



BN Products - USA, LLC.

A Division of Benner-Nawman, Inc. - Wickenburg, AZ

BNCE-20-24V

The Cutting Edge Saw™

Operation Manual



Model BNCE-20-24V SN# _____
Cordless Cutting Edge Saw™

Please keep this booklet and enter your tool serial number in the space above.



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Instruction Manual

Please read this manual
before operating this tool.

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This manual provides users with knowledge and procedures for operation, maintenance, and inspection of the tool, a multipurpose flush cutting saw for cutting reinforcing bar, coil rod, all-threaded rod, pipe, tubing, and conduit. Improper use of this tool may lead to a severe accident. Therefore, please read this instruction manual before using the tool to familiarize yourself with its correct usage, operating method, and warnings.



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General Safety Rules

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

PLEASE SAVE THESE INSTRUCTIONS!

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 that may ignite dust or fumes. Keep children and bystanders away while operating a power tool. Distractions can cause misuse of a power tool.

Electrical Safety

Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of damage or electric shock.

Personal Safety

- Always wear eye protection. Use this tool with enough space to prevent chips from hitting other workers in the same area.
- 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 masks, non-skid safety shoes, hard hats, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure that the switch is in the off-position before connecting to a power source. Do not pick up or carry the tool with your finger on the power button.
- Remove any adjusting key or wrench before turning the power tool on. If a wrench or key-tool is left attached to the power tool's rotating parts, this may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times to better control the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing, and gloves away from moving parts. An operator with loose clothes, jewelry, or long hair can easily be caught in moving parts of this tool.



- A device has been provided for the collection of dust and chips. Please ensure it is connected and properly used. The use of dust and chip collection can reduce hazards related to debris.
- Keep fingers and body parts away from the blade opening.

Power Tool Use and Care

- Do not force the power tool. Instead, use the correct tool for your specific application. The right power tool will do the job better and safer at the rate it was designed.
- Do not use the power tool if the switch does not turn on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect 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 your 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. Remember, poorly maintained power tools cause many accidents.
- Keep cutting blades 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 blades according to these instructions, take 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.

Service

Have your power tool serviced only by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained. Upon purchasing the Cutting Edge Saw, open the carrying case and check the contents for the following:

- BNCE-20-24V Cutting Edge Saw with blade mounted
- Removable Side Handle and Chip Collector Attachment
- Allen Wrenches for Blade Removal and Installation
- An Additional Saw Blade
- Two Batteries and AC Quick Charger Unit
- An Operation Manual



NOTE: If anything is missing or damaged, please do not return this packaged tool to the distributor. Please call the BN PRODUCTS-USA Customer Service Department: 800-992-3833 or 928-684-2813.

Functions and Applications

The Cutting Edge Saw is a power tool developed for fast and efficient cutting of various ferrous and non-ferrous materials. The primary design is flush cutting or free cutting reinforcing bars, coil rods, and all-threaded rods used in the construction industry. Application the Cutting Edge Saw can be used for are as follows:

3/8" to 3/4" (or 10 mm to 20 mm) grade 60 rebar (reinforcing bars), up to 1/2" I.D pipe, 3/4" O.D. copper water pipe, 3/4" O.D. tubing, 1/2" conduit, 3/4" square steel tubing & bar, and up to 7/8" O.D. all-threaded or coil rod.

Use and Storage - The user is required to be thoroughly familiar with the saw, the cutting blades, battery care and storage procedures upon completion of use.

Specifications

This power tool is a multipurpose saw with an enclosed guard and flush cutting capabilities. The specifications of the Cutting Edge Saw™ are as follows.

Standard Blade

(Best for Ferrous Metals)

This tool is supplied with (2) each 110 mm Blade diameter × 1.6mm thickness, 24 teeth. The maximum blade RPM is 2000. The blade replacement number is: RB-BNCE-NH

Operation

- Check and Preparation of Working Environment
- Check the following before using the Cutting Edge Saw. Always observe the instructions and prohibited items.
- Checking of weather conditions, do not use in the rain or snow



!DANGER: The Cutting Edge is not a waterproof power tool. If it becomes wet, the power source system may become faulty, or the operator may be in danger of an electric shock. Therefore, when it is raining or snowing, never operate this saw outdoors, on top of buildings or under roofs where rain or snow enters freely. Also, do not use where water accumulates or in any wet conditions

Operating Instructions

Attach the front handle in the mounting hole that provides the best grip. To operate the trigger, depress the trigger to start the saw. Start the saw before cutting, and then apply a light pressure moving forward through the cut. Do not use excessive force.



! DANGER: Electric Shock Hazard. Ignoring this warning may lead to death or severe injury. When raining or snowing, do not operate outdoors or indoors where rain or snow enters freely or in extreme temperatures.

Do not use in extreme hot or cold conditions. The tool is designed for use under an allowable environmental temperature of 0 to 120°F. Operation at higher temperature may cause the tool's central unit to overheat. Likewise, operation in extreme cold or high humidity can cause the device to fail due to condensation.

Do not operate the Cutting Edge Saw™ in snow or icy conditions or inside refrigerators where the temperature is freezing or below.

Check The State of Your Work Site.

Before using the tool, check whether the state of the worksite is as follows. Is the area free of foreign objects, debris, water, ice, snow, powered electrical cables, and excessive dust? Is the floor free of obstructions? Is there adequate ventilation? Is the worker adequately insulated from the ground? Then, follow the operation instructions and avoid hazardous conditions.

Remove Hazardous Substances.

Since the tool is battery-operated, it may spark and cause an explosion or a fire if operated near flammable gas, thinners, explosive and other hazardous substances. Therefore, do not use the tool in areas where dangerous substances are present. Ignoring this warning may cause death or severe injury.

Regular Maintenance
Clean the entire unit occasionally by removing dust, debris, and oils. Periodically remove the flush cutting bottom plate; then remove any cutting chips that remain lodged in the area the cutting blade rotated. We recommend that the cutting blade be removed and inspected for any materials that did not exit the chip exhaust area. Inspection should be done after 4-8 hours of use. Most material cutting chips would normally exit the chip exhaust area and into the Cutting Chip Catch Bag. We recommend that the Cutting Chip Catch bag be emptied when it becomes 2/3 full of cut material.

RB-BNCE-NH Blade

The Blade for the BNCE-20-24V Cutting Edge Saw™ should be replaced when the blade is dull or chipped and a noticeable increase in cutting time has occurred.



To change the Blade, remove the screws that hold the Blade Cover to the Body. Next, remove the cover and unscrew the four bolts holding the blade to the Hub. Replacement blades have new screws to be used when installing the new blade. Make sure that you clean out any metal debris that has not escaped the tool when you remove the blade.

An optional Steel Mesh Blade is available to improve the cutting capability of the BNCE-20-24V when cutting mesh materials. (RB-BNCE-MESH) Please see your distributor or call BN Products-USA, LLC (www.bnproducts.com) for more information.

General Operating Cautions

Here are the general cautions on operating this tool. Always observe the warnings stated in each item.

- Do not press the operation switch if the tool is pointed towards anyone. Operating the tool by holding it toward anyone may cause injury from contact with the blade.
- Please do not use the Cutting Edge Saw™ for purposes it is not intended.
- Do not use the tool for lifting or hammering etc., instead, only use this tool for cutting. Otherwise, the main unit may be broken or damaged, causing injury.

Charger for	BNCE-24VLI Battery
Model	BNCE-24VCHGR
Input	A.C. 120 V 50-60 Hz
Output	D.C. 14.4V - 21.6V
Weight	1 lbs. (.45 kgs)

Important Safety Instructions

SAVE THESE INSTRUCTIONS — This manual contains important safety and operating instructions for the battery charger. Before using the battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using the battery.



CAUTION — To reduce the risk of injury, charge only BN Products-USA rechargeable batteries marked on the charger label. Batteries not specifically designed for this tool may burst, causing personal injury and damage.

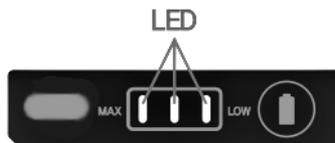
BNCE-24VCHGR Battery Charger

- Non-rechargeable batteries cannot be charged with this battery charger.
- Use a power source with the voltage specified on the nameplate of the charger.
- Do not charge the battery cartridge near flammable liquids or gases.
- Do not expose the charger to wet conditions including rain or snow.
- Never carry the charger by the cord or yank it to disconnect from a receptacle.
- After charging or before attempting any maintenance or cleaning, unplug the charger from the power source. Pull by plug rather than cord whenever disconnecting the charger.
- Please make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- Do not operate charger with a damaged cord or plug. If the cord or plug is damaged, contact a BN Products-USA authorized service center for replacement to avoid any hazard.
- Do not operate or disassemble the charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified service technician. Incorrect use or reassembly may result in a risk of electric shock or fire.
- The battery charger is not intended for use by young children without supervision.
- Do not charge battery cartridge when the room temperature is BELOW 10°C (50°F) or ABOVE 40°C (104°F). Likewise, when the battery temperature is under 0°C (32°F), the battery may fail to charge.
- This charger is electronic in nature. Do not attempt to use a step-up transformer, gas engine generator, or a DC power receptacle to charge.
- Do not allow anything to cover or clog the charger vents.

Abnormal Display Mode Function

In case of abnormal mode during operation, the remaining amount display LED light shows the tool's current status as shown on the next page.

LED operation automatically turns off after 10 seconds.



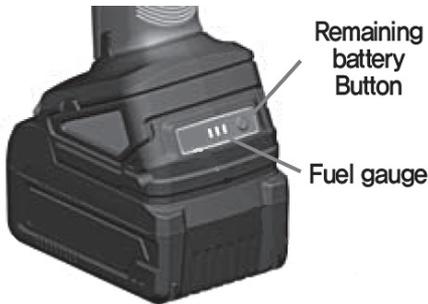


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Symptoms	LED Indicator	On	Off
Terminal contact failure	LED Off		
High temperature battery protection	LED 3 SPACE On 0.7s / Off 0.3s		
High temperature switch protection	LED 3 SPACE On 0.3s / Off 0.7s		
Overcurrent shutdown	LED 3 SPACE On 0.05s / Off 0.1s On 0.2s / Off 0.65s (2 $\frac{1}{2}$ Flashing)		
Motor sensor recognition error	LED 3 SPACE On 0.5s / Off 0.5s		
Undervoltage battery protection	LED 1 SPACE On 0.5s / Off 0.5s		

Fuel Gauge



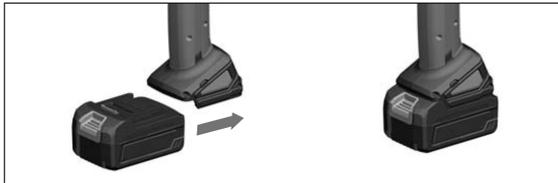
Indicator	Remaining battery capacity
3 light on	(Over) 80 %
2 light on	(Over) 50%
1 light on	(Below) 20 %
1 flickering	20% or less

If you press the switch on the bottom of the power tool, the LED light will turn off after a few seconds. Check the battery level as follows.

Installing or Removing the Battery

Do not use force when inserting the battery. To insert the battery, align the tongue with the groove in the housing and slip it into place. Always insert it until it locks in place with a click. If not, it may accidentally fall out of the tool.

- Inserting battery



- Removing battery



Charging

► Indicators and Meaning

Indicators	Meaning
<div style="border: 1px solid black; border-radius: 5px; padding: 2px; display: inline-block;">Standby</div> ☼ ► Green LED Flickering	► Battery charging is workable.
<div style="border: 1px solid black; border-radius: 5px; padding: 2px; display: inline-block;">Charging</div> ● ► Red LED on	► Battery is being charged.
<div style="border: 1px solid black; border-radius: 5px; padding: 2px; display: inline-block;">Finish</div> ● ► Green LED on	► Fully charged.
<div style="border: 1px solid black; border-radius: 5px; padding: 2px; display: inline-block;">Battery High Temperature</div> ● ► Red & Green LED on <small>Red/Green</small>	► Battery temperature has missed the normal range (0~45 °C) Charge will automatically start when allowable temperature is reached. ► Pre-charging mode voltage of the battery is low. (When a constant voltage charging mode is switched to rise.)
<div style="border: 1px solid black; border-radius: 5px; padding: 2px; display: inline-block;">Battery low voltage</div>	

- Plug the battery charger into a proper AC voltage source. The charging light will start blinking green.
- Insert the battery cartridge into the charger.
- When the battery cartridge is inserted, the red charging light will light up, indicating that the battery is charging.

- When the battery is fully charged, the charging light will change from red to green.
- After charging, remove the battery cartridge from the charger and unplug the charger.



NOTE: The battery charger is for charging BN Products-USA battery cartridge only. Never use it for other purposes or other manufacturer's batteries. If the charging light flashes red/green, this indicates that the battery may be damaged and cannot be charged.

- A battery cartridge from a just-operated tool or battery cartridge that has been left in a location exposed to direct sunlight may be too hot to charge - check indicator light.
- Battery cartridge that has been left for a long time in a location exposed to cold air.
- When the battery cartridge is too hot, charging will begin after the cooling fan installed in the charger cools the battery cartridge. Charging will start after the battery cartridge temperature reaches the degree at which charging is possible. When the temperature on the battery is more than approx. 70°C, two charging lights may flash in red color, and when approx. 50°C – 70°C, one charging light in red color.
- If the charging light flashes alternately in green and red color, the battery is unable to accept a charge. The charger or battery cartridge terminals may be clogged with dust, or the battery cartridge is worn out or damaged.

Charger Light

- Blinking Green Light - waiting to charge.
- Solid Red Light as the battery charges
- Solid Green Light - the battery is fully charged.
- Red Green Light damage or overheat signal

Charger troubleshooting

1. If the LED lamp does not work.
 - Check connection of power cord into the outlet.
 - Check the cleanliness of power cord and battery terminal.
 - Insert another battery to determine if the charger is working normally.

2. The green LED flickering when the battery is inserted.

- Low temperature: Let stand at room temperature until normal temperature is achieved.
- If this does not solve the problem, please contact BN Products-USA, LLC or an authorized service center nearest you.

Environmental Protection



Lithium-Ion Batteries

- Do not dispose of power tools and batteries into household waste.
- Do not dispose of power tools and batteries into fire or bodies of water.
- Please use environmental - friendly recycling.
- Defective or dead battery packs must be recycled



Power tools and batteries that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

For a complete parts list and schematic diagram please visit www.bnproducts.com or call customer service (800) 992-3833



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