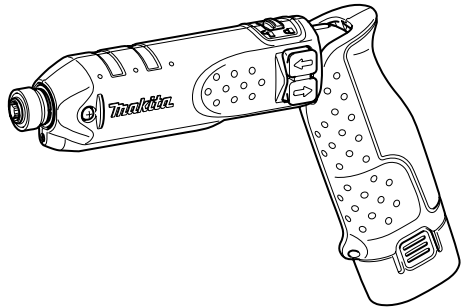


INSTRUCTION MANUAL



Cordless Impact Driver

TD020D



007506

⚠WARNING:

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

ENGLISH SPECIFICATIONS

Model		TD020D
Capacities	Machine screw	3 mm - 8 mm
	Standard bolt	3 mm - 8 mm
	High tensile bolt	3 mm - 6 mm
	Coarse thread	22 mm - 45 mm
No load speed (min ⁻¹)		2,300
Impacts per minute		3,000
Overall length	Straight type	276 mm
	Pistol type	213 mm
Net weight		0.53 kg
Rated voltage		D.C. 7.2 V

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Specifications and battery cartridge may differ from country to country.
- Weight, with battery cartridge, according to EPTA-Procedure 01/2003

END004-3

Vibration emission (a_h) : 6.5 m/s²
Uncertainty (K) : 1.5 m/s²

ENH101-12

Symbols

The following show the symbols used for the equipment. Be sure that you understand their meaning before use.



• Read instruction manual.



• Only for EU countries

Do not dispose of electric equipment together with household waste material! In observance of European Directive 2002/96/EC on waste electric and electronic equipment and its implementation in accordance with national law, electric equipment that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.

ENE033-1

Intended use

The tool is intended for screw driving in wood, metal and plastic.

ENG102-2

For European countries only

Noise

The typical A-weighted noise level determined according to EN60745:

Sound pressure level (L_{pA}) : 82 dB(A)

Sound power level (L_{WA}) : 93 dB(A)

Uncertainty (K) : 3 dB(A)

Wear ear protection

ENG205-1

Vibration

The vibration total value (tri-axial vector sum) determined according to EN60745-2-2:

Work mode : impact tightening of fasteners of the maximum capacity of the tool

EC Declaration of Conformity

We Makita Corporation as the responsible manufacturer declare that the following Makita machine(s):

Designation of Machine:
Cordless Impact Driver

Model No./ Type: TD020D
are of series production and

Conforms to the following European Directives:

98/37/EC until 28th December 2009 and then with
2006/42/EC from 29th December 2009

And are manufactured in accordance with the following standards or standardised documents:

EN60745

The technical documentation is kept by our authorised representative in Europe who is:

Makita International Europe Ltd,
Michigan, Drive, Tongwell,
Milton Keynes, MK15 8JD, England

30th January 2009

000230

Tomoyasu Kato
Director

Makita Corporation
3-11-8, Sumiyoshi-cho,
Anjo, Aichi, JAPAN

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.

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

1. **Keep work area clean and well lit.** Cluttered or 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 children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

Electrical safety

4. **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.
5. **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.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **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.
8. **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.
9. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of an GFCI reduces the risk of electric shock.

Personal safety

10. **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.
 11. **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.
 12. **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.
 13. **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.
 14. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
 15. **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.
 16. **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
17. **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.
 18. **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.
 19. **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.
 20. **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.

21. **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.
22. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
23. **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.

Battery tool use and care

24. **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.
25. **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
26. **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 a fire.
27. **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

Service

28. **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.
29. **Follow instruction for lubricating and changing accessories.**
30. **Keep handles dry, clean and free from oil and grease.**

GEB012-3

SPECIFIC SAFETY RULES

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

1. **Hold power tool by insulated gripping surfaces, when performing an operation where the fastener may contact hidden wiring or its own cord.** Fasteners contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
2. **Always be sure you have a firm footing. Be sure no one is below when using the tool in high locations.**
3. **Hold the tool firmly.**
4. **Wear ear protectors.**

SAVE THESE INSTRUCTIONS.

⚠WARNING:

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

ENC007-4

IMPORTANT SAFETY INSTRUCTIONS

FOR BATTERY CARTRIDGE

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.**

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
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.
9. Do not use dropped or struck battery.

SAVE THESE INSTRUCTIONS.

Tips for maintaining maximum battery life

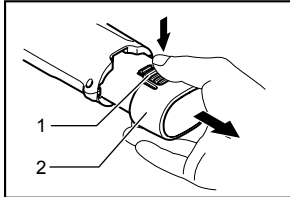
1. Charge the battery cartridge before completely discharged.
Always stop tool operation and charge the battery cartridge when you notice less tool power.
2. Never recharge a fully charged battery cartridge.
Overcharging shortens the battery service life.
3. Charge the battery cartridge with room temperature at 10 ° C - 40 ° C (50 ° F - 104 ° F). Let a hot battery cartridge cool down before charging it.

FUNCTIONAL DESCRIPTION

⚠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

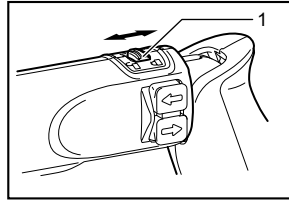


007507

1. Button
2. 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 pressing the buttons on both sides 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 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.


Lock button



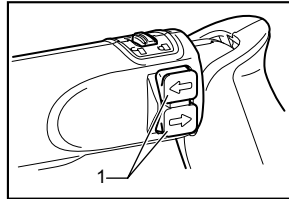
007508

1. Lock button

When the lock button is in the locked position , the switch cannot be actuated.

When the lock button is in the unlocked position , the switch can be actuated.

Switch action






007511


1. Switch

⚠CAUTION:

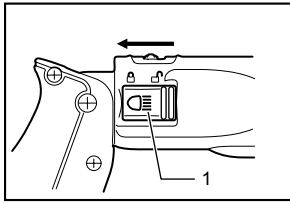
- Before inserting the battery cartridge into the tool, always check to see that the switch actuates properly and returns to the "OFF" position when released.

To start the tool, first move the lock button to the released position  to release the switch. And then simply push the switch on the  side for the clockwise rotation and the  side for the counterclockwise rotation. Release the switch to stop.

⚠CAUTION:

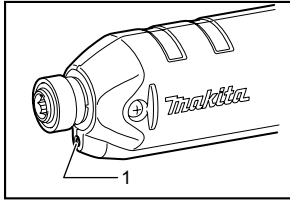
- Always check the direction of rotation before operation.
- Change the direction only after the tool comes to a complete stop. Changing the direction of rotation before the tool stops may damage the tool.
- When not operating the tool, always place the lock button in the locked position .

Lighting up the front lamp



007512

1. Lamp switch



007513

1. Lamp

⚠ CAUTION:

- Do not look in the light or see the source of light directly.

To put on the light, first slide the lamp switch to the position and then push the mark on the lamp switch. Release it to stop.

NOTE:

- When the lamp switch is in the locked position, lamp switch cannot be actuated.

⚠ CAUTION:

- Always slide the lamp switch to the locked position when not operating the tool.

NOTE:

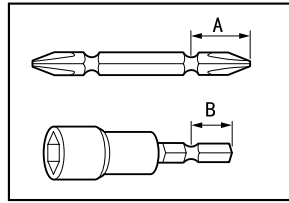
- Use a dry cloth to wipe the dirt off the lens of lamp. Be careful not to scratch the lens of lamp, or it may lower the illumination.

ASSEMBLY

⚠ CAUTION:

- Always be sure that the lock button is in the locked position mark and the battery cartridge is removed before carrying out any work on the tool.

Installing or removing driver bit or socket bit



004521

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

For European and North & South American countries, Australia and New Zealand

A=12mm	Use only these type of bit. Follow the procedure (1). (Note) Bit-piece is not necessary.
B=9mm	

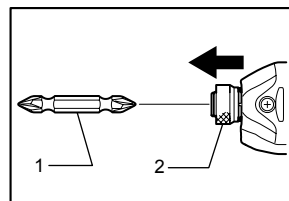
006348

For other countries

A=17mm B=14mm	To install these types of bits, follow the procedure (1). (Note) Makita bits are these types.
A=12mm B=9mm	To install these types of bits, follow the procedure (2). (Note) Bit-piece is necessary for installing the bit.

006349

- 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.

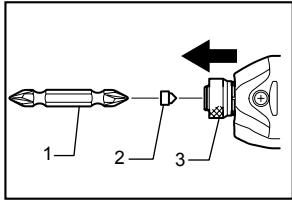


007509

1. Bit
2. Sleeve

- To install the bit, pull the sleeve in the direction of the arrow and insert the bit-piece and bit into the sleeve as far as it will go. The bit-piece should be inserted into the sleeve with its pointed end facing

in. Then release the sleeve to secure the bit.



1. Bit
2. Bit-piece
3. Sleeve

007510

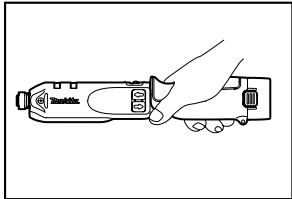
To remove the bit, pull the sleeve in the direction of the arrow and pull the bit out firmly.

NOTE:

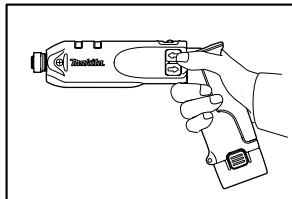
- If the bit is not inserted deep enough into the sleeve, the sleeve will not return to its original position and the bit will not be secured. In this case, try re-inserting the bit according to the instructions above.

OPERATION

The tool can be used in two ways; a straight type and a pistol type which is selectable according to the conditions of workplace and screwdriving.



007514



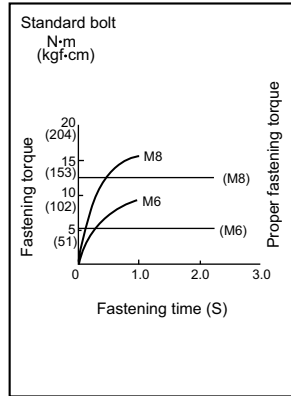
007515

⚠ CAUTION:

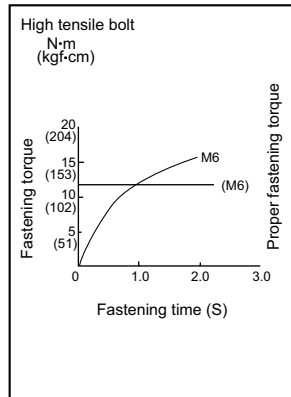
- When bending the tool to use in the pistol type or straightening to use in the straight type, do not hold the bendable part of the tool. Failure to do so may cause your hand and fingers to be pinched and injured by this part.

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.

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.



007517



007518

NOTE:

- Use the proper bit for the head of the screw/bolt that you wish to use.
- 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.

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.

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

ACCESSORIES

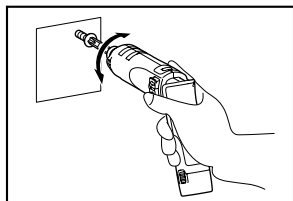
⚠CAUTION:

- 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.


- Phillips bit
- Socket bit
- Soft carrying case
- Bit piece
- Makita genuine battery and charger

Using the tool as a hand screwdriver



007516

Switch off the tool.

Move the lock button to the locked position 

Turn the tool.

NOTE:

- Use the tool with a fastening torque less than 12.5 Nm.
- This use is convenient for checking the screwdriving.
- Do not use the tool for work requiring excessive force, such as tightening bolt M10 or bolts greater than M10 or removing rusted screws.

MAINTENANCE

⚠CAUTION:

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

Makita Corporation Anjo, Aichi, Japan