

TOLSEN X20

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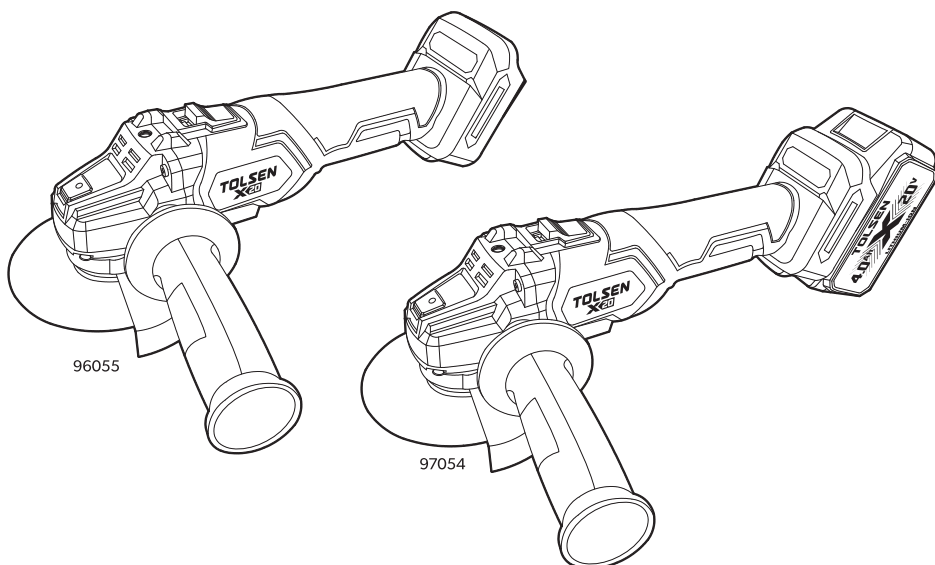
LI-ION CORDLESS ANGLE GRINDER

INSTRUCTION MANUAL

20V LITHIUM-ION

BL BRUSHLESS
MOTOR

INDUSTRIAL



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

Safety Warnings Common for Grinding, Sanding, Wire Brushing, and Abrasive Cutting-Off Operations

1. This power tool is intended to function as a grinder, sander, wire brush or cut-off tool. 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.
2. Operations such as polishing is not recommended to be performed with this power tool. Operations for which the power tool was not designed may create a hazard and cause personal injury.
3. Do not use accessories which are not specifically designed and recommended by the tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.
4. The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their RATED SPEED can break and fly apart.
5. The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.
6. Threaded mounting of accessories must match the GRINDER spindle thread. For accessories mounted by FLANGES, the arbour hole of the accessory must fit the locating diameter of the FLANGE. Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
7. Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
8. Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtering particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
9. Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury.
10. Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
11. Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.
12. Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.
13. Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.
14. Do not operate the power tool near flammable materials. Sparks could ignite these materials.
15. Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

Kickback and Related Warnings

1. Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory. Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding.
2. For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kickout. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions. Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.
3. Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
4. Never place your hand near the rotating accessory. Accessory may kickback over your hand.
5. Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.
6. Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory.
7. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
8. Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

Safety Warnings Specific for Grinding and Abrasive Cutting-Off Operations

1. Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel. Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.
2. The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip. An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.
3. The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. The guard helps to protect operator from broken wheel fragments and accidental contact with wheel.
4. Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.
5. Always use undamaged wheel flanges that are of correct size and shape for your selected wheel.
6. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage. Flanges for cut-off wheels may be different from grinding wheel flanges.
7. Do not use worn down wheels from larger power tools. Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.
8. Additional Safety Warnings Specific for Abrasive Cutting-Off Operations: Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.
9. Do not position your body in line with and behind the rotating wheel. When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.
10. When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.
11. Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully reenter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
12. Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.
13. Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.
14. Do not use type 1 abrasive wheels designed for straight grinding.
15. Do not attempt to cut large stock or sheets of metal as this machine is not designed to be a dedicated cut-off machine.

Safety Warnings Specific for Sanding Operations

Do not use excessively oversized sanding disc paper. Follow manufacturer's recommendations, when selecting sanding paper. Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.

Safety Warnings Specific for Wire Brushing Operations

Be aware that wire bristles are thrown by the brush even during ordinary operation. Do not overstress the wires by applying excessive load to the brush. The wire bristles can easily penetrate light clothing and/or skin. If the use of a guard is recommended for wire brushing, do not allow any interference of the wire wheel or brush with the guard. Wire wheel or brush may expand in diameter due to work load and centrifugal forces.

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

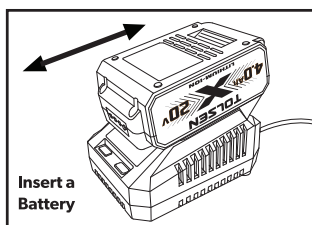
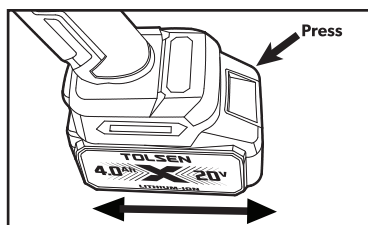
Note: Make sure the Battery and tool are lined up correctly. If the Battery does not slide into the tool easily, do not force it. Instead, slide the Battery out of the tool again, check the top of Battery and the tool battery slot are clean and undamaged and that the contacts are not bent

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 125 minutes for a recently discharged 4.0Ah 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

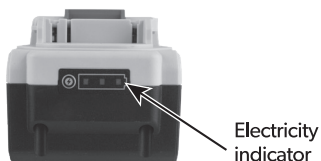
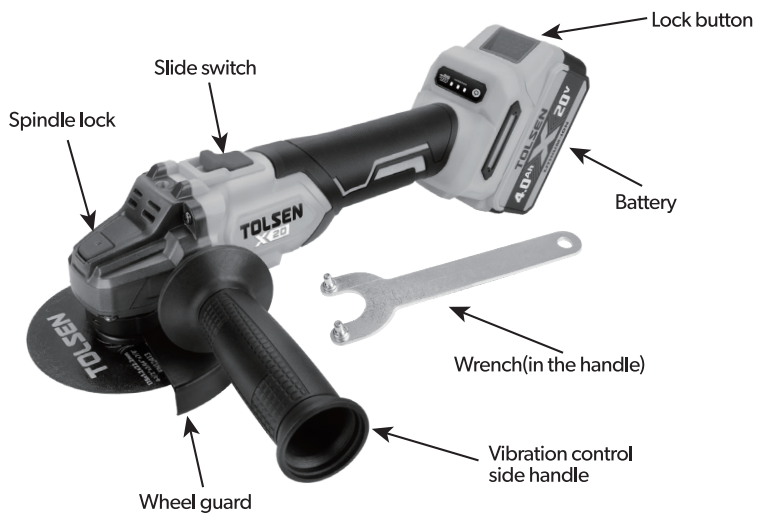
	Class II Double insulated for additional protection
	Read the instruction manual before using
	Wear hearing protection while operating the tool
	Wear hand protection
	Always use breathing apparatus when machining materials which generate dust.
	Wear ear protection.
	Operating environmental temperature
	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



WARNING

Disconnect battery pack from tool before making any assembly, adjustments or changing accessories. Such preventive safety measures reduce the risk of starting the tool accidentally.



SPECIFICATIONS

Rated Voltage	20VDC
Diameter of wheel	125mm, 5"
No-load speed	n_0 : 4000/6000/8000/10000min ⁻¹
Spindle thread	5/8"
Battery (96055 not include)	
Battery Voltage	20VDC
Battery capacity	4.0Ah
Charger (96055 not include)	
Input Voltage	110V-120AC 60Hz
Output Voltage	21VDC
Rated output current	2.0A
Charging Time	125 minutes fast charging(4.0Ah battery)
Protection class	

ASSEMBLY



NOTE: For tool specifications refer to the nameplate on your tool.

Accessory speed rating must be equal to or greater than the tool's speed rating. Do not exceed the recommended wheel diameter.

NOTE: Not recommended for use with type 11 cup wheels.

Wheel guard installation

Wheel guard must be attached when using disc grinding or cutting wheels. Always keep wheel guard between you and your work while grinding or cutting.

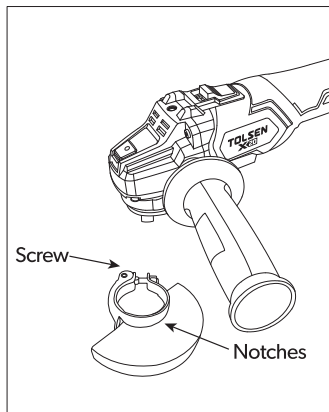
The position of the guard can be adjusted to accommodate the operation being performed.

To attach wheel guard, **DISCONNECT** battery pack from tool.

Position guard on spindle neck so that the notches on guard line up with the keys on the spindle neck.

Rotate guard either direction to desired position, and tighten the screws to secure the protective cover.

TO REMOVE GUARD: Loosen the guard locking screws, rotate guard until the notches on guard line up with the keys on the spindle neck, and lift guard off the spindle neck.



Lock nut and backing flange

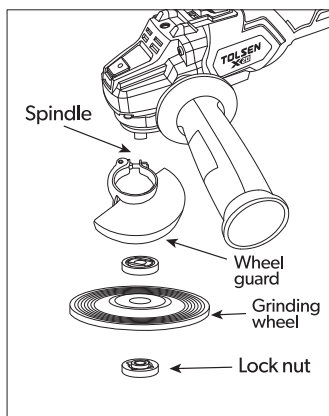
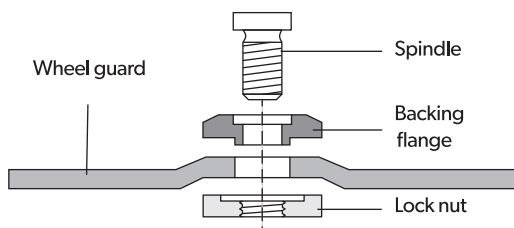
Your tool is equipped with a threaded spindle for mounting accessories. Always use the supplied lock nut (and backing flange) that has same thread size as spindle.

Vibration control side handle

Housing on either side of the tool, depending on personal preference and comfort. Use the side handle for safe control and ease of operation.

Disc grinding wheel assembly

Disconnect battery pack from tool. Be sure that wheel guard is in place for grinding. Place **BACKING FLANGE** and **GRINDING WHEEL** on the spindle. Thread on the lock nut and tighten nut using the supplied lock nut wrench, while holding the spindle lock in.



OPERATING INSTRUCTIONS

WARNING

Hold the tool with both hands while starting the tool, since torque from the motor can cause the tool to twist. Start the tool before applying to work and let the tool come to full speed before contacting the workpiece. Lift the tool from the work before releasing the switch. **DO NOT** turn the switch "ON" and "OFF" while the tool is under load; this will greatly decrease the switch life.

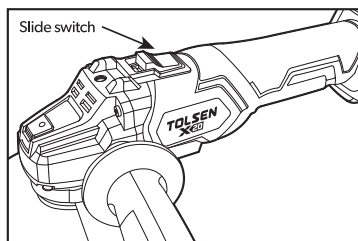
SLIDE 1(ON)-0(OFF) SWITCH WITH LOCK

The tool is switched "1" by the slide switch located at the top of the motor housing. The switch can be locked in the "1" position, a convenience for long grinding operations.

TO TURN THE TOOL "1" without locking it, move the switch forward by applying pressure **ONLY** at the **REAR** portion of the switch. When pressure is released the switch will return to "0" position.

TO LOCK THE SWITCH "1", move the switch forward and press the **FRONT** portion.

TO UNLOCK THE SWITCH, simply press and release the **REAR** portion of the slider. Switch is spring loaded and will snap back automatically.



Grinding Operations

SELECTING GRINDING WHEELS

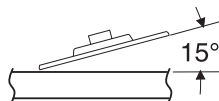
WARNING

DISC GRINDING WHEELS

Grinding wheels should be carefully selected in order to use the grinder most efficiently. Wheels vary in type of abrasive, bond, hardness, grit size and structure. The correct type of wheel to use is determined by the job. Use disc grinding wheels for fast grinding of structural steel, heavy weld beads, steel casting, stainless steel and other ferrous metals.

GRINDING TIPS

Efficient grinding is achieved by controlling the pressure and keeping the angle between wheel and workpiece at 10° to 15°. If the wheel is flat, the tool is difficult to control. If the angle is too steep, the pressure is concentrated on a small area causing burning to the work surface.



WARNING

Excessive or sudden pressure on the wheel will slow grinding action and put dangerous stresses on the wheel. When grinding with a new wheel be certain to grind while pulling tool backwards until wheel becomes rounded on its edge. New wheels have sharp corners which tend to "bite" or cut into workpiece when pushing forward.

Inserting and releasing battery pack

This tool is equipped with Automatic Restart Protection. This feature helps prevent accidental startups after power has been interrupted, e.g. the battery was removed with the switch locked in the on position.

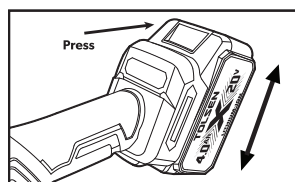
To resume operation, turn the slide switch to the off position, and back to on position to restart the tool.

Make sure that the slide switch is in the "0" position before inserting or removing battery pack. To insert the battery pack slide it into the housing until the battery pack locks into position.

Your tool is equipped with a secondary locking latch to prevent the battery pack from completely falling out of the handle.

To remove the battery pack, press the lock button and slide the battery pack forward.

Press lock button again and slide the battery pack completely out of tool housing.



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



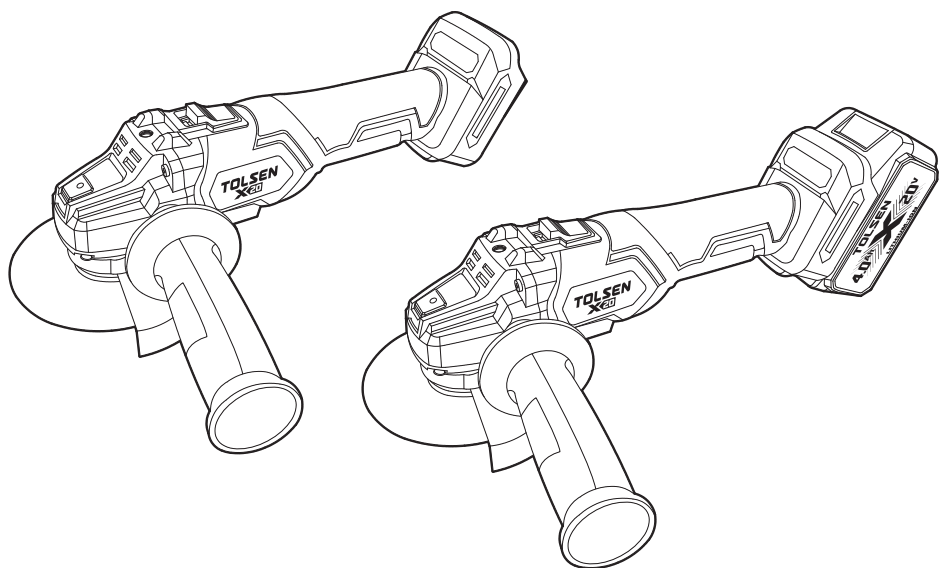
Disposal

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.



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