

LI-ION IMPACT DRIVER 8601









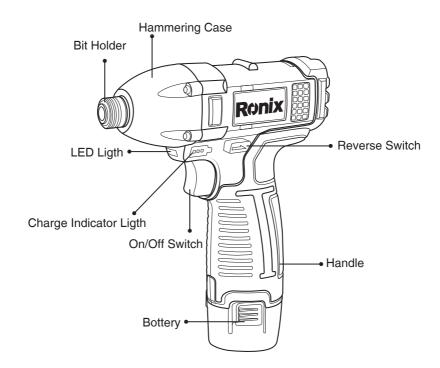




TECHNICAL SPECIFICATIONS

Drill voltage		12V
Charging voltage		220-240V~50/60Hz
Capacities	Machine screw	M4-M8
	Standard bolt	M4-M12
Toolholder		6.35mm
No-load speed		0-2000min-1
Impacts per minute		0-2800
Max. torque		100NM
Charging time		2Hr
Battery capacity		1.5AH

PART LIST





- Due to our continuing programme of research and development, the specifications herein are subject to change without notice without notice.



A NOTE:

Specifications may differ from country to country.

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. 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

- Keep work area clean and well lit. Cluttered and 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 which 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 conditions. 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 power 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 tools in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces 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 medication. 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 dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the offposition before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- 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, clothing and gloves 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, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

■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 cannot be controlled with the switch is dangerous and must be repaired.
- 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.
- 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. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools 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.

BATTERY TOOL USE AND CARE

- 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.
- Use power tools only with specifically designated battery packs. Use of



any other battery packs may create a risk of injury and fire.

- 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.
- 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.
- Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion.
- 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

- 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.
- Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.

ADDITIONAL SAFETY WARNINGS

Hold power tool by insulated gripping surfaces, 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.



RESIDUAL RISKS

Even when the power tool is used as prescribed it is not possible to eliminate all residual risk factors. The following hazards may arise in connection with the power tool's construction and design:

- a) Health defects resulting from vibration emission if the power tool is being used over longer period of time or not adequately managed and properly maintained.
- b) Injuries and damage to property to due to broken accessories that are suddenly dashed.



WARNING!

This power tool produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this power tool.

■GENERAL POWER TOOL SAFETY



WARNING!

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.

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.

■IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CARTRIDGE

- 1) Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery. one type of battery pack may create a risk of fire when used with another battery pack.
- 25) Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- 26) 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.
- 27) 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

- 28) 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.
- 29) Follow instruction for lubricating and changing accessories.
- 30) Keep handles dry, clean and free from oil and grease.

"CORDLESS DRILL SAFETY



MARNING!

1) Use auxiliary handles supplied with the tool. Loss of control can cause personal injury. (if supplied)



- 2) Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord. Contact with a «live» wire will make exposed metal parts of the tool «live» and shock the operator.
- 3) Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring or its own cord. Fasteners contacting a «live» wire may make exposed metal parts of the power tool live and could give the operator an electric shock.
- 4) Always be sure you have a firm footing. 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 dust inhalation and skin contact. Follow material supplier safety data.

SAVE THESE INSTRUCTIONS.



WARNING!

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CARTRIDGE

- 1) Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
- 2) Do not disassemble battery cartridge.
- 3) If operating time has become excessively shorter, stop operating



immediately. It may result in a risk of overheating, possible burns and even an explosion.

- 4) If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.
- 5) Do not short the battery cartridge:
- (1) Do not touch the terminals with any conductive material.
- (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
- (3) Do not expose battery cartridge to water or rain. A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
- 6) Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50° C (122° F).
- 7) Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
- 8) Be careful not to drop or strike battery.
- 9) Do not use a damaged battery.

SAVE THESE INSTRUCTIONS.

TIPS FOR MAINTAINING MAXIMUM BATTERY LIFE

- 1) Charge the battery cartridge before completely discharged. Always stop tool operation and charge the battery cartridge when you notice less tool power.
- 2) Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.
- 3) Charge the battery cartridge with room temperature at 10° C 40° C (50° F - 104° F). Let a hot battery cartridge cool down before charging it.

SYMBOLS

The symbols in instruction manual and the label on the tool.



	Double insulated for additional protection.	
	Read the instruction manual before using.	
Œ	CE conformity.	
	Wear safety glasses, hearing protection and dust mask.	
<u> </u>	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.	
A	Safety alert. Please only use the accessories supported by the manufacture.	
max50°C	Charging the battery only bellow 50°c	
	Always recycle batteries	
	Do not destroy battery by fire	
×	Do not expose battery to water	

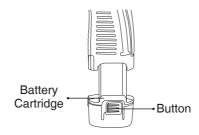
FUNCTIONAL DESCRIPTION



A CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before adjusting or checking function on the tool.

■INSTALLING OR REMOVING BATTERY CARTRIDGE





- Always switch off the tool before installation or removal of the battery cartridge.
- To remove the battery cartridge, withdraw it from the tool while sliding the button on the front of the cartridge.
- To insert the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Always insert it all the way until it locks in place with a little click.
- Do not use force when inserting the battery cartridge. If the cartridge does not slide in easily, it is not being inserted correctly.

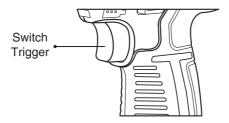
SWITCH ACTION



A CAUTION:

- Before inserting the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the «OFF» position when released.

To start the tool, simply push the switch trigger. Tool speed is increased by increasing pressure on the switch trigger. Release the switch trigger to stop.



LIGHTING UP THE FRONT LAMP

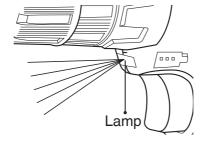


A CAUTION:

- Do not look in the light or see the source of light directly.

Push the switch trigger to light up the lamp. The lamp keeps on lighting while the switch trigger is being pulled.





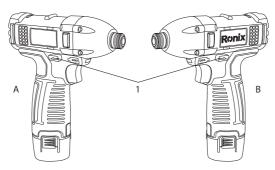
A NOTE:

- Use a dry cloth to wipe the dirt off the lens of lamp. Be careful not to scratch the lens of lamp, or it may lower the illumination.

REVERSING SWITCH ACTION

This tool has a reversing switch to change the direction of rotation. Depress the reversing switch lever from the A side for clockwise rotation or from the B side for counter clock wise roation.

When the reversing switch lever is in the neutral position, the switch trigger cannot be pulled.



A CAUTION:

- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.
- When not operating the tool, always set the reversing switch lever to the neutral position.



ASSEMBLY

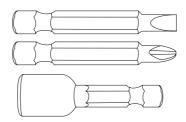
A CAUTION:

- Always be sure that the tool is switched off and the battery cartridge is removed before carrying out any work on the tool.

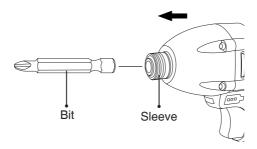
■INSTALLING OR REMOVING DRIVER BIT

Use only the driver bit or socket bit Use only the driver bit or socket bit shown in the figure. Do not use any other driver bit or socket bit.

To install the bit, pull the sleeve in the direction of the arrow and insert the bit into the sleeve as far as it will go Then release the sleeve to secure the bit.



To remove the bit, pull the sleeve in the direction of the arrow and pull the bit out firmly.



A NOTE:

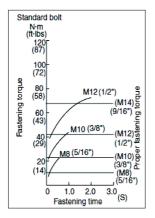
- If the bit is not inserted deep enough into the sleeve, the sleeve will not return to its original position and the bit will not be secured. In this case, try re-inserting the bit according to the instructions above.

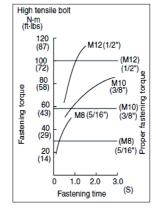


OPERATION

The proper fastening torque may differ depending upon the kind or size of the screw/bolt, the material of the workpiece to be fastened, etc. The relation between fastening torque and fastening time is shown in the figures.







Hold the tool firmly and place the point of the driver bit in the screw head. Apply forward pressure to the tool to the extent that the bit will not slip off the screw and turn the tool on to start operation.

A NOTE:

- Use the proper bit for the head of the screw/bolt that you wish to use.
- When fastening screw M8 or smaller, carefully adjust pressure on the switch trigger so that the screw is not damaged.
- Hold the tool pointed straight at the screw.
- If you tighten the screw for a time longer than shown in the figures, the screw or the point of the driver bit may be overstressed, stripped, damaged, etc.



Before starting your job, always perform a test operation to determine the proper fastening time for your screw.

The fastening torque is affected by a wide variety of factors including the following. After fastening, always check the torque with a torque wrench.

- 1) When the battery cartridge is discharged almost completely, voltage will drop and the fastening torque will be reduced.
- 2) Driver bit or socket bit

Failure to use the correct size driver bit or socket bit will cause a reduction in the fastening torque.

- 3) Bolt
- Even though the torque coefficient and the class of bolt are the same, the proper fastening torque will differ according to the diameter of bolt.
- Even though the diameters of bolts are the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.
- 4) The manner of holding the tool or the material of driving position to be fastened will affect the torque.
- 5) Operating the tool at low speed will cause a reduction in the fastening torque.

ACCESSORIES



A CAUTION:

- These accessories or attachments are recommended for use with your INGCO tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. Only use accessory or attachment for its stated purpose.

If you need any assistance for more details regarding these accessories, ask your local service center.

- Screw bits
- Plastic carrying case
- Various type of INGCO batteries and chargers

