

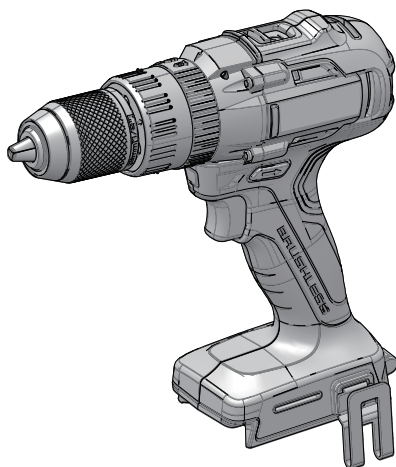
greenworks

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HAMMER DRILL

OPERATOR MANUAL



E8038

DDD402

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1	Description.....	2	7.2	Install the battery pack.....	4
1.1	Purpose.....	2	7.3	Remove the battery pack.....	5
1.2	Overview.....	2	7.4	Install the bit.....	5
1.3	Packing list.....	2	7.5	Remove the bit.....	5
2	General power tool safety		8	Operation.....	5
	warnings.....	2	8.1	Start the machine.....	5
2.1	Work area safety.....	2	8.2	Stop the machine.....	5
2.2	Electrical safety.....	2	8.3	Adjust the variable speed.....	5
2.3	Personal safety.....	2	8.4	Adjust the two-speed gear train.....	5
2.4	Power tool use and care.....	3	8.5	Select the mode.....	5
2.5	Battery tool use and care.....	3	8.6	Adjust the reversing button.....	6
2.6	Service.....	3	8.7	Drill materials.....	6
3	Drill safety warnings.....	3	9	Maintenance.....	6
4	Symbols on the product.....	4	9.1	Remove the chuck.....	6
5	Risk levels.....	4	9.2	Retighten a loose chuck.....	7
6	Recycle.....	4	9.3	Clean the machine.....	7
7	Installation.....	4	10	Technical data.....	7
7.1	Unpack the machine.....	4	11	Warranty.....	7

1 DESCRIPTION

1.1 PURPOSE

This machine is used to drill in all types of wood materials (lumber, plywood, paneling, composition board, and hard board), ceramics, plastics, fiberglass, laminates and metals.

1.2 OVERVIEW

Figure 1.

1 Two-speed gear train (HI-LO)	5 LED light
2 Mode selection ring	6 Switch trigger
3 Torque adjustment ring	7 Belt clip
4 Keyless chuck	8 Reversing button

1.3 PACKING LIST

1 Hammer drill	4 Screw
2 Double sided bit	5 Manual
3 Belt clip	

2 GENERAL POWER TOOL SAFETY WARNINGS

▲ WARNING

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.

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.

2.1 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.

2.2 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 and 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.

2.3 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 lapse of attention while operating power tools may result in serious personal injury.
- **Use personal protection.** Always wear eye protection. Protective products such as dust mask, non-skid safety shoes, hard hat or hearing protection used appropriately will reduce personal injuries.
- **Prevent unintentional starting.** Ensure the switch is in the off position before connecting to power source and/or battery pack and when 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 over-reach.** 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.
- **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.

2.4 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 and accessories.** 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.*
- **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.*

2.5 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 fire.*
- **Under abusive conditions, liquid may be ejected from the battery; avoid contact.** **If contact accidentally occurs, flush with plenty of soap and water. If liquid contacts eyes, immediately 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.*

2.6 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.*

3 DRILL SAFETY WARNINGS

- **Wear ear protectors when impact drilling.** *Exposure to noise can cause hearing loss.*
- **Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting accessory may contact hidden wiring.** *Cutting accessory or fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.*
- **Never operate at higher speed than the maximum speed rating of the drill bit.** *At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.*
- **Always start drilling at low speed and with the bit tip in contact with the workpiece.** *At higher speeds, the bit is likely to bend if allowed to rotate freely without contacting the workpiece, resulting in personal injury.*
- **Apply pressure only in direct line with the bit and do not apply excessive pressure.** *Bits can bend causing breakage or loss of control, resulting in personal injury.*
- **Know your power tool.** **Read operator manual carefully.** *Learn its applications and limitations, as well as the specific potential hazards related to this power tool. Obey this instruction will reduce shock, fire or serious injury.*
- **Always wear safety glasses with side shields marked to comply with ANSI Z87.1.** *Obey this instruction will reduce the risk of serious injury.*
- **Protect your lungs.** **Wear a face or dust mask if the operation is dusty.** *Obey this instruction will reduce the risk of serious injury.*
- **Protect your hearing.** **Wear hearing protection during extended periods of operation.** *Obey this instruction will reduce the risk of serious injury.*




4 SYMBOLS ON THE PRODUCT

Some of the following symbols may be used on this tool. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the tool better and safer.

Symbol	Explanation
V	Voltage
	Direct current
	Read all safety warnings and all instructions.
	Safety alert
	Wear eye protection
	Wear ear protection
	Low speed
	High speed
	Do not touch rotating part.




5 RISK LEVELS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	DANGER	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.

SYMBOL	SIGNAL	MEANING
	CAUTION	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

6 RECYCLE

	Separate collection. You must not discard with usual household waste. If it is necessary to replace the machine, or if it is no more use to you, do not discard it with household waste. Make this machine available for separate collection.
	Separate collection of used machine and packaging let you recycle materials and use them again. Use of the recycled materials helps prevent environmental pollution and decreases the requirements for raw materials.
	At the end of their useful life, discard batteries with a precaution for our environment. The battery contains material that is dangerous to you and the environment. You must remove and discard these materials separately at a equipment that accepts lithium-ion batteries.

7 INSTALLATION

7.1 UNPACK THE MACHINE

▲ WARNING

Make sure that you correctly assemble the machine before use.

▲ WARNING

- If the parts are damaged, do not use the machine.
- If you do not have all the parts, do not operate the machine.
- If the parts are damaged or missing, speak to the service center.

1. Open the package.
2. Read the documentation in the box.
3. Remove all the unassembled parts from the box.
4. Remove the machine from the box.
5. Discard the box and package in compliance with local regulations.

7.2 INSTALL THE BATTERY PACK

Figure 2.

▲ WARNING

- If the battery pack or charger is damaged, replace the battery pack or the charger.
- Stop the machine and wait until the motor stops before you install or remove the battery pack.
- Read, know, and do the instructions in the battery and charger manual.

1. Align the lift ribs on the battery pack with the grooves in the battery compartment.
2. Push the battery pack into the battery compartment until the battery pack locks into place.
3. When you hear a click, the battery pack is installed.

7.3 REMOVE THE BATTERY PACK

Figure 3.

1. Push and hold the battery release button.
2. Remove the battery pack from the machine.

7.4 INSTALL THE BIT

Figure 4.

1. Push reversing button in the center position to lock the switch trigger.
2. Open or close the chuck jaws to a point.
3. Lift the front of the machine to keep the bit from falling out of the chuck jaws.
4. Put the bit into the point.
5. Tighten the chuck jaws.

i NOTE

Turn the chuck body to close the chuck jaws. Do not use a wrench to tighten or loosen the chuck jaws.

▲ WARNING

Put the bit straight into the chuck jaws. Do not put the bit into the chuck jaws at an angle then tighten.

7.5 REMOVE THE BIT

Figure 5.

1. Push reversing button in the center position to lock the switch trigger.
2. Open the chuck jaws.
3. Remove the drill bit.

▲ WARNING

Be prepared for binding at bit breakthrough. When these situations occur, drill has a tendency to grab and kick opposite to the direction of rotation and could cause loss of control when breaking through material. If not prepared, this loss of control can result in possible serious injury.

8 OPERATION**▲ WARNING**

Always wear eye protection.

▲ WARNING

Do not use any attachments or accessories not recommended by the manufacturer of this product.

8.1 START THE MACHINE

Figure 6.

i NOTE

The machine can not work until the reversing button is pushed fully to the left or right. Do not operate the machine at low speeds for extended periods of time.

1. Push the switch trigger to turn the machine ON (I).

8.2 STOP THE MACHINE

Figure 6.

1. Release the switch trigger to turn the machine OFF (O).

▲ WARNING

Release the switch trigger and let the coupler to come to a complete stop.

8.3 ADJUST THE VARIABLE SPEED

Figure 6.

1. Increase the trigger pressure to make a higher speed.
2. Decrease the trigger pressure to make a lower speed.

8.4 ADJUST THE TWO-SPEED GEAR TRAIN

Figure 7.

The machine has a two-speed gear train designed for drilling or driving at LO (1) or HI (2) speeds. A slide switch is on top of the machine.

1. When you use the machine in the LO (1) speed, the speed decreases and the machine has more power and torque.
2. When you use the machine in the HI (2) speed, the speed increases and the machine has less power and torque.

▲ WARNING

Use LO (1) speed for high power and torque applications and HI (2) speed for fast drilling or driving applications.

8.5 SELECT THE MODE

Figure 8.

To change the operation mode, adjust the mode selection ring to the correct position.

The machine is used for three functions: driver (a), drill (b) and hammer drill(c).

i NOTE

Torque can not be adjusted until the driver (a) mode starts.

A. The direction to decrease torque.

B. The direction to increase torque.

i NOTE

When hammer drilling, do not apply too much pressure.

8.6 ADJUST THE REVERSING BUTTON

The machine has the reversing button (forward/reverse lock) above the switch trigger to change the direction of the bit.

Figure 9 - 10.

1. When the reversing button is on the left side of the switch trigger, the bit direction is forward.
2. When the reversing button is on the right side of the switch trigger, the bit direction is reversible.
3. Put the direction button in the OFF (center lock) position to help decrease the possibility of accidental start when not operate.

▲ WARNING

Release the switch trigger and let the chuck to come to a complete stop to stop the machine.

▲ WARNING

Let the chuck to come to a complete stop before changing the direction of rotation.

i NOTE

The machine does not operate until the direction button is pushed fully to the left or right.

8.7 DRILL MATERIALS

- When drilling hard, smooth surfaces, use a center punch to mark the desired hole location. This can prevent the drill bit from slipping off-center as the hole is started.
- When drilling metals, use a light oil on the drill bit to keep it from overheating. The oil can prolong the life of the bit and increase the drilling action.
- If the bit jams in the workpiece or if the drill falls, stop to use the machine immediately. Remove the bit from the workpiece and analyze the cause of the jam.

i NOTE

This drill has an electric brake. When the switch trigger is released, the chuck stops turning. When the brake is functioning properly, sparks can be visible through the vent slots on the housing. This is normal and is the action of the brake.

WOOD DRILLING

For maximum performance, use high speed steel bits for wood drilling.

1. Operate the machine at a very low speed to prevent the bit from slipping off the starting point. Increase the speed as the drill bit bites into the material.
2. When drilling through holes, put a piece of wood behind the workpiece to prevent ragged or splintered edges on the back side of the hole.

METAL DRILLING

For maximum performance, use high speed steel bits for metal or steel drilling.

1. Operate the machine at a very low speed to prevent the bit from slipping off the starting point.
2. Hold consistent speed and pressure to avoid overheating the bit. Applying too much pressure can: Overheat the drill; Wear the bearings; Bend or burn bits; and Produce off-center or irregular-shaped holes.
3. When drilling large holes in metal, start with a small bit, then finish with a large bit. Also, lubricate the bit with oil to improve drilling action and increase bit life.

9 MAINTENANCE

▲ CAUTION

Do not let brake fluids, gasoline, petroleum-based materials touch the plastic parts. Chemicals can cause damage to the plastic, and make the plastic unserviceable.

▲ CAUTION

Do not use strong solvents or detergents on the plastic housing or components.

▲ WARNING

Remove the battery pack from the machine before maintenance.

9.1 REMOVE THE CHUCK

The chuck may be removed and replaced by a new one.

i NOTE

Note: before remove the chuck, lock the switch trigger by placing the direction of rotation selector in center position and remove the battery pack.

- Loosen the chuck jaws securely and insert a cross screwdriver into the chuck of the drill to remove the screw in a clockwise direction.
- The chuck body can now be unscrewed by hand in a counterclockwise direction.

9.2 RETIGHTEN A LOOSE CHUCK

- Align the chuck hole to the drill spindle and tighten the chuck in a clockwise direction until the chuck engages completely with a continuous click. At this time, the chuck jaw is closed.
- Use a dexterous strength to loosen the chuck jaw counterclockwise. Align the screw with the hole of spindle and insert a screwdriver into the chuck to tighten the crew counterclockwise.

9.3 CLEAN THE MACHINE

▲ CAUTION

The machine must be dry. Humidity can cause risks of electrical shocks.

- Clear the unwanted material out of the air vent with a vacuum cleaner.
- Do not spray the air vent or put the air vent in solvents.
- Clean the housing and the plastic components with a moist and soft cloth.

10 TECHNICAL DATA

Voltage	24 V
No load speed	0-450 / 0-1700 min ⁻¹
Chuck	13 mm Keyless
Clutch	20 Positions + Drill + Hammer
Torque	60 N·m
Weight without battery	1.4 kg
Battery model	G24B2 / G24B4 and other BAG series
Charger model	2913907 and other CAG series
Measured sound pressure level	73 dB(A), K _{pA} = 3 dB(A)
Measured sound power level	84 dB(A), K _{wA} = 3 dB(A)
Vibration	< 2.5 m/s ² , K = 1.5 m/s ²

11 WARRANTY

(The full warranty terms and conditions can be found on Greenworks webpage)

The Greenworks warranty is 4 years on the product, and 2 years on batteries (consumer/private usage) from the date of purchase. This warranty covers manufacturing faults. A faulty product under warranty might be either repaired or replaced. A unit that has been misused or used in other ways then described in the owner's manual might be rejected for warranty. Normal wear, and wear parts are not considered as warranty. The original manufacturer warranty is not affected by any additional warranty offered by a dealer or retailer.

A faulty product must be returned to the point of purchase in order to claim for warranty, together with the proof of purchase (receipt).