blade is squeezed or the cut is tightly stuck, the saw blade becomes stuck and the motor reaction force drives the whole machine to quickly bounce back towards the operator. If the saw blade twists or deviates from the cutting surface, the saw teeth on the back edge of the saw blade will dig into the surface of the wood, causing the saw blade to climb out of the cut and bounce back towards the operator. Rebound is the result of misuse of a circular saw and/or incorrect operating procedures or conditions. The following appropriate preventive measures can be taken to avoid rebound:

- a) Grasp the handle of the circular saw tightly and place your arms so that they can withstand the rebound force. Place your body on either side of the circular saw, do not aim at the saw blade.
- b) Rebound can cause the circular saw to bounce backwards, but if appropriate precautions are taken, the operator can control the rebound force.
- c) When the saw blade gets stuck or the cutting is interrupted for any reason, release the switch trigger and keep the circular saw in the material without moving until the saw blade comes to a complete stop. Do not attempt to remove or pull the circular saw from the workpiece while the saw blade is in operation or may rebound. Investigate and take corrective measures to eliminate the cause of saw blade jamming.
- d) When restarting the circular saw in the workpiece, align the saw blade with the cut without inserting the saw

- teeth into the material. If the saw blade gets stuck and the tool restarts, the saw blade will climb out of the workpiece or rebound from the workpiece.
- e) Support large sheet metal to reduce the risk of saw blade compression and rebound. Large sheet metal will sag due to its own weight, and the support must be placed on both sides below the sheet metal, near the sawing line and the edge of the sheet metal.
- f) Do not use saw blades that are not sharp or improperly installed. Unsharpened or improperly installed saw blades can create narrow incisions, leading to excessive friction, blade jamming, and rebound. Before sawing, The locking knob for adjusting the cutting depth and tilt angle must be tightened and fastened. If the saw blade adjuster moves during sawing, it may cause the saw blade to get stuck and rebound.
- g) Be extra careful when sawing existing walls or other blind spots, as the protruding sharp edges may cause rebound when sawing.

Safety instructions for circular saws with swinging inner shields Lower shield function

- a) Before each use, check if the lower cover closes smoothly. If the lower cover cannot move freely and quickly close, the circular saw must not be operated. Do not clamp or tie the lower cover in the open position. If the circular saw accidentally falls, the protective cover may bend and deform. Use a retractable handle to lift the lower cover and ensure that it can move freely at any cutting angle and depth without touching the saw blade or any other parts.
- b) Check the working condition of the shield spring. If the shield and spring cannot work properly, they must be repaired before use. The lower protective device may move slowly due to component damage, gum deposition, or debris accumulation.
- c) Only for special sawing, such as "insert sawing" and "combination sawing", can the lower guard be manually lifted. Once the saw blade enters the cutting material, the lower cover must be immediately released by lifting it with the retraction handle. The protective cover should work automatically for all other sawing operations.
- d) Before placing the circular saw on the workbench or ground, always check if the lower cover covers the saw blade. Unprotected and inertia driven saw blades can cause the circular saw to retreat and cut any object along its path. Consider the time it takes for the saw blade to stop after the switch is released.

Battery Safety



WARNING

This battery can only be used in the machines included in the TOLSEN X20V lithium-ion power platform system. This battery can only be used cooperatively with the designated battery charger.

Li-Ion batteries, if incorrectly used, stored or charged will cause a fire, burn and explosion hazard.

Failure to follow these instructions may cause overheating or fire.

1. Keep the battery out of reach of children.
2. The battery should be charged at ambient temperatures between 5 and 40°C (ideally around 20°C) . After charging, allow 15 minutes for the battery to cool before use.
3. The Battery Charger monitors battery temperature and voltage while charging. DO NOT leave batteries on charge for extended periods and NEVER store batteries on charge. Ensure that the charger is disconnected from the mains supply after use.
4. When not in use batteries should be stored at room temperature. Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 40°C (ideally around 20°C) .
5. Ensure that battery contacts cannot accidentally short in storage. Keep batteries clean; foreign objects or dirt may cause a short. Keep away from other metal objects, for example, paperclips, coins, keys, nails and screws.
6. **DO NOT** store lithium-ion battery packs in a discharged state over a long period as this can damage the lithium-ion cells. For long-term storage, store batteries in a high charge state disconnected from the power tool.
7. Batteries can become faulty over time, individual cells in the battery can fail and the battery could short. The charger will not charge faulty batteries. Use another battery, if possible, to check correct functionality of the charger and purchase a replacement battery if a faulty battery is indicated.
8. **DO NOT** open, disassemble, crush, heat or incinerate. Do not dispose of in fire or similar.

Battery Charger Safety



WARNING

This charger can only be used to charge the batteries which has TOLSEN X20V symbol. If it is used to charge other kinds of batteries, there is a risk of explosion. **DO NOT** attempt to recharge non-rechargeable batteries.

1. This is class 2 power supply. It is suitable for indoor use only.
2. Before use, the input and output technical data must be checked to secure correct use.
3. Do not use the Battery Charger in the circumstances that the output polarity does not match the load polarity.
4. Do not attempt to use the charger with any batteries other than those supplied. Keep your battery charger clean; foreign objects or dirt may cause a short or block air vents. Failure to follow these instructions may cause overheating or fire
5. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Before Use

Removing a battery

Remove the Battery from the tool by pressing the lock button, then slide the Battery out of the Battery Slot.

WARNING:

DO NOT try to remove the Battery without pressing the lock button. The tool or Battery could be damaged.

Fitting a battery

1. Fit a battery by sliding it on to the Battery Slot of the tool until it clicks and locks into position

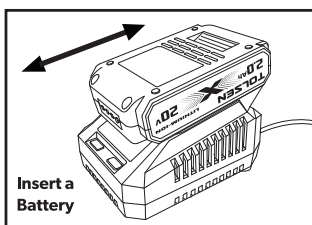
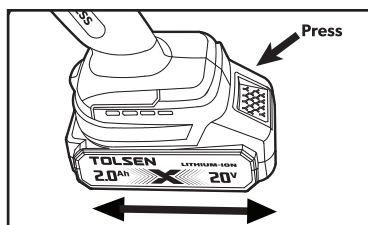
Note: Make sure the Battery and tool are lined up correctly. If the Battery does not slide into the tool easily, do not force it. Instead, slide the Battery out of the tool again, check the top of Battery and the tool battery slot are clean and undamaged and that the contacts are not bent

Setting up the battery charger

1. If there is battery fitted, remove any battery from battery charger first

2. Insert the Battery Charger mains plug into a suitable mains socket

Note: The Green LED on the Charger will always bright to indicate that the charger is ready to charge the battery.



WARNING: Use this charger ONLY to charge the supplied battery or additional purchased batteries that are specifically designed for this tool.

Charging the battery

WARNING: Failure to follow the correct procedure when charging batteries will result in permanent damage.

Note: Normal charging time is approximately 65 minutes for a recently discharged 2.0Ah capacity battery.

However, if the Battery has been left in a discharged state for some time, it may take additional time to charge.

1. Slide a fully or partially discharged Battery on to the Battery Charger .

2. Once charging commences, the Red LED will on.

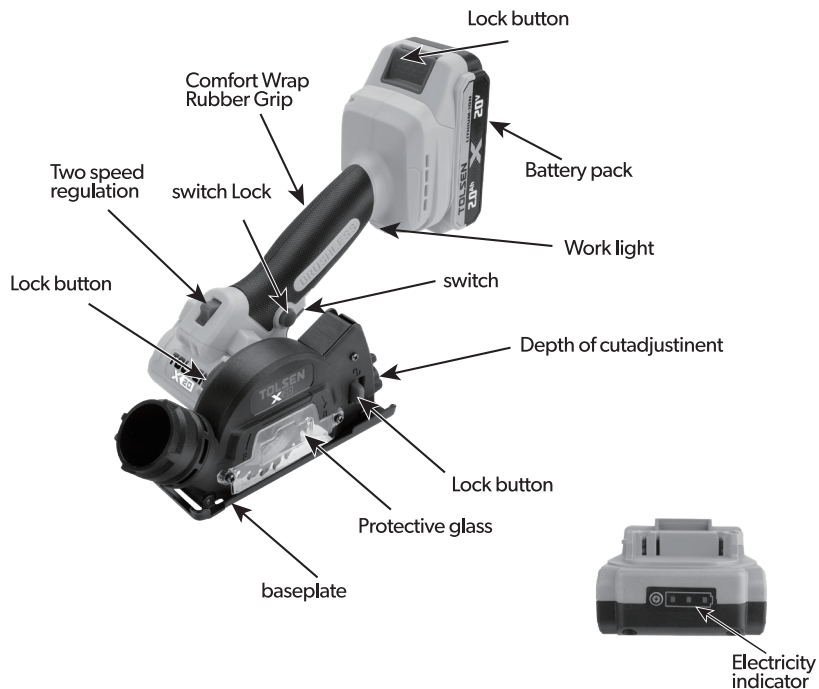
3. When the Battery is fully charged, the Red LED will off and Green LED will on.

IMPORTANT: When a low charge level is indicated, the tool may stop operating while in use, which is dangerous when operating it. Always ensure the battery pack has a good charge level.

Note: Symbolology

	Class II Double insulated for additional protection
	CE conformity
	Read the instruction manual before using
	Wear hearing protection while operating the tool
	Wear hand protection
	Always use breathing apparatus when machining materials which generate dust.
	Wear ear protection.
	Operating environmental temperature
	Do not incinerate battery pack
	Do not expose to water
	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.
	Batteries and rechargeable batteries are not household waste! As a consumer, you are required by law to dispose of all batteries and accumulators, whether or not they contain harmful substances *, at a collection point in your municipality / neighborhood or in commerce so that they can be disposed of in an environmentally sound manner.
	Battery pack is recyclable and should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice
	Safety alert
	For indoor use only
	Internal time lag fuse with a maximum current of 2A.

FUNCTIONAL DESCRIPTION



SPECIFICATIONS

Rated Voltage	20VDC
Disc diameter	75mm, 3"
No-load speed	$n_0: 19800\text{min}^{-1}$
Spindle thread	M5
Battery pack (96060 not include)	
Battery pack Voltage	20VDC
Battery capacity	2.0Ah
Charger (96060 not include)	
Input Voltage	220-240VAC 50/60Hz
Output Voltage	21VDC
Rated output current	2.0A
Charging Time	65 minutes fast charging(2.0Ah battery)
Protection class	□



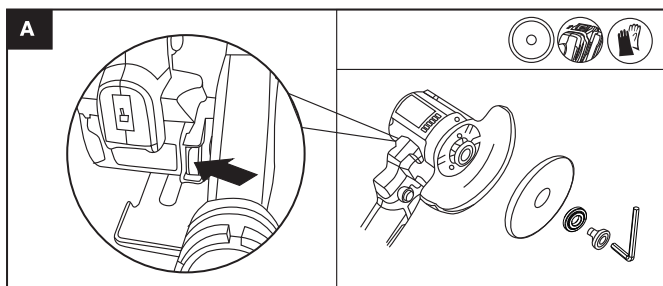
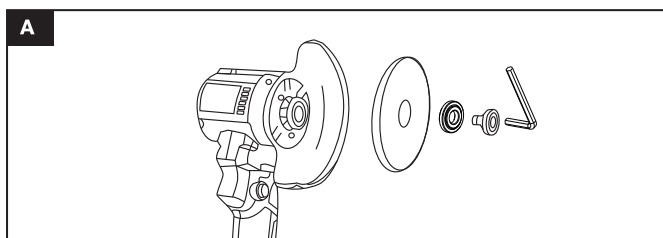
OPERATING INSTRUCTIONS

Safety and Operation install

Assembly and disassembly of saw blades

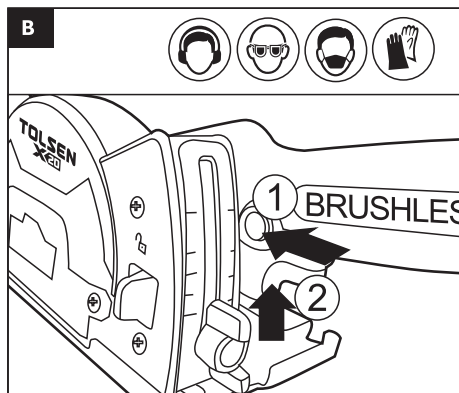
Attention: To lock or loosen the saw blade bolt, press the spindle lock button.

Warning: Before replacing the saw blade, be sure to disconnect the power supply!



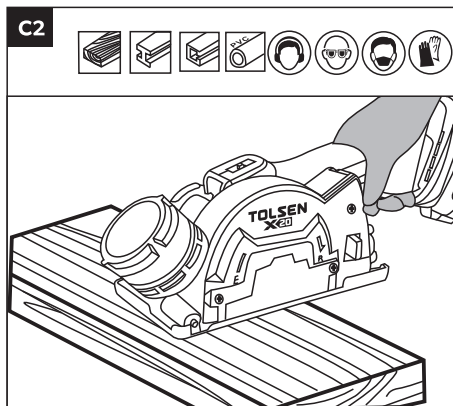
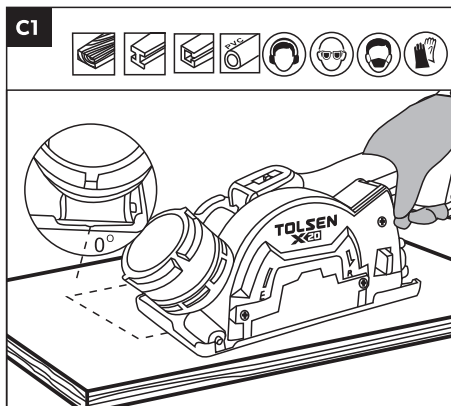
Safety switch and on/off trigger

Warning: To avoid cuts caused by sharp saw blades, please do not place your hands on the base plate

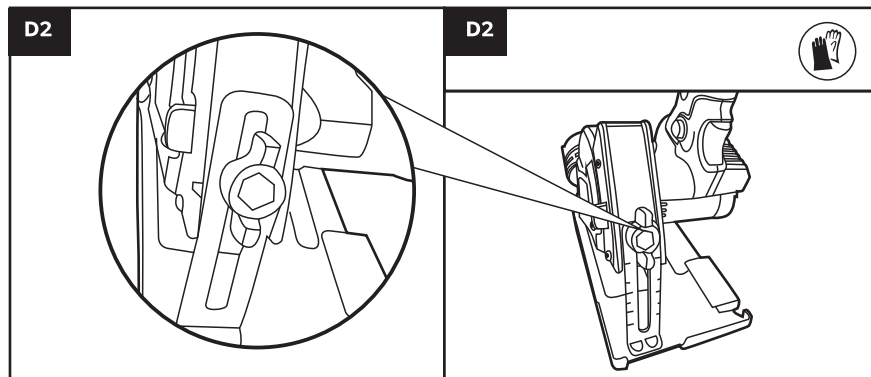
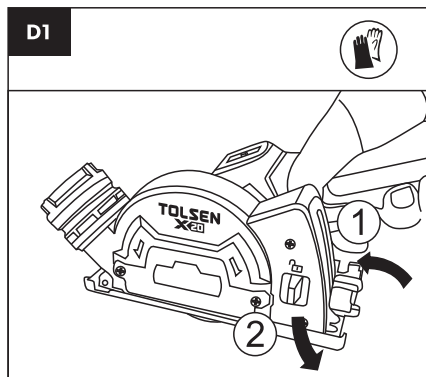


Sawing and cross cutting

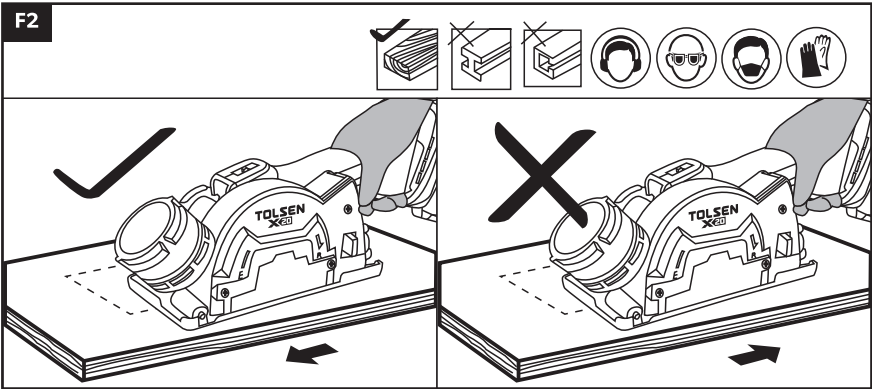
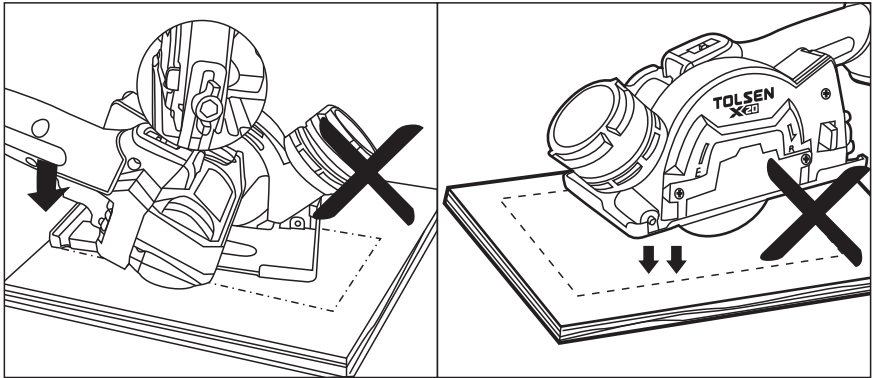
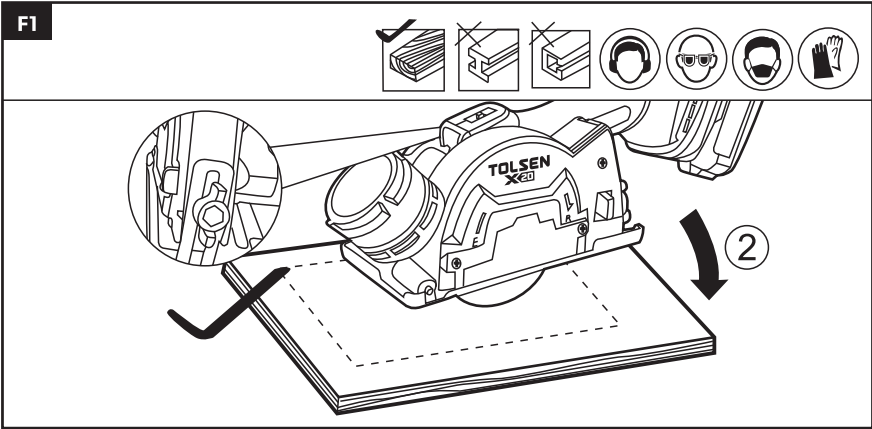
Attention: Align the cutting line of the saw blade with the cutting mark 0.



Adjust cutting depth



Wooden board opening



MAINTENANCE

WARNING: ALWAYS disconnect from the mains power supply, before carrying out any maintenance/ cleaning of the charger. Remove the battery before carrying out any maintenance/ cleaning of the tool.

Note: Both the tool and the charger contain no user-serviceable parts. If the device does not perform as outlined in this manual, return it to an authorised service centre for repair

General inspection

- Regularly check that all the fixing screws are tight
- Inspect the supply cord of the tool, prior to each use, for damage or wear. Repairs should be carried out by an authorised service centre. This advice also applies to extension cords used with this tool.

Cleaning

- Keep your tool clean at all times. Dirt and dust will cause internal parts to wear quickly, and shorten the machine's service life. Clean the body of your machine with a soft brush, or dry cloth. If available, use clean, dry, compressed air to blow through the ventilation holes
- Clean the tool casing with a soft damp cloth using a mild detergent. Do not use alcohol, petrol or strong cleaning agents
- Never use caustic agents to clean plastic parts

Lubrication

- Slightly lubricate all moving parts at regular intervals with a suitable spray lubricant



Disposal

Always adhere to national regulations when disposing of power tools that are no longer functional and are not viable for repair.

- Do not dispose of power tools, or other waste electrical and electronic equipment (WEEE), with household waste.
- Contact your local waste disposal authority for information on the correct way to dispose of power tools

TROUBLESHOOTING

problem	possible causes	Likely Solutions
Tool will not start.	1. Battery Pack not properly connected. 2. Battery Pack not properly charged. 3. Battery Pack worn out. 4. Internal damage or wear. (Carbon brushes or Trigger, for example.) 5. Contact chips of switch or battery pack deformed. 6. Battery is not suitable for TOLSEN X20V lithium-ion power platform system 7. Overload operation	1. Remove Battery Pack, make sure there are no obstructions, clean battery contacts on tool, reinsert the Battery Pack according to its shape (it should only fit one way), and press firmly until the Battery Pack locks in place. 2. Make sure Charger is connected and operating properly. Give enough time for Battery Pack to recharge properly. 3. Dispose of old Battery Pack properly or recycle. Replace Battery Pack. 4. Have technician service tool. 5. Replace switch or Battery Pack 6. Replace the battery of TOLSEN X20V 7. Stop to use and restart the machine after cooling.
Tool operates slowly.	1. Excess pressure applied to workpiece. 2. Battery Pack wearing out. 3. Low battery	1. Decrease pressure, allow tool to do the work. 2. Dispose of old Battery Pack properly or recycle. Replace Battery Pack. 3. Recharge or replace a fully charged battery
Performance decreases over time.	1. Battery Pack worn out. 2. Wheel or blade dull	1. Dispose of old Battery Pack properly or recycle. Replace Battery Pack. 2. Replace wheel or blade
Excessive noise or rattling.	Internal damage or wear. (Gear or Bearings, for example.)	Have technician service tool.
Overheating.	1. Forcing tool to work too fast. 2. Blocked motor housing vents.	1. Allow tool to work at its own rate. 2. Clean the Blocked motor housing vents
Tool does not grind, sand or brush effectively.	1. Disc accessory may be loose on Spindle. 2. Disc accessory may be damaged, worn or wrong type for the material.	1. Be sure disc accessory arbor is correct and Outer Flange/ Arbor Nut is tight. 2. Check condition and type of disc accessory. Use only proper type of disc accessory in good condition.

CE DECLARATION OF CONFORMITY

WE
SUZHOU TOLSEN TOOLS CO.,LTD.
198 HUASHAN ROAD, ZHANGJIAGANG,
JIANGSU, CHINA

Declare that the product
96060/96460
LI-ION CORDLESS CUTTING SAW

Complies with the essential health and safety requirements of the following Directices:
council directive 2006/42/EC

Standards and technical specifications referred to:

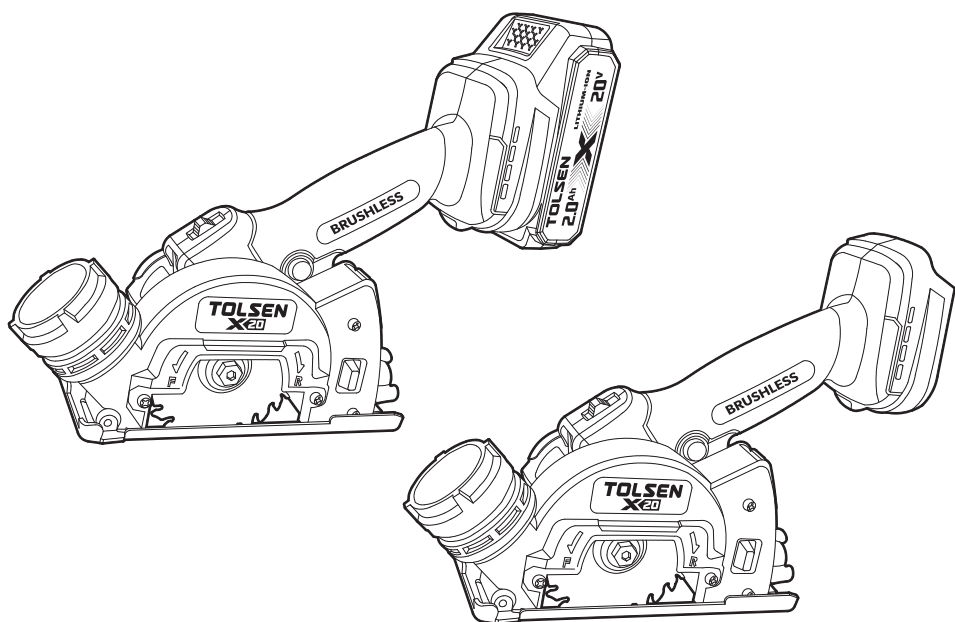
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EN 62841-4-1:2021
EN 55014-1:2021
EN 55014-2:2021

Authorised Signatory and technical file holder

Signed for and on behalf of:
SUZHOU TOLSEN TOOLS CO.,LTD.
198 HUASHAN ROAD, ZHANGJIAGANG,
JIANGSU, CHINA
WANG QING

Group Quality Director
on:06/05/2025





SUZHOU TOLSEN TOOLS CO.,LTD.

www.tolsentools.com

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TOOLS. All rights reserved.
MADE IN CHINA



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96060



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