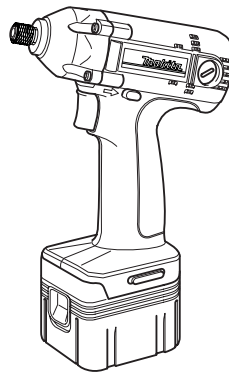




# Cordless Impact Driver

Equipped with Electric Brake  
MODEL BTD120



002806

## I N S T R U C T I O N M A N U A L

**⚠ WARNING:**

For your personal safety, READ and UNDERSTAND before using.  
SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE.

---

# SPECIFICATIONS

Model		BTD120
Capacities	Machine screw	4 mm - 8 mm (5/32" - 5/16")
	Standard bolt	5 mm - 12 mm (3/16" - 1/2")
	High tensile bolt	5 mm - 10 mm (3/16" - 3/8")
No load speed (RPM)		0 - 2,300/min.
Impacts per minute		0 - 3,000
Overall length		168 mm (6 - 5/8")
Net weight		1.5 kg (3.3 lbs)
Rated voltage		D.C. 12 V
Standard battery cartridges		BH1220,BH1233

- Manufacturer reserves the right to change specifications without notice.
- Specifications may differ from country to country.

---

# GENERAL SAFETY RULES

USA003-2

## (FOR ALL BATTERY OPERATED TOOLS)

### **WARNING:**

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

---

# SAVE THESE INSTRUCTIONS

## Work Area

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control.

---

## Electrical Safety

- 4. A battery operated tool with integral batteries or a separate battery pack must be recharged only with the specified charger for the battery.** A charger that may be suitable for one type of battery may create a risk of fire when used with another battery.
- 5. Use battery operated tool only with specifically designated battery pack.** Use of any other batteries may create a risk of fire.

## Personal Safety

- 6. Stay alert, watch what you are doing, and use common sense when operating a power tool. Do not use tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- 7. Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
- 8. Avoid accidental starting. Be sure switch is in the locked or off position before inserting battery pack.** Carrying tools with your finger on the switch or inserting the battery pack into a tool with the switch on invites accidents.
- 9. Remove adjusting keys or wrenches before turning the tool on.** A wrench or a key that is left attached to a rotating part of the tool may result in personal injury.
- 10. Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enable better control of the tool in unexpected situations.
- 11. Use safety equipment. Always wear eye protection.** Dust mask, non-skid safety shoes, hard hat, or hearing protection must be used for appropriate conditions.

## Tool Use and Care

- 12. Use clamps or other practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
- 13. Do not force tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed.
- 14. Do not use tool if switch does not turn it on or off.** A tool that cannot be controlled with the switch is dangerous and must be repaired.
- 15. Disconnect battery pack from tool or place the switch in the locked or off position before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally.
- 16. Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
- 17. 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 sparks, burns, or a fire.
- 18. Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with sharp cutting edge are less likely to bind and are easier to control.
- 19. Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
- 20. Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may create a risk of injury when used on another tool.

---

## SERVICE

**21. Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel may result in a risk of injury.

**22. When servicing a tool, use only identical replacement parts. Follow instructions in the Maintenance section of this manual.** Use of unauthorized parts or failure to follow Maintenance instructions may create a risk of shock or injury.

---

## SPECIFIC SAFETY RULES

USB024-2

**DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to cordless impact driver safety rules. If you use this tool unsafely or incorrectly, you can suffer serious personal injury.**

- 1. Hold tool by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring.** Contact with a “live” wire will also make exposed metal parts of the tool “live” and shock the operator.
  - 2. Be aware that this tool is always in an operating condition, because it does not**
  - 3. Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
  - 4. Hold the tool firmly.**
  - 5. Wear ear protectors.**
- have to be plugged into an electrical outlet.

---

## SAVE THESE INSTRUCTIONS

**⚠ WARNING:**  
**MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.**

---


# SYMBOLS


USD302-1

The followings show the symbols used for tool.

V ..... volts

.../min..... revolutions or reciprocation per minute

 ..... direct current

 ..... number of blow

$n_0$  ..... no load speed

---

# IMPORTANT SAFETY INSTRUCTIONS FOR BATTERY CARTRIDGE

ENC005-1

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

---

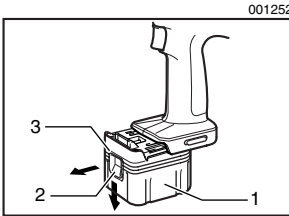
# SAVE THESE INSTRUCTIONS

## Tips for maintaining maximum battery life

1. Charge the battery cartridge before completely discharged.

- 
- Always stop tool operation and charge the battery cartridge when you notice less tool power.**
- 2. Never recharge a fully charged battery cartridge.  
Overcharging shortens the battery service life.**
  - 3. Charge the battery cartridge with room temperature at 10°C - 40°C (50°F - 104°F).  
Let a hot battery cartridge cool down before charging it.**
  - 4. Charge the Nickel Metal Hydride battery cartridge when you do not use it for more than six months.**

# FUNCTIONAL DESCRIPTION



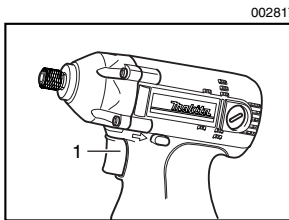
1. Battery cartridge
2. Button
3. Red part

## ⚠ CAUTION:

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

## Installing or removing battery cartridge

- Always switch off the tool before insertion or removal of the battery cartridge.
- To remove the battery cartridge, withdraw it from the tool while sliding the button on the side of the cartridge.
- To insert the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Always insert it all the way until it locks in place with a little click. If you can see the red part on the upper side of the button, it is not locked completely. Insert it fully until the red part cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.
- Do not use force when inserting the battery cartridge. If the cartridge does not slide in easily, it is not being inserted correctly.



1. Switch trigger

## Switch action

### ⚠ CAUTION:

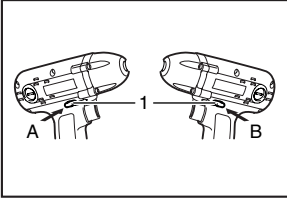
- Before inserting the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

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

## Electric brake

This tool is equipped with an electric brake. If the tool consistently fails to quickly stop after switch trigger release, have tool serviced at a Makita service center.

001257



1. Reversing switch lever

## Reversing switch action

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

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

### ⚠ CAUTION:

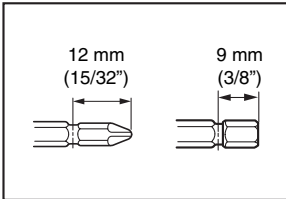
- Always check the direction of rotation before operation.
- Use the reversing switch only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.
- When not operating the tool, always set the reversing switch lever to the neutral position.

## ASSEMBLY

### ⚠ CAUTION:

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

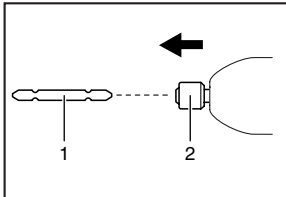
001266



## Installing or removing driver bit or socket bit

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

001267



1. Bit
2. Sleeve

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

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

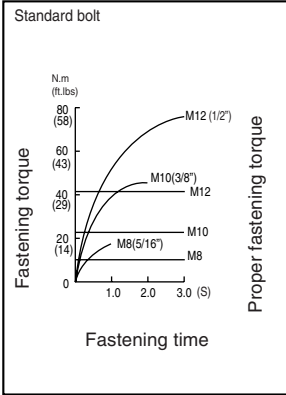
### NOTE:

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

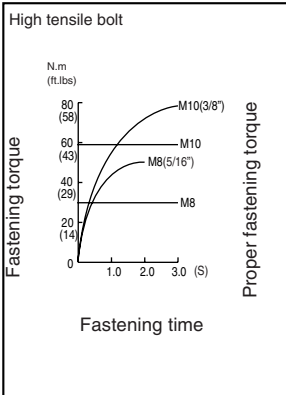


# OPERATION

002848



002849



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

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

**NOTE:**

- Use the proper bit for the head of the screw/bolt that you wish to use.
- When fastening screw M8 or smaller, carefully adjust pressure on the switch trigger so that the screw is not damaged.
- Hold the tool pointed straight at the screw.
- If you tighten the screw for a time longer than shown in the figures, the screw or the point of the driver bit may be overstressed, stripped, damaged, etc. Before starting your job, always perform a test operation to determine the proper fastening time for your screw.
- If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

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

1. When the battery cartridge is discharged almost completely, voltage will drop and the fastening torque will be reduced.
2. Driver bit or socket bit  
Failure to use the correct size driver bit or socket bit will cause a reduction in the fastening torque.
3. Bolt
  - Even though the torque coefficient and the class of bolt are the same, the proper fastening torque will differ according to the diameter of bolt.
  - Even though the diameters of bolts are the same, the proper fastening torque will differ according to the torque coefficient, the class of bolt and the bolt length.

4. The manner of holding the tool or the material of driving position to be fastened will affect the torque.
5. Operating the tool at low speed will cause a reduction in the fastening torque.

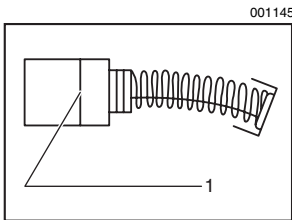
## MAINTENANCE

### ⚠ CAUTION:

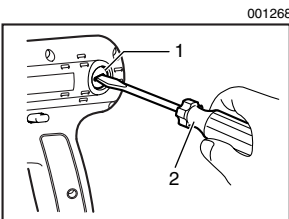
- Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

### Replacing carbon brushes

Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.



1. Limit mark

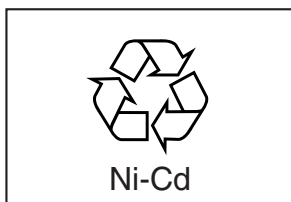


1. Brush holder cap  
2. Screwdriver

Use a screwdriver to remove the brush holder caps. Take out the worn carbon brushes, insert the new ones and secure the brush holder caps.

After replacing brushes, insert the battery cartridge into the tool and break in brushes by running tool with no load for about 1 minute. Then check the tool while running and electric brake operation when releasing the switch trigger. If electric brake is not working well, ask your local Makita service center for repair.

To maintain product SAFETY and RELIABILITY, repairs, any other maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.



## Recycling the Battery

The only way to dispose of a Makita battery is to recycle it. The law prohibits any other method of disposal.

To recycle the battery:

1. Remove the battery from the tool.
2. a) Take the battery to your nearest Makita Factory Service Center  
or  
b) Take the battery to your nearest Makita Authorized Service Center or Distributor that has been designated as a Makita battery recycling location.

*Call your nearest Makita Service Center or Distributor to determine the location that provides Makita battery recycling. See your local Yellow Pages under "Tools-Electric".*

## ACCESSORIES

### **⚠ CAUTION:**

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

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

- Screw bits
- Protector
- Shoulder strap
- Automatic refreshing adapter
- Plastic carrying case
- Various type of Makita genuine battery cartridge



# Memo

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

Cut



**Makita Canada Inc.  
1950 Forbes Street,  
Whitby, Ontario  
L1N 7B7**

Stamp  
Timbre

Fold

# Your answers to the following questions are appreciated.

## 1. This product was purchased from?

- Hardware/lumber Store     Industrial Supply  
 Tool Distributor         Other (            )

## 3. How did you first learn of Makita Power Tools?

- Magazine/Newspaper     Catalog  
 From dealer               Other (            )  
 Store display

## 2. Use of the product is intended for?

- Construction trade     Home maintenance  
 Industrial maintenance     Other (            )

## 4. Most favored points are?

- Design                       Makita Brand  
 Features                     Power  
 Size                          Other (            )  
 Price

## 5. Any comments?

---



---



---



---



---

## Certificate of Warranty Mail to Makita

Date Purchased Month: <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/> Day: <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/> Year 20: <input style="width: 30px; height: 20px;" type="text"/> <input style="width: 30px; height: 20px;" type="text"/>	Model No. <input style="width: 95%; height: 25px;" type="text"/> <hr/> Serial No. <input style="width: 95%; height: 25px;" type="text"/>
Initial Last Name: <input style="width: 100%; height: 25px;" type="text"/>	
Male <input type="checkbox"/> Female <input type="checkbox"/> Single <input type="checkbox"/> Married <input type="checkbox"/>	
Street Address: <input style="width: 100%; height: 25px;" type="text"/>	
City: <input style="width: 95%; height: 25px;" type="text"/>	Province: <input style="width: 95%; height: 25px;" type="text"/>
Postal Code: <input style="width: 95%; height: 25px;" type="text"/>	
AGE: <input type="checkbox"/> Under 19 <input type="checkbox"/> 20-29 <input type="checkbox"/> 30-39 <input type="checkbox"/> 40-49 <input type="checkbox"/> Over 50	

Occupation:

Dealer's Name & Address:

---

# Factory Service Centres

<b>Head Office:</b>	1950 Forbes St., Whitby, Ontario, L1N 7B7 (905) 571 - 2200	1-800-263-3734
<b>Regional Office:</b>	11771 Hammersmith Way, Richmond B.C. V7A 5H6 (604) 272 - 3104	1-800-663-0909
<b>Regional Office:</b> (Montreal)	6389 boul. Couture, St. Leonard, Quebec H1P 3J5 (514) 323 - 1223	1-800-361-7049
<b>Dartmouth:</b>	202 Brownlow Avenue Dartmouth, N.S., B3B 1T5 (902) 468 - 7064	1-888-625-4821
<b>Ville St. Laurent:</b> (Montreal)	1140 Rue Bégin, Ville St. Laurent, Quebec H4R 1X1 (514) 745 - 5025	1-888-745-5025
<b>Les Saules:</b> (Quebec)	1200 St. Jean Baptiste, Unit 106, Les Saules, Quebec, G2E 5E8 (418) 871 - 5720	1-800-663-5757
<b>Nepean:</b> (Ottawa)	210 Colonnade Road, Unit 11, Nepean, Ontario, K2E 7M1 (613) 224 - 5022	1-888-560-2214
<b>Whitby:</b>	1950 Forbes St., Whitby, Ontario, L1N 7B7 (905) 571 - 2200	1-800-263-3734
<b>London:</b>	317 Adelaide St. S., Unit 117, London, Ontario, N5Z 3L3 (519) 686 - 3115	1-800-571-0899
<b>Mississauga:</b>	6350 Tomken Rd., Unit 8, Mississauga, Ontario, L5T 1Y3 (905) 670 - 7255	1-888-221-9811
<b>Calgary:</b>	#8-6115 Fourth St. S.E., Calgary Alberta, T2H 2H9 (403) 243 - 3995	1-800-267-0445
<b>Edmonton:</b>	11614-149 Street, Edmonton, Alberta, T5M 3R3 (780) 455 - 6644	1-888-455-6644
<b>Richmond:</b>	11771 Hammersmith Way, Richmond, B.C., V7A 5H6 (604) 272 - 3104	1-800-663-0909
<b>Winnipeg:</b>	1670 St. James Street, Winnipeg, Manitoba, R3H 0L3 (204) 694 - 0402	1-800-550-5073
<b>Saskatoon:</b>	206A-2750 Faithful Avenue Saskatoon, Saskatchewan, S7K 6M6 (306) 931 - 0111	1-888-931-0111

For the authorized service centre nearest you please refer to the local yellow pages directory under "tools" or contact our customer service department (Tel) 1-800-263-3734

## When you need service...

- Explain the problem in a letter
- Enclose the letter with the tool
- Package carefully and send prepaid to the nearest Makita factory or authorized service centre

## CUSTOMER RECORD

DATE  
 PURCHASED: \_\_\_\_\_  
 DEALER'S NAME  
 & ADDRESS: \_\_\_\_\_  
 \_\_\_\_\_  
 MODEL NO.: \_\_\_\_\_  
 SERIAL NO.: \_\_\_\_\_

# MAKITA LIMITED ONE YEAR WARRANTY

## Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centres. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply:

- where normal maintenance is required,
- repairs have been made or attempted by others,
- the tool has been abused, misused or improperly maintained,
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

"The Makita Warranty is the only and the entire written warranty given by Makita for the Makita tools. No dealer or his agent or employee is authorized to extend or enlarge upon this warranty by any verbal or written statement or advertisement."

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE YEAR TERM OF THIS WARRANTY.

"This Warranty gives you specific rights. The provisions contained in this warranty are not intended to limit, modify, take away from, disclaim or exclude any warranties set forth in any provincial legislation. To the extent required by law, the provisions in any provincial or federal legislation with respect to warranties take precedence over the provisions in this warranty."

**Makita Corporation**  
3-11-8, Sumiyoshi-cho,  
Anjo, Aichi 446-8502 Japan