

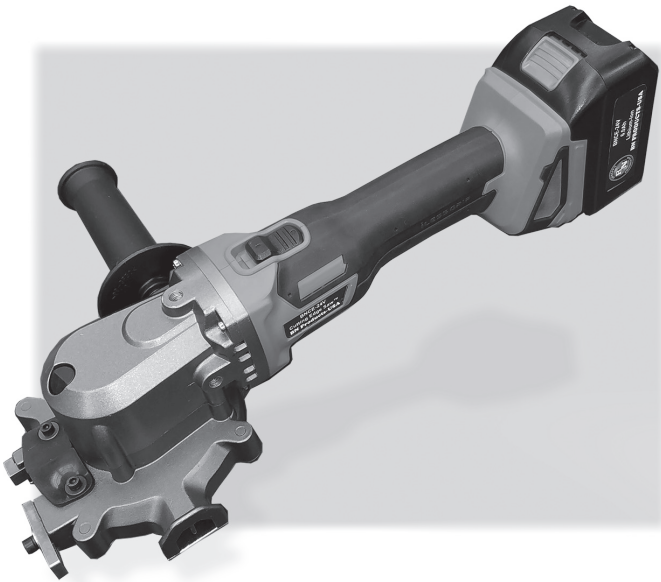


**BN Products-USA, LLC**

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BNCE-20-24V  
**The Cutting Edge Saw™**

**Operation & Instruction Manual**



**Model BNCE-20-24V SN# \_\_\_\_\_  
Cordless Cutting Edge Saw™**

**Keep this booklet and enter your tool serial number  
in the appropriate space above.**



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## **Instruction Manual**

Please read this manual before operating this tool.

### **Contents**

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Purpose of this manual - This manual is intended to provide users with correct knowledge and the 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 the tool may possibly lead to a serious accident. Therefore, always read this instruction manual before using the tool to familiarize yourself with its correct usage, operating method, and warnings.



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Warning! Read and understand all instructions. Failure to follow all instructions listed below may result in electric shock, fire and/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 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**

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

## **Personal Safety**

- Always wear eye protection. Care must be taken 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 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 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 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 jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.



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- 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.
- Keep fingers and body parts away from the blade opening.

### **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 blades 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.

### **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.

#### **Cutting Edge Saw™ Package**

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 : 1 unit
- Removable Side Handle and chip collector attachment: 1 unit
- Allen Wrenches for Blade Removal and Installation: 1 unit
- Additional Saw Blade: 1 unit
- Additional Battery: 1 unit
- Operation Manual: 1 copy



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If anything is missing or damaged please do not return this packaged unit to the distributor, please call the Benner-Nawman customer service department: 800-992-3833 or 928-684-2813

### **Functions and Applications**

This section describes the functions, applications, service environment and other aspects of the Cutting Edge Saw. The Cutting Edge Saw is a power tool developed for fast and efficient cutting of various ferrous and non-ferrous materials. This multipurpose tool can be used by a variety of contractors however the primary design was for flush cutting or free cutting reinforcing bars, coil rod and all-threaded rod used in the construction industry.

**Application of the Tool** - Actual areas of application the Cutting Edge Saw is 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.

**Rules of Use and Storage** - To use the tool to its fullest performance, the user is required to be fully familiar with the saw itself, the cutting blades, and storage procedures upon completion of work.

### **Specification**

The power tool is a multipurpose saw with an enclosed guard and flush cutting capabilities. The specifications of the main unit are as follows.

#### **Standard Blade:** (Best for Ferrous Metals)

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-KNH

### **Operation**

- Checking 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
-



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**!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 get 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. Do not use where water accumulates or where water splashes.

### **Operation Instructions**

Locate 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.



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

Do not use under high temperature and humidity or extremely cold temperature 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 main unit to overheat. Operation at high temperature with high humidity may cause the tool to fail due to condensation.

Also, do not operate the Cutting Edge Saw™ in very cold places 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 work site is as follows. Is the worksite 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 properly insulated from the ground. Follow the operation instructions and avoid prohibited items.

#### **Remove Hazardous Substances.**

Since the tool is battery operated, it may spark and cause an explosion or a fire if operated near gas cylinders, thinner, or explosive and other hazardous substances or in a place filled with flammable gas, etc. Therefore, do not use the tool in places where such hazardous substances are present. Ignoring this warning may cause death or serious injury. Never use the tool in places filled with flammable gas or near hazardous substances of high flammability.



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### **Maintenance of the Main Unit**

Clean the entire unit occasionally by removing dust, debris and oils. Occasionally remove the flush cutting bottom plate; then remove any cutting chips that remain lodged in the area the cutting blade rotated.

It is also recommended that the cutting blade be removed and inspected for any materials that did not exit out the chip exhaust area. This should be done after 4-8 hours of use. Most material cutting chips would normally exit out the chip exhaust area and into the Cutting Chip Catch Bag. It is recommended that the Cutting Chip Catch bag be emptied when it becomes 2/3 full of cut material.

### **RB-BNCE-KNH 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. Remove the cover and unscrew the four bolts holding the blade to the Hub. The replacement blades that you purchase have new screws to be used when installing the new blade. Make sure that when you remove the blade you clean out any metal debris that has not escaped the tool.

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](http://www.bnproducts.com)) for more information.

### **General Operating Cautions**

The following describe the general cautions on operating tool. Always observe the cautions 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.
- Do not apply 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)



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### IMPORTANT SAFETY INSTRUCTIONS

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



**CAUTION** — To reduce risk of injury, charge only BN Products-USA rechargeable batteries marked on the charger label. Other types of batteries may burst causing personal injury and damage.

- 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 in presence of flammable liquids or gases.
- Do not expose charger to rain or snow.
- Never carry charger by cord or yank it to disconnect from 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 charger.
- Make sure 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 damaged cord or plug. If the cord or plug is damaged, ask BN Products-USA authorized service center to replace it in order to avoid a hazard.
- Do not operate or disassemble charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman. 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.
- Young children should be supervised to ensure that they do not play with the battery charger.
- Do not charge battery cartridge when room temperature is BELOW 10°C (50°F) or ABOVE 40°C (104°F). When the battery temperature is under 0°C (32°F), charging may not start.
- Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.
- 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 current status of the tool as shown n next page.

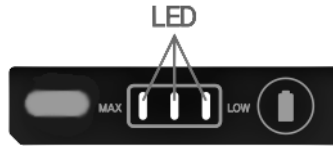
LED operation automatically turns off after 10 seconds.





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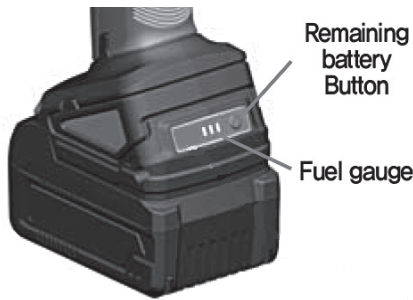
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Symptoms	LED Indicator	
	On	Off
Terminal contact failure	LED Off	
High temperature battery protection	LED 3 SPACE On 0.7s / Off 0.3s	
High temperature switch protection	LED 3 SPACE On 0.3s / Off 0.7s	
Overcurrent shutdown	LED 3 SPACE On 0.05s / Off 0.1s On 0.2s / Off 0.65s (2.3) 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





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.





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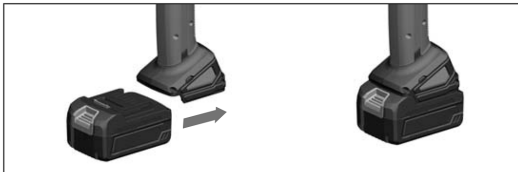
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Indicator	Remaining battery capacity
 3 light on	(Over) 80 %
 2 light on	(Over) 50%
 1 light on	(Below) 20 %
 1 flickering	20% or less

## Installing and removing battery

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

### - Inserting battery



### - Removing battery










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## Charging

### ► Indicators and Meaning

Indicators	Meaning
Standby  ► Green LED Flickering	► Battery charging is workable.
Charging  ► Red LED on	► Battery is being charged.
Finish  ► Green LED on	► Fully charged.
Battery High Temperature  Battery low voltage  Red/Green	► 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.)

- Plug the battery charger into the proper AC voltage source. Charging light will start blinking green.
- Insert the battery cartridge into charger.
- When the battery cartridge is inserted, the red charging light will light up and charging will begin.
- When the battery is charged, the charging light will change from red to green.
- After charging, remove the battery cartridge from charger and unplug the charger.
- 



**NOTE:** The battery charger is for charging BN Products-USA-battery cartridge. Never use it for other purposes or for other manufacturer's batteries. If charging light flashes red/green, battery condition is as below and charging may not start.

- Battery cartridge from just-operated tool or battery cartridge that has been left in a location exposed to direct sunlight for a long time.
- 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 begin after the battery cartridge temperature reaches the degree at which charging is possible. When the temperature on 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, charging is not possible. The terminals on the charger or battery cartridge are 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



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### **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 check the charger working normally.

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

- Low temperature: Let stand at room temperature until normal temperature.

If Checking 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 ocean.
- Be sorted for environmental - friendly recycling.
- Defective or dead battery packs must be recycled

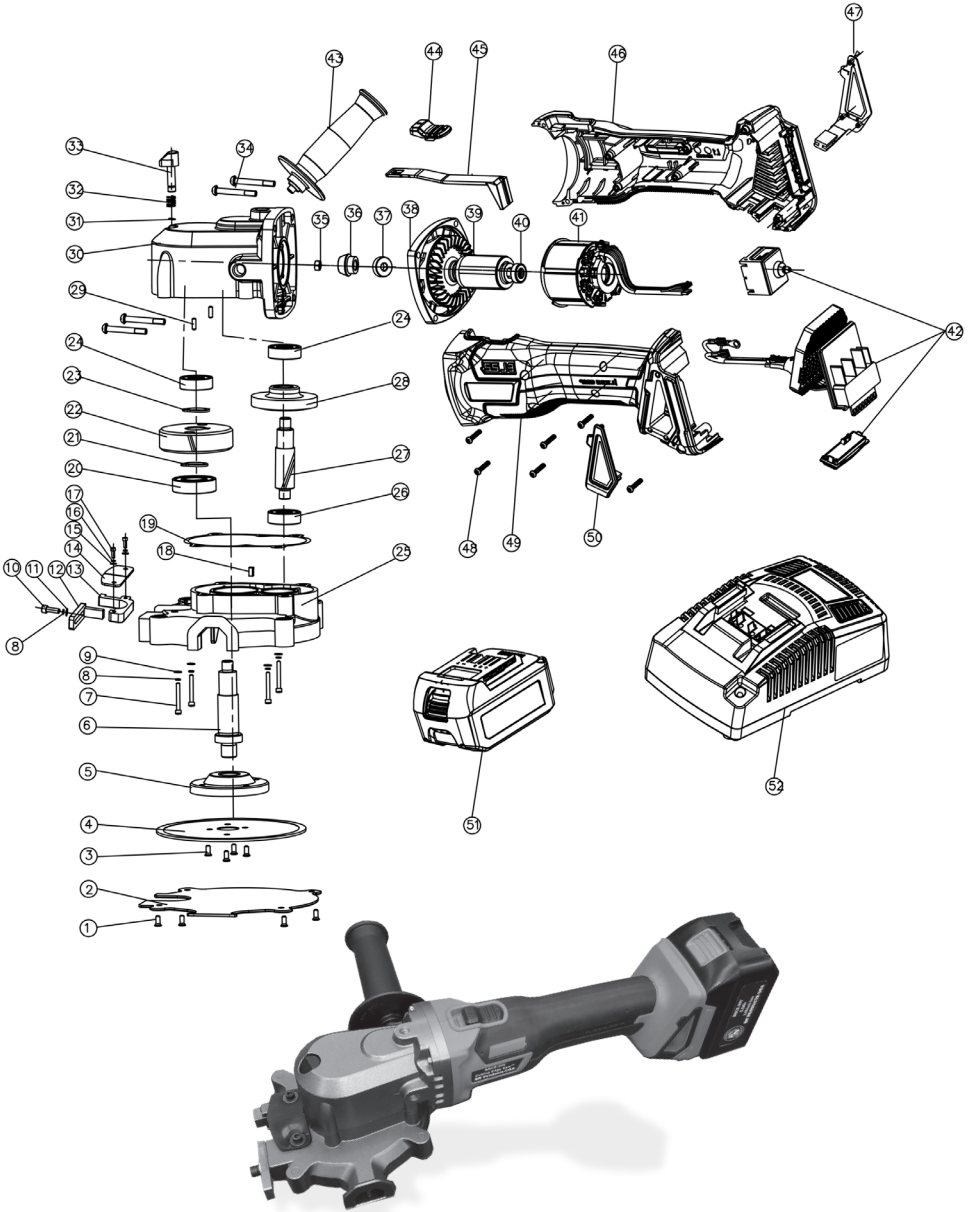


Power tools and batteries that are no longer usable must be collected separately and disposed of in an environmentally correct manner.



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## **Parts List**

Parts List for BNCE-20-24V		
No.	Description	Part No.
1	Hexagon Socket Countersunk Head Bolt M5x15 (class 12.9)	BNCEP1-71
2	Blade Cover	BNCEP1-72
3	Hexagon Socket Countersunk Head Bolt M5x8 (class 12.9)	BNCEP1-73
4	Blade	RB-BNCE-KNH
5	Hub-New Style	w/ BNCEP1-75
6	Cutting Blade Spindle	BNCEP1-75
7	Hexagon Socket Head Cap Head Screw M5x30	BNCEP-07
8	Spring Lock Washer-5mm	BNCEP-08
9	Plain Washer-5mm	BNCEP-09
10	Hexagon Socket Head Cap Head Screw M5x16	BNCEP-20
11	Big Plain Washer-5mm	BNCEP-66
12	Movable Cutting Guide	BNCEP-18
13	Fixed Cutting Guide Block	BNCEP-17
14	Left and Right Rubber Plate	BNCEP-21
15	Big Plain Washer-4mm	BNCEP-22
16	Spring Lock Washer-4mm	BNCEP-23
17	Hexagon Socket Head Cap Head Screw M4x16	BNCEP-24
18	Flat Key-5x5x14	BNCEP-78
19	Gasket Seal	BNCEP-12
20	Ball Bearing-6002-2RS	BNCEP-25
21	Spacer	BNCEP-26
22	Big Gear	BNCEP-27
23	Shaft Clip-15	BNCEP-28
24	Ball Bearing-608-2Z	BNCEP24V-24



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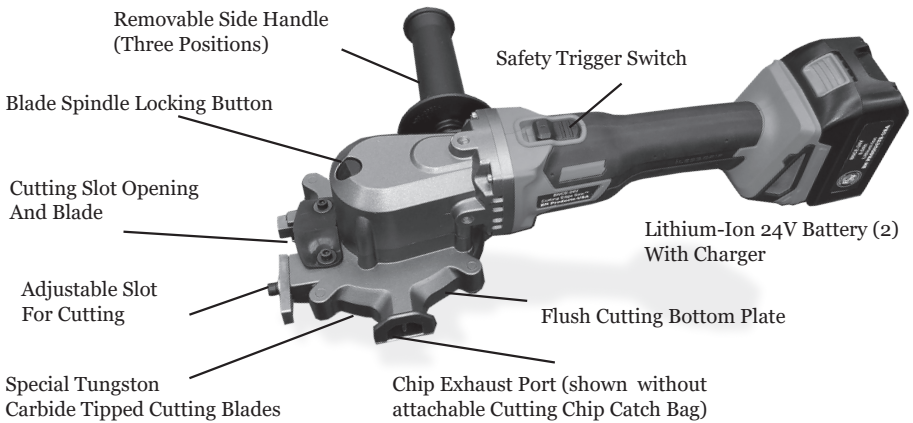
Parts List for BNCE-20-24V		
No.	Description	Part No.
25	Aluminum Housing	BNCEP1-77
26	Ball Bearing-628-2Z	BNCEP24V-26
27	Gear Shaf	BNCEP24V-27
28	Big Bevel Gear	BNCEP24V-28
29	Pin-A5x16	BNCEP-29
30	Alunmium Gear Box Housing	BNCEP24V-30
31	Steel Ring-5mm	BNCEP-31
32	Spring for Lock Button	BNCEP-32
33	Locking Button	BNCEP-33
34	Six Flower Shaped Pan Head Tapping ScrewsT15	BNCEP24V-34
35	Hex Nut	BNCEP24V-35
36	Bevel Pinion	BNCEP24V-36
37	Ball Bearing-608-2RS	BNCEP24V-37
38	Diaphram	BNCEP24V-38
39	Rotor	BNCEP24V-39
40	Ball Bearing-696-2RS	BNCEP24V-40
41	Stator	BNCEP24V-41
42	Switch Assembly	BNCEP24V-42
43	Side Handle	BNCEP-67
44	Switch Button	BNCEP24V-44
45	Pole Switch	BNCEP24V-45
46	Right Housing	BNCEP24V-46
47	Dust Protection-Right	BNCEP24V-47
48	Six Flower Shaped Pan Head Tapping ScrewsT10	BNCEP24V-48
49	Left Housing	BNCEP24V-49
50	Dust Protection-Left	BNCEP24V-50
51	Battery	BNCE-24VLI
52	Charger	BNCE-24VCHGR



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# BNCE-20-24V The Cutting Edge Saw™



Model No.	BNCE-20-24V Cutting Edge Saw™
Power Supply	24V Lithium-Ion Battery (2 Supplied)
No-Load Blade Speed	2,000 RPM
Max Cutting Capacity	3/4" (20mm)
Cutting Blade	RB-BNCE-KNH (TCT Type Blade) Proprietary (Two Supplied)
Blade Diameter	110 mm (4.38")

**Safe** - Minimal sparks or burrs

**Versatile** - Flush cutting capability up to 7/8" diameter steel rod

**Economical** - Up to 350 cuts on #5 - 60 grade rebar per blade

**Durable** - One-year warranty includes a carrying case, extra 24V Battery, Charger and two cutting blades