

ASSEMBLY

⚠ WARNING Recharge only with the charger specified for the battery. For specific charging instructions, read the operator's manual supplied with your charger and battery.

Inserting/Removing the Battery

To remove the battery, push in the release buttons and pull the battery pack away from the tool. To insert the battery, slide the pack into the body of the tool. Make sure it latches securely into place.

⚠ WARNING Always remove battery pack before changing or removing accessories. Only use accessories specifically recommended for this tool. Others may be hazardous.

⚠ WARNING Use only sockets and other accessories specifically designed for use on impact wrenches and drivers. Other sockets and accessories might shatter or break causing injury.

Attaching and Removing Accessories

1/2" Impact Wrench with Pin Detent

1. Use only the appropriate size Square Drive Sockets.
2. To attach a socket, align the hole in the accessory with the detent pin on the anvil. Hold the detent pin in while pushing the socket onto the anvil. The detent pin will snap into place in the hole to secure the socket.
3. To remove the socket, insert a nail or other thin object into the hole in the accessory and press in the detent pin. Pull the accessory off the anvil.

1/2" Impact Wrench with Ball Detent

1. Use only the appropriate size Square Drive Sockets.
2. To attach a socket, align the hole in the accessory with the detent ball on the anvil. Push the socket onto the anvil. The detent ball will snap into place in the hole to secure the socket.
3. To remove the accessory, pull the accessory off the anvil.

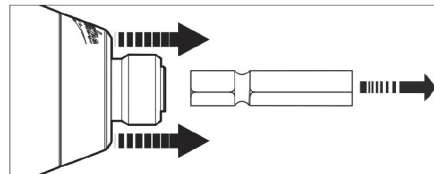
3/8" Impact Wrench

1. Use only the appropriate size Square Drive Sockets.
2. To attach a socket, align the accessory with the anvil and push it firmly over the retaining ring.
3. To remove the accessory, pull the accessory off the anvil.

1/4" Hex Impact Driver (Cat. No. 2653-20)

This impact driver is intended for use with drill and driver bits.

1. To attach an accessory, press the shank into the hex drive chuck.
2. To remove the accessory, pull out the ring and remove the accessory. Release the ring.



LITHIUM ELECTRIC TOOL

OPERATION INSTRUCTIONS



- 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.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

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.

SPECIFIC SAFETY RULES

- Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring. Fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

- Wear ear protectors when impact drilling. Exposure to noise can cause hearing loss.
- Use only sockets and other accessories specifically designed for use on impact wrenches and drivers. Other sockets and accessories might shatter or break causing injury.
- Maintain labels and nameplates. These carry important information. If unreadable or missing, contact a MAITENG service facility for a free replacement.
- WARNING: Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - lead from lead-based paint
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

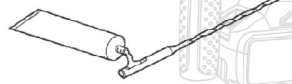
Read through carefully and understand these instructions before use.



OPERATION DESCRIPTION OF LITHIUM ELECTRIC HAMMER

Chuck

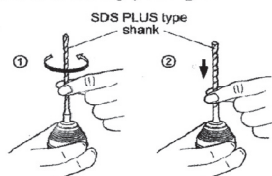
Note: Grease for bit
Grease the oval indentation on the bit with the supplied grease at least once a month.



1. To mount the bit

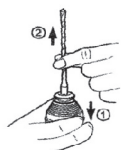
1-1. Insert a bit into the mounting hole, and turn it slightly to locate an engaged position.

1-2. At the engaged position, push the bit as far as it goes. Make sure that the bit is fixed by pulling it.



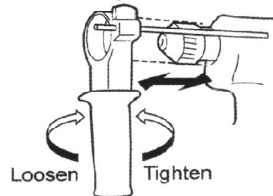
2. To dismount the bit

2-1. Depress the chuck cover and pull the bit.



Support handle

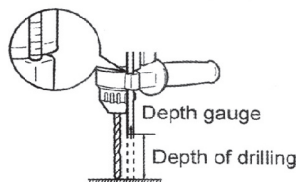
Place the support handle at your favorite position and tighten the handle securely.



Depth gauge

Loosen the support handle and adjust the depth gauge at your favorite depth.

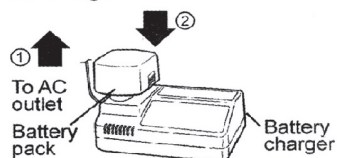
After adjusting, tighten the support handle and fix depth gauge.



Battery charger

Note: Charge a new battery pack, or a battery pack that has not been used for a prolonged time, for about 24 hours to bring the battery up to full charge.

1. Plug the charger into an AC outlet.
2. Insert the battery pack firmly into the charger.



3. During charging, the charging lamp will light up. When the charge is completed, an internal electronic switch will automatically be triggered to prevent overcharging.

- Charging will not occur if the battery pack is warm (for example, immediately after heavy-duty operation). The orange standby lamp will light up until the battery becomes cool. Charging will then begin automatically.

4. When charging is completed, the charging lamp will start flashing quickly.

5. When the battery pack has not been used for a long time, the charging lamp starts flashing slowly to indicate protective charging. Protective charging takes longer to fully charge the battery pack, than

OPERATION INSTRUCTIONS OF LITHIUM ELECTRIC WRENCH

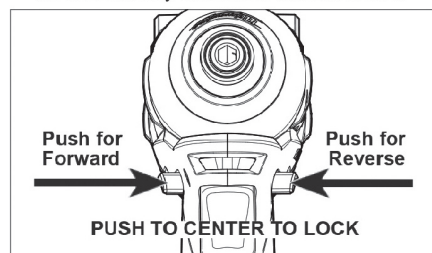
WARNING Always remove battery pack before changing or removing accessories. Only use accessories specifically recommended for this tool. Others may be hazardous.

WARNING To reduce the risk of injury, wear safety goggles or glasses with side shields.

Using the Control Switch

The control switch may be set to three positions: forward, reverse and lock. Due to a lockout mechanism, the control switch can only be adjusted when the ON/OFF switch is not pressed. Always allow the motor to come to a complete stop before using the control switch.

1. For **forward** (clockwise) rotation, push the control switch in the direction shown. Check the direction of rotation before use.
2. For **reverse** (counterclockwise) rotation, push the control switch in the direction shown. Check the direction of rotation before use.
3. To **lock** the trigger, push the control switch to the center position. The trigger will not work when the control switch is in the locked position. Always remove the battery pack before performing maintenance, changing accessories, storing the tool and any time the tool is not in use.



Charging Indicator Light

Charge State	Icon	Light Icon		Indicator State
		Green	Red	
Charger Into The Power Source				Green on, Red off
Charging				Green off, Red on
After Charging				Green on, Red off
Battery Abnormal				Green Red Flick
Battery Temperature Below 0°C or Over 45°C				Green off, Red Flick

Starting, Stopping and Controlling Speed

These tools may be operated at any speed from 0 to full speed.

1. To **start** the tool, pull the trigger.
2. To **vary** the driving speed, simply increase or decrease pressure on the trigger. The further the trigger is pulled, the greater the speed.
3. To **stop** the tool, release the trigger and the electric brake stops the tool instantly.

Impacting Techniques

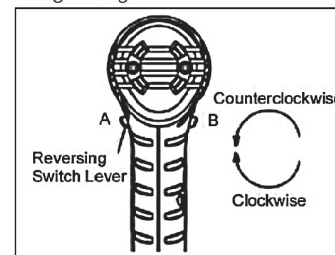
The longer a bolt, screw, or nut is impacted, the tighter it will become. To help prevent damaging the fasteners or workpieces, avoid excessive impacting. Be particularly careful when impacting smaller fasteners because they require less impacting to reach optimum torque.

Practice with various fasteners, noting the length of time required to reach the desired torque. Check the tightness with a hand-torque wrench. If the fasteners are too tight, reduce the impacting time. If they are not tight enough, increase the impacting time.

Oil, dirt, rust or other matter on the threads or under the head of the fastener affects the degree of tightness.

The torque required to loosen a fastener averages 75% to 80% of the tightening torque, depending on the condition of the contacting surfaces.

On light gasket jobs, run each fastener down to a relatively light torque and use a hand torque wrench for final tightening.



LITHIUM ELECTRIC DRILL OPERATION

GENERAL SAFETY RULES

(FOR ALL BATTERY OPERATED TOOLS)

⚠ WARNING:

Read and understand all instructions. Failure to follow all instructions listed below, may result in electric shock, fire and / or serious personal injury.

Work Area

1. Keep your work area clean and well lit. Cluttered benches and 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 bystanders, children, and visitors away while operating a power tool. Distractions can cause you to lose control.

Personal Safety

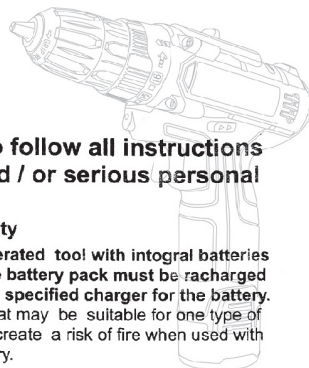
6. Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
7. Dress properly. Do not wear loose clothing or jewelry, contain long hair. Keep your hair, clothing, and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts.
8. Avoid accidental starting. Be sure switch is in the locked or off position before inserting battery pack. Carrying tools with your finger on the switch or inserting the battery pack into a tool with the switch on invites accidents.
9. Remove adjusting keys or wrenches before turning the tool on. A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
10. Do not overreach. Keep proper footing and balanced at all times. Proper footing and balance enable better control of the tool in unexpected situations.
11. Use safety equipment. Wear eye protection. Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

Tool Use and Care

12. Use clamps or other practical way to secure and support the workpiece to a stable platform. Holding the work by hand or against your body is unstable and may lead to loss of control.

Electrical Safety

4. A battery operated tool with integral batteries or a separate battery pack must be recharged only with the specified charger for the battery. A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.
5. Use battery operated tool only with specifically designated battery pack. Use of any other batteries may create a risk of fire.
13. Do not force tool. Use the correct tool for your application. The correct tool will do the job better and safer at the rate for which it is designed.
14. Do not use tool if switch does not turn it on or off. A tool that cannot be controlled with the switch is dangerous and must be repaired.
15. Disconnect battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool. Such preventive safety measures reduce the risk of starting the tool accidentally.
16. Store idle tools out of reach of children and other untrained persons. Tools are dangerous in the hands of untrained users.
17. 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 sparks, burns, or a fire.
18. Maintain tools with care. Keep cutting tools sharp and clean. Properly maintained tools with sharp cutting edge are less likely to bind and are easier to control.
19. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using. Many accidents are caused by poorly maintained tools.
20. Use only accessories that are recommended by the manufacturer for your model. Accessories that may be suitable for one tool may create a risk for injury when used on another tool.



SPECIFIC SAFETY RULES

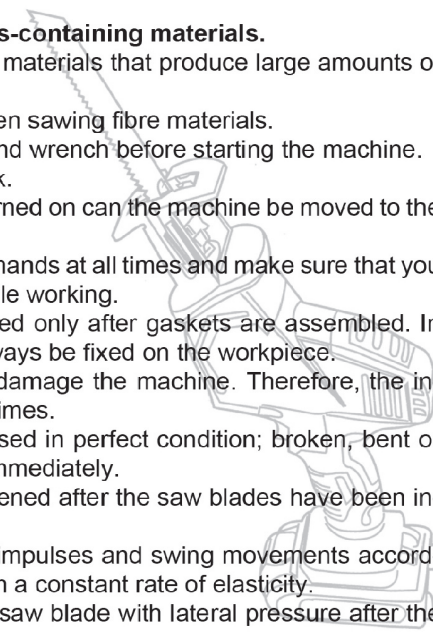
DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to cordless drill safety rules. If you use this tool unsafely or incorrectly, you can suffer serious personal injury.

1. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring. Contact with a "live" wire will also make exposed metal parts of the tool "live" and shock the operator.
2. Be aware that this tool is always in an operating condition. Because it does not have to be plugged into an electrical outlet.
3. Always be sure you have a firm footing.
4. Be sure no one is below when using the tool in high locations.
5. Hold the tool firmly.
6. Keep hands away from rotating parts.
7. Do not leave the tool running. Operate the tool only when hand-held.
8. Do not touch the drill bit or the workpiece immediately after operation; they may be extremely hot and could burn your skin.
9. Some material contains chemicals which may be toxic. Take caution to prevent working dust inhalation and skin contact. Follow material supplier safety data.

LITHIUM ELECTRIC RECIPROCATING SAW

Warning: Do not saw asbestos-containing materials.

1. Wear goggles when cutting materials that produce large amounts of flying debris.
2. Wear a protective mask when sawing fibre materials.
3. Remove the adjusting tool and wrench before starting the machine.
4. Fix the workpiece with a rack.
5. Only when the machine is turned on can the machine be moved to the workpiece.
6. Hold the machine with both hands at all times and make sure that you are in a safe and secure place while working.
7. The machine can be operated only after gaskets are assembled. In machine sawing, the pad must always be fixed on the workpiece.
8. The wrong operation may damage the machine. Therefore, the instructions must be followed at all times.
9. Only sharp blades can be used in perfect condition; broken, bent or blunt blades should be replaced immediately.
10. The machine should be opened after the saw blades have been installed.
11. Choose appropriate tools, impulses and swing movements according to the material. Mainly maintain a constant rate of elasticity.
12. Do not attempt to stop the saw blade with lateral pressure after the machine is closed.
13. Only genuine accessories can be used.



Warm tips for sawing

1. Adjust the blade and stroke rate to suit the material that needs to be processed. For right radius curve, narrow saw blade is better. Swing along the cutting line when sawing metal with coolant and lubricant.

2. If necessary, check and remove foreign nails and screws on wood, particle-board and building materials before sawing.

3. Fix the material well and do not support the workpiece with hands or feet. Do not touch hornworm objects or floors with running saws. (in danger of rebounding)

4. Place the pad on the workpiece and pass through the workpiece under constant pressure. If the saw blade is stuck, shut down the machine immediately. Use appropriate tools to widen the gap, and then pull out the saw blade.

Close the machine after work and put it down only after the machine has completely stopped working.

Cut-in Cutting

1. Cut-in cutting can only be used for cutting soft materials, such as wood, pneumatic concrete, gypsum cementitious board, etc.

2. However, cut-in cutting requires some connection and can only use short saw blades. Put the saw on the workpiece and open the machine.

3. Ensure that the bottom edge of the gasket is on the surface of the workpiece.

4. Saw the workpiece slowly at a certain angle, move the saw to a vertical position and continue to saw along the cutting line.

5. Close the saw after work and lift the workpiece

Flat sawing

1. Elastic bimetal saw blades can cut objects protruding from the wall (e.g. water pipes, metal bars, etc.)

2. Place the saw blade directly against the wall and then gently bend the cushion plate against the wall. Put the saw on the workpiece and open the machine. Saw off the workpiece by opening the machine to maintain constant lateral pressure on the wall.

OPERATING INSTRUCTIONS FOR LITHIUM ELECTRIC GRINDER

1. always wear safety glasses and ear plugs during processing. Other labor protection items such as dust respirators, gloves, safety helmets and aprons should also be used.

2. keep the protective cover in a fixed position.

3. Only the correct grinding wheel can be used, and its maximum operating speed is not lower than the tool nameplate's maximum "halberd speed". When using cymbal wheel, glass fiber reinforced grinding wheel can only be used. No grinding wheel with a maximum rotation speed of less than 80m/s shall be used.

4. check carefully whether there are cracks and damages before grinding. If there are cracks or damage, replace the new grinding wheel immediately.

5. follow the instructions in the instructions to install and use the wheels properly. The grinding wheel must be handled with care and care.

6. do not use variable diameter bushing or joint to refit large diameter grinding wheel.

7. only use the special flange for the tool.

8. do not damage the spindle, flange, especially installation surface or locking nut. Otherwise, the wheel itself will be damaged.

9. for those tools that use threaded hole grinding wheels, ensure that the grain of the grinding wheel is long enough to be inserted into the spindle.

10. Trial run the tool at least 30 seconds at a safe place at the highest idle speed before using the tool for actual workpiece operation. If the tool vibrates or sways due to poor assembly or unbalanced grinding wheel eccentricity, the operation is stopped immediately. Inspection tools to identify the reasons for the above phenomena.

11. check whether the workpiece is fixed.

12. firmly grasp the tools

13. hands do not approach rotating parts.

14. Make sure that the grinding wheel and workpiece are not in contact before closing the switch.

15. Use the required grinding wheel surface for grinding.

16. do not use the grinding wheel to carry out side grinding and addition.

17. we should pay attention to sparks. Operating tools should make sparks away from you and other people or inflammable objects.

18. notice that the grinding wheel will continue to rotate after the tool is closed.

19. do not touch the workpiece immediately after grinding.

20. Workpiece may burn and burn your skin.

21. Do not use tools to process materials containing asbestos. Do not use water or grinding fluid.

22. when using the cutting wheel, always use the dust collecting wheel cover according to the regulations of the country.

23. the cutting wheel must not be subjected to lateral pressure.

24. do not use machine bowl wheel when using this polishing machine. Such grinding wheels are not suitable for this polishing machine. Forcible use may cause serious bodily injury.

