



20V LI-ION CORDLESS
GRINDER
2.0Ah POWER TOOLS

OWNER'S MANUAL



PT2620



WARNING! To Reduce The Risk Of Injury, User
Must Read And Understand Instruction Manual.

20V Li-ion Cordless Grinder

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WARNING! READ AND CALL SAFETY PRECAUTIONS IN THIS MANUAL BEFORE OPERATION. FAILURE TO COMPLY WITH INSTRUCTIONS IN THIS MANUAL COULD RESULT IN PERSONAL INJURY, PROPERTY DAMAGE, AND/OR VOIDING OF YOUR WARRANTY. PULSAR PRODUCTS, INC. WILL NOT BE LIABLE FOR ANY DAMAGE BECAUSE OF FAILURE TO FOLLOW THESE INSTRUCTIONS.

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customer will pay any additional charges for expedited shipments.

- Consumer is responsible for labor costs associated with warranted repairs twelve (12) months after the purchase date. Labor rates will only be based on normal working hours.
- Consumer is responsible for maintaining power tool as specified in the owner's manual. Documentation of this maintenance may be required to cover warranty requests.
- Consumer is responsible for presenting any problems with the power tool to an authorized Service Center as soon as the problem exists. Warranted repairs will be completed in a reasonable period of time, not to exceed 30 days.

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1. SYMBOL EXPLANATION



Warning!



Read the Instruction manual!



Wear eye protection!



Wear protection gloves!



This product conforms the protection class II.



Always wear hearing protection at work.



Always wear a dust mask when working.

2. SAFETY INSTRUCTIONS

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.

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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 or dark areas invite accidents.
- Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks 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 tool 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.

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Repair

Do not try to repair this tool on your own. Always hand the tool to a qualified technician.

8. CLEANING AND MAINTENANCE



WARNING! SWITCH OFF AND DISCONNECT FROM POWER SUPPLY BEFORE CARRYING OUT CLEANING AND MAINTENANCE WORK.

1. Remove dust and dirt with a cloth slightly dampened with detergent solution. In doing so, ensure that no water gets into the tool.
2. Do not use aggressive and abrasive detergents, they might damage the housing.
3. Regularly clean drillings and dust out of the chuck and the ventilation slots.
4. The appliance is permanently lubricated and does not require oiling.

9. DISPOSAL

Environmental protection

Our packaging and the transport protection parts are made from environmentally friendly reusable materials. Please dispose of all packaging materials in an environmentally friendly manner.



This marking indicates that this product should not be disposed with other household wastes throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

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Grinding

1. Grip the grinder securely with two hands so you have full control at all times. The starting torque creates a sudden jerk.
2. After starting the tool, apply the grinding wheel to the workpiece.



Note: Do not turn the switch on or off while the grinder is in contact with the workpiece. It will decrease switch life and could cause damage to the workpiece.

3. Tilt the grinder at a 10° to 15° angle for easy handling and smooth grinding.
4. Apply the grinding disc to the work surface with a light, steady pressure for maximum grinding efficiency. It should never be necessary to force the tool. The weight of the tool applies adequate pressure.
5. The grinding discs are more moderate metal removal on flat or contoured surface. Do not put excessive pressure on the grinding disc. Excessive or sudden pressure will overload the motor, slow the grinding action, put dangerous stress on the disc and causes breakage.



Note: The continued use of a worn-out disc may result in disc explosion and serious injury.

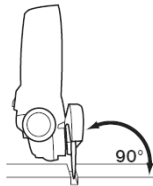


Cutting-off



WARNING! ALWAYS USE THE CLOSED GUARD FOR CUTTING-OFF OPERATION FOR METAL.

- While cutting-off, do not press the tool, do not twist, do not turn.
- Enter with grinding wheel at a 90° angle in the workpiece.
- Work with moderate, the material to be machined custom feed.
- Do not stop the wheel with lateral pressure
- Expiring not brake discs with side pressure.
- The direction in which the abrasive cutting is performed is important.
- The machine must always opposite to the rotational direction of the cutting wheel to be moved. Therefore, never move the machine in the other direction! There is a danger that it could be pushed out of the uncontrolled intersection.



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- 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. Carrying power tools with your finger on the switch or energising 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 tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

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Battery tool use and care

- Endure the switch is in the off position before inserting battery pack. Inserting the battery pack into power tools that have the switch on invites accidents.
- Recharger only with the charger specified by the manufacturer. A charger that is suitable for one type of battery 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 object, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a 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.

3. ADDITIONAL SAFETY WARNINGS FOR ANGLE GRINDERS

Safety instructions for all operations

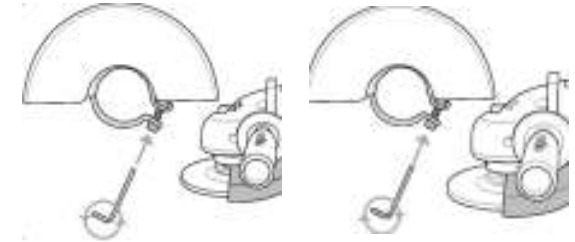
Safety Warnings Common for Grinding Operations:

- This power tool is intended to function as a grinder 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.
- Operations such as sanding, wire brushing or polishing are 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.
- 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.
- 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.
- 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.

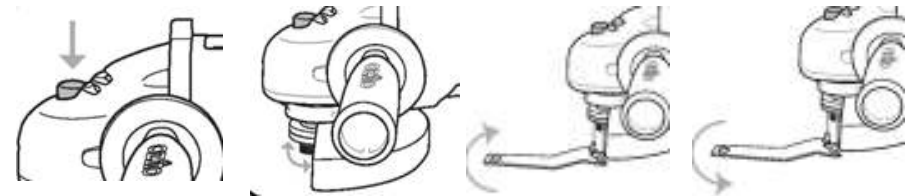
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Adjust grinding guard (B2)

1. Loosen the screw on the guard with a suitable screwdriver. Do not wind out completely.
2. Adjust the guard to a position that protects you from flying sparks.
3. Fasten the screw.



Install / Remove grinding disc (B2-B3)



Install

1. Make sure the guard is securely in place.
2. Place the inner flange on the spindle. Ensure it is aligned on the two flats.
3. Check the rated speed on the grinding disc. Do not use a disc with a rated speed lower than the speed shown on the tool label.
4. Fit the disc onto the spindle over the inner flange.
5. Press the spindle lock button to prevent movement of the spindle.
6. Keep the lock button pressed in and tighten the threaded outer flange by turning the lock nut wrench.

Remove

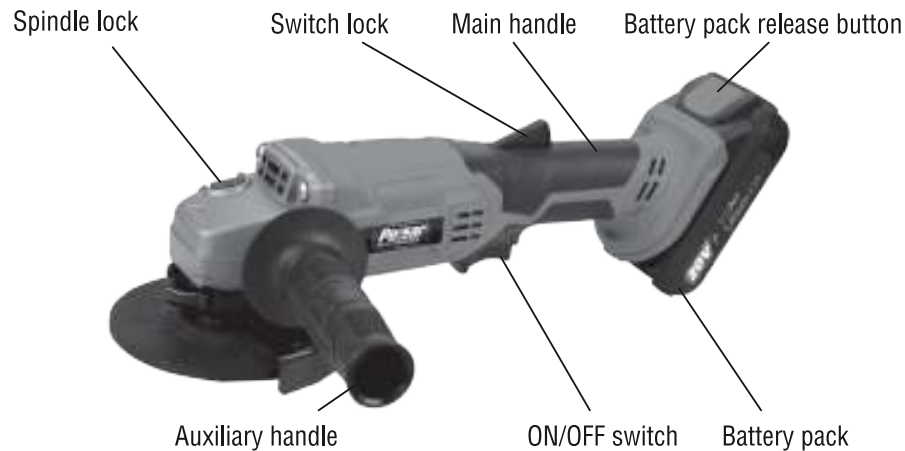
1. Press the spindle lock button.
2. Loosen the spindle lock nut by turning the nut counterclockwise with the wrench.
3. Remove the threaded outer flange.
4. Remove the grinding disc from the spindle.

Switch (B4)

1. To turn the grinder on, press down the switch lock of 1.
2. Press down the switch 2.

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7. OPERATION



Intended use

This angle grinder is intended for home use and can only be used for grinding and cutting.

The construction of this tool and its safety devices may not be changed.

This tool is not intended for industrial use.

Before use

Attach auxiliary handle (B1)

For reasons of safety the auxiliary handle must be assembled when you use the tool

1. Screw the auxiliary handle in one of the attachment point on the tool head.
2. Make sure the handle is securely fastened.

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- The arbour size of wheels, flanges, backing pads or any other accessory must properly fit the spindle of the power tool. Accessories with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- 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.
- 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 filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.
- 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 beyond immediate area of operation.
- Hold power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and shock the operator.
- Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.
- 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.
- 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.
- 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.
- Do not operate the power tool near flammable materials. Sparks could ignite these materials.
- Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

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Kickback and Related Warnings

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.

For example, if an abrasive wheel is snagged or pinched by the work piece, 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 kick out. 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.

- 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.
- Never place your hand near the rotating accessory. Accessory may kickback over your hand.
- 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.
- Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.
- Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

Additional safety instructions for grinding operations

Safety Warnings Specific for Grinding and cutting-off Operations:

- 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.
- 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.

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| Item | Value |
|---------------------|---------------------|
| Main voltage | 110-120 V~60 Hz |
| Output voltage | 20 V |
| Battery voltage | 20 V |
| Battery capacity | 2.0 Ah Li-ion |
| Battery charge time | 1 hours |
| Disc diameter | 4-1/2 Inch (Ø115mm) |
| No-load speed | 10000 RPM |

There is the need to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

6. ILLUSTRATIONS



B1



B2



B3



B4

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6. During working, user can check the battery status pressing the button.

| LED battery capacity indicator | Capacity |
|--------------------------------|----------|
| Green, Yellow and Red LED on | 100% |
| Yellow and Red LEDs on | >60% |
| Red LED on | >30% |



Note: Avoid charging your battery in freezing conditions as charging power will not be sufficient.



CAUTION: WHEN CHARGING MORE THAN ONE BATTERY PACK IN SUCCESSION, ALLOW AT LEAST 30 MINUTES FOR THE CHARGER TO COOL DOWN BEFORE CHARGING THE ADDITIONAL BATTERY.



WARNING! ALWAYS REMOVE THE BATTERY PACK AND STORE IT SAFELY WHEN THE TOOL IS NOT IN USE.

Additional or replacement batteries

Additional or replacement batteries specifically designed to work with this tool and charger are available from your service center. (1-866-591-8921)

Discharging the battery

Use the tool until it loses all effective power before recharging the battery. Recharging partially used batteries may eventually cause a memory effect that will prevent batteries from accepting their full capacity. Making sure to charge batteries completely before use and discharge them completely before recharging will help them preserve their full capacity.

5. TECHNICAL DATA

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- 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 and spark that could ignite clothing.
- 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.
- Always use undamaged wheel flanges that are of correct size and shape for your selected wheel. 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.
- 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.

Additional safety instructions for cutting-off operations

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.
- 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.
- 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.
- Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.
- 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.
- 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.

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WARNING! RESIDUAL RISKS: EVEN WHEN THE TOOL IS USED AS PRESCRIBED IT IS NOT POSSIBLE TO ELIMINATE ALL RESIDUAL RISK FACTORS. THE FOLLOWING HAZARDS MAY ARISE IN CONNECTION WITH THE TOOL'S CONSTRUCTION AND DESIGN:

- Damage to lungs if an effective dust mask is not worn.
- Damage to hearing if effective hearing protection is not worn.
- 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.



WARNING! THIS MACHINE 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 MACHINE.

4. BATTERY CHARGER & PLUG

Battery Charger



WARNING! THIS CHARGER AND BATTERY PACK ARE SPECIFICALLY DESIGNED TO WORK TOGETHER. DO NOT ATTEMPT TO CHARGE ANY OTHER BRAND OF CORDLESS TOOL OR BATTERY PACK WITH THIS CHARGER.

- This 120V~60Hz charger is double insulated and therefore does not require a grounding connection. It is a sealed unit fitted with an internal fuse which cannot be replaced.
- There are no user serviceable parts inside this charger. Never remove any part of the casing unless qualified to do so. If in doubt, consult a qualified electrician.



WARNING! THIS UNIT CONTAINS DANGEROUS VOLTAGES.

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- For your protection, do not expose this charger to rain or use in damp locations. Do not place the charger on damp or wet surfaces; use a workbench if available. For added protection use a suitable Residual Current Device (RCD) at the wall outlet.
- This charger unit is intended for use with this specific tool only and must not be used for any other use. Do not use any other charger for charging these batteries.



WARNING! NEVER USE THE CHARGER IN YOUR HOME, ALWAYS CHARGE BATTERIES ON A BENCH IN YOUR WORKSHOP.

- Never exceed the charging time specified in the manual as this could damage both the battery and the charger.
- When the battery fails to charge or maintain its charge, its usable life is exhausted. The battery should be disposed of in an environmentally friendly manner. Do not dispose of the battery in the household disposal system. Take the battery to a recycling or specialized center for disposal.



WARNING! DO NOT DISPOSE OF THE BATTERY BY INCINERATION AS THE BATTERY WILL EXPLODE.

Inserting the battery

Insert the battery pack into the tool handle.

Charging the battery

The battery supplied with this power tool contains a test charge only and must be fully charged before use. Be sure to read all safety instructions before charging the battery. The battery will become warm during charging. This is normal. (Fig A & Fig B)



1. Connect the the power cord of the charge with a wall socket. The charging indicator light truns green.
2. Slide the battery onto the charger. The there intelligent battery indicators will continue flashing when start charging. Two indicators will flash inturn when the capacity reach 70%.
3. About one hour later, battery will full charge, and the charger indicator turn green again. At the moment three indicators (green, yellow, red) light up together.
4. Unplug the charger and disconnect it from the battery pack when charging is finished.
5. Allow the battery pack cool completely before use it.