



Makita

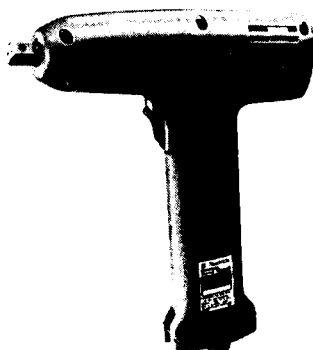
Cordless Impact Wrench

12.7 mm (1/2") MODEL 6900D

12.7 mm (1/2") MODEL 6900DW

With Fast Charger

INSTRUCTION MANUAL



SPECIFICATIONS

• Model 6900D					
Capacities				Impacts per minute	
Bolt size		Square drive	At high speed	At low speed	
Standard bolt	High tensile bolt				
M8 — M14 (5/16" — 9/16")	M8 — M10 (5/16" — 3/8")	12.7 mm (1/2")	2,000	1,500	
No load speed (RPM)		Tightening torque		Overall length	Net weight
High	Low	At high speed	At low speed		
1,500	1,300	1,000 kg.cm (72 ft.lbs) Note 1	400 kg.cm (29 ft.lbs) Note 2	226 mm (8-7/8")	1.7 kg (3.7 lbs)
• Battery Cartridge 9000			• Model DC9100 Fast Charger		
Voltage		Charging time	Input		Output
9.6 V		1 Hr.	A.C. only 50 Hz — 60 Hz		D.C. 9.6 V

Note 1. After tightening high tensile bolt M12 for 8 seconds while using a fully charged battery cartridge.

Note 2. After tightening high tensile bolt M10 for 8 seconds while using a fully charged battery cartridge.

• Manufacturer reserves the right to change specifications without notice.

• Note: Specifications may differ from country to country.

IMPORTANT SAFETY INSTRUCTIONS

(For All Tools)

WARNING: WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND PERSONAL INJURY, INCLUDING THE FOLLOWING:

READ ALL INSTRUCTIONS.

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Don't use power tools in damp or wet locations. Keep work area well lit. Don't expose power tools to rain. Don't use tool in presence of flammable liquids or gases.
3. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Don't let visitors contact tool or extension cord.
4. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place — out of reach of children.
5. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
6. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended.
7. **DRESS PROPERLY.** Don't wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
8. **USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty.
9. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
10. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
11. **DON'T OVERREACH.** Keep proper footing and balance at all times.
12. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.
13. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.

14. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
15. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is OFF when plugging in.
16. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
17. **STAY ALERT.** Watch what you are doing, use common sense. Don't operate tool when you are tired.
18. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Don't use tool if switch does not turn it on and off.
19. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
20. **REPLACEMENT PARTS.** When servicing, use only identical replacement parts.

VOLTAGE WARNING: Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in **SERIOUS INJURY** to the user — as well as damage to the tool. If in doubt, **DO NOT PLUG IN THE TOOL.** Using a power source with voltage less than the nameplate rating is harmful to the motor.

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** — This manual contains important safety and operating instructions for battery charger.
2. Before using battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
3. **CAUTION** — To reduce risk of injury, charge only MAKITA Battery 9000. Other types of batteries may burst causing personal injury and damage.
4. Do not expose charger to rain or snow.
5. Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
6. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.
7. Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
8. An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:
 - a. That pins on plug of extension cord are the same number, size, and shape as those of plug on charger;
 - b. That extension cord is properly wired and in good electrical condition; and
 - c. That wire size is at least as large as the one specified in the table below.

TABLE 1
RECOMMENDED MINIMUM AWG SIZE FOR
EXTENSION CORDS FOR BATTERY CHARGERS

Length of Cord (Feet)	25	50	100	150
AWG Size of Cord	18	18	18	16

9. Do not operate charger with damaged cord or plug — replace them immediately.
10. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman.
11. Do not disassemble charger or battery cartridge; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
12. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

ADDITIONAL SAFETY RULES FOR CHARGER & BATTERY CARTRIDGE

1. Do not charge Battery Cartridge when temperature is BELOW 10°C (50°F) or ABOVE 40°C (104°F).
2. Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.
3. Do not allow anything to cover or clog the charger vents.
4. 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.
5. Do not store the tool and Battery Cartridge in locations where the temperature may reach or exceed 50°C (122°F).
6. 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.

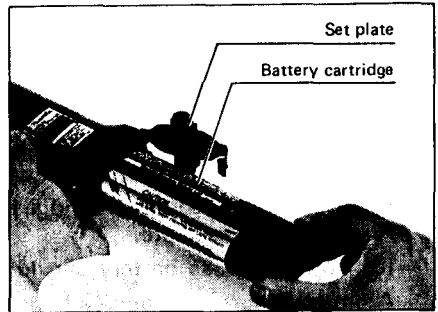
ADDITIONAL SAFETY RULES

1. Be aware that this tool is always in an operating condition, because it does not have to be plugged into an electrical outlet.
2. Wear ear protectors.
3. Check the socket carefully for wear, cracks or damage before installation.
4. Hold the tool firmly.
5. Always be sure you have a firm footing.
Be sure no one is below when using the tool in high locations.
6. The proper tightening torque may differ depending upon the kind or size of the bolt.
Check the torque with a torque wrench.

SAVE THESE INSTRUCTIONS.

Installing or removing battery cartridge

- Always switch off the tool before insertion or removal of the battery cartridge.
- To remove the battery cartridge, pull out the set plate on the tool and grasp both sides of the cartridge while withdrawing it from the barrel.
- To insert the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Snap the set plate back into place. Be sure to close the set plate fully before using the tool.



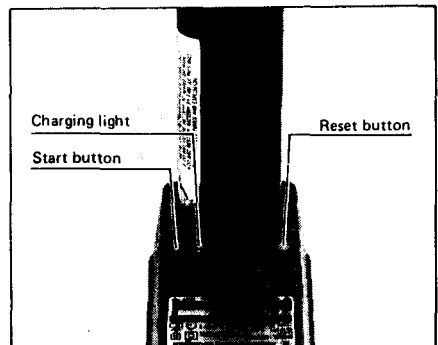
- Do not use force when inserting the battery cartridge.
If the cartridge does not slide in easily, it is not being inserted correctly.

Charging

Plug the fast charger into your power source. Insert the battery cartridge so that the plus and minus terminals on the battery cartridge are on the same sides as their respective markings on the fast charger. Insert the cartridge fully into the port so that it rests on the charger port floor.

Press the start button (red). The charging light will come on and charging will begin. If the charging light does not come on, press the reset button (yellow) first, then the start button (red). If the charging light goes out within 10 seconds even after pressing the reset button and start button a couple of times, the battery cartridge is dead. (CAUTION: Wait for more than 5 seconds after the charging light goes out to press the reset button again.) Replace it with a new one. When the charging light goes out after about one hour, you may remove the fully charged battery cartridge.

After charging, unplug the charger from the power source.



CAUTION:

- Your new battery cartridge is not charged. You will need to charge it before use.
- Do not keep the button pressed in with tape, etc. or the circuit will not function properly. Also, a malfunction of the charger may result possibly causing overheating, etc.
- If you try to charge a cartridge from a just-operated tool, sometimes the charging light will not come on. If this occurs, let the cartridge cool off for a while. Then re-insert it and try to charge it once more.

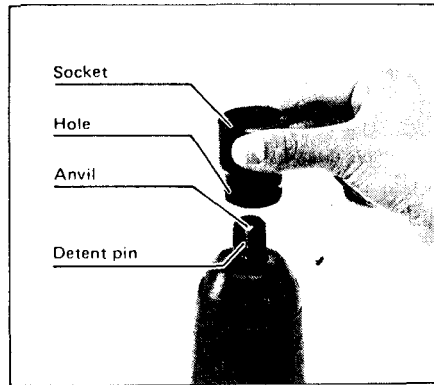
- When you charge a new battery cartridge or a battery cartridge which has not been used for a long period, it may not accept a full charge. This is a normal condition and does not indicate a problem. You can recharge the battery cartridge fully after discharging it completely a couple of times.
- If you wish to charge two battery cartridges, allow 15 minutes between chargings on the fast charger.

Selecting correct socket

Use a correct size socket for bolts and nuts. A wrong size socket will result in inaccurate and inconsistent tightening torque. Refer to accessories section for socket size.

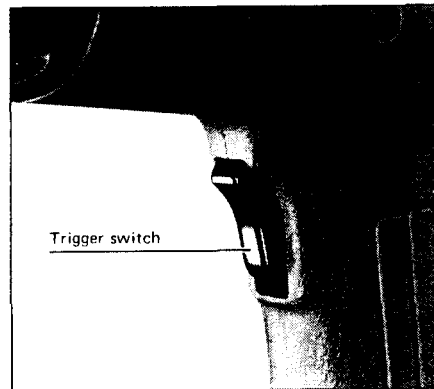
Fit the socket over the anvil of the tool and push firmly until the spring-loaded detent pin on the anvil indexes the hole in the socket.

To remove the socket, simply pull it firmly.



Switch action

To start the tool, simply pull the trigger. Release the trigger to stop.



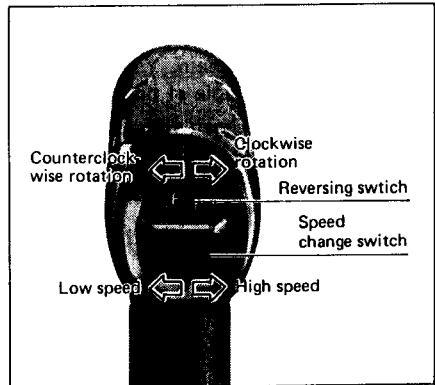
CAUTION:

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

Reversing switch and speed change switch action

Slide the reversing switch to the right for clockwise rotation or to the left for counterclockwise.

Slide the speed change switch to the right for high speed (high tightening torque) or to the left for low speed (low tightening torque). Select the speed suitable for your bolt by referring to the figures listed under "Operation".



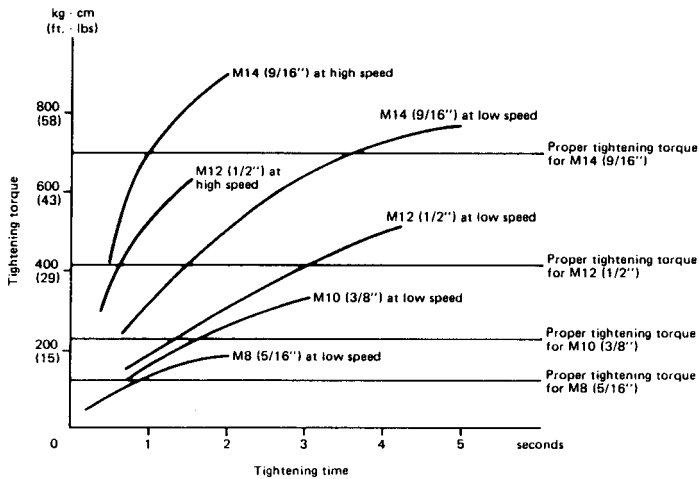
CAUTION:

- Always check the direction of rotation before operation.
- Use the reversing switch only when the tool comes to a complete stop. Changing the direction of rotation before the tool stops may ruin the tool.

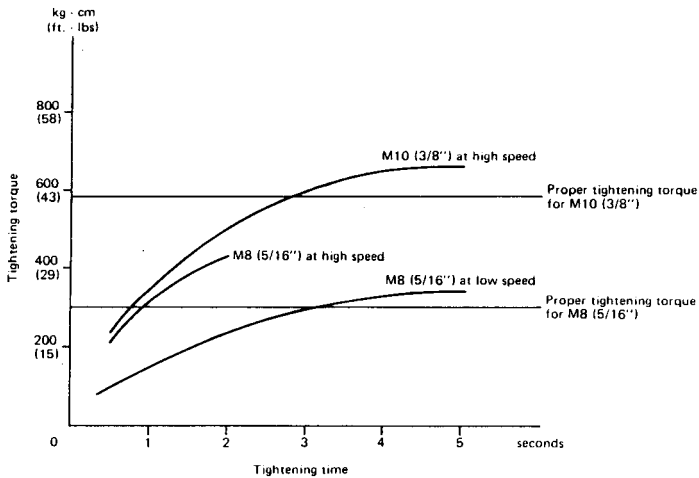
Operation

The proper tightening torque may differ depending upon the kind or size of the bolt. The relation between tightening torque and tightening time is shown in the figures below.

Standard bolt



High tensile bolt



Hold the tool firmly and place the socket over the bolt or nut. Turn the tool on and tighten for the proper tightening time.

NOTE :

- Hold the tool pointed straight at the bolt or nut without applying excessive pressure on the tool.
- Excessive tightening torque may damage the bolt or nut. Before starting your job, always perform a test operation to know the proper tightening speed and proper tightening time for your bolt or nut.

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

1. When the battery cartridge is discharged almost completely, voltage will drop and the tightening torque will be reduced.
2. Socket
 - Failure to use the correct size socket will cause a reduction in the tightening torque.
 - A worn socket (wear on the hex end or square end) will cause a reduction in the tightening torque.
3. Bolt
 - Even though the torque coefficient and the class of bolt are the same, the proper tightening torque will differ according to the diameter of bolt.
 - Even though the diameters of bolts are the same, the proper tightening torque will differ according to the torque coefficient, the class of bolt and the bolt length.
4. The use of the universal joint or the extension bar somewhat reduces the tightening force of the impact wrench. Compensate by tightening for a longer period of time.
5. The manner of holding the tool will affect the torque.

Tightening performance

The following reference table indicates the approximate tightening capacity from a single 1-hour battery charge. It may differ under some conditions.

Speed	Type of bolt	Tightening time	Number of tightenings
High	High tensile bolt M10 (3/8")	3 seconds	90
Low	Standard bolt M8 (5/16")	1 second	450

CAUTION:

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.

MAINTENANCE

CAUTION:

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

To maintain product **SAFETY** and **RELIABILITY**, repairs, maintenance or adjustment should be performed by Makita Authorized or Factory 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. The accessories or attachments should be used only in the proper and intended manner.

• Socket (With pin and O ring)



Part No.	Size	Square drive	Across hex flats (mm)	Applicable bolt			Pin for socket	O ring for socket
				Metric screws (ISO)		Inch screws		
				Standard bolt	High tensile bolt			
133223-6	12 – 75	12.7 mm (1/2")	12			5/16"	256095-3	213370-0
134519-8	13 – 36		13	M8	M8	—		
134520-3	13 – 52		14	—	—	—		
134517-2	14 – 36.5		14	—	—	—		
134518-0	14 – 52		17	M10	M10	3/8"	256036-9	213405-7
133208-2	17 – 39		17	M10	M10	3/8"		
133212-1	17 – 52		19	M12	—	7/16"		
133213-9	19 – 40		19	M12	—	7/16"		
133214-7	19 – 52		21	—	—	1/2"		
134315-4	19 – 80		21	—	—	1/2"		
133209-0	21 – 41		22	M14	M12	—		
133215-5	21 – 52		22	M14	M12	—		
134316-2	21 – 80		23	—	—	9/16"		
133216-3	22 – 42		23	—	—	9/16"		
133217-1	22 – 52		23	—	—	9/16"		
133218-9	23 – 43		23	—	—	9/16"		
133219-7	23 – 52		23	—	—	9/16"		

• Extension bar

Part No. 133211-3

[With pin (Part No. 256036-9) and O ring (Part No. 213405-7)]

Recommended for work in tight place where the conventional socket will not reach.



• Universal joint

Part No. 133210-5

[With pin (Part No. 256036-9) and O ring (Part No. 213405-7)]

This accessory is useful in tight spaces where the tool cannot be held in line with the axis of the bolt or nut.



- **Phillips bit**
(Use with bit adapter)



Part No.	Size	L (mm)
784208-1	No. 3	45 (1-3/4")
784209-9		65 (2-5/8")
784210-4		110 (4-3/8")

- **Fast charger**
Model DC9100



- **Battery cartridge 9000**
Part No. 632007-4



- **Battery holster**
Holster holds extra battery.
Part No. 823033-3C



- **Bit adapter**
Part No. 134530-0
[With pin (Part No. 256095-3) and
O ring (Part No. 213370-0)]
For driving machine screws.



- **12 V Fast charger**
Model DC9012

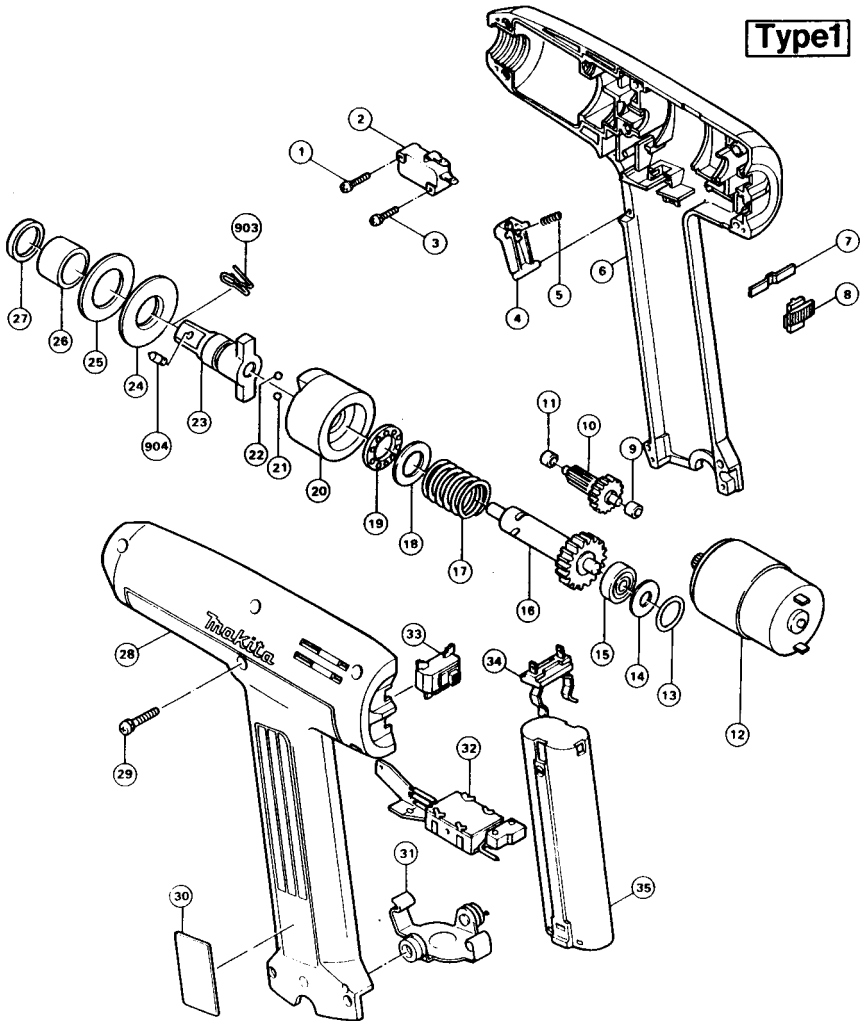


- **Plastic carrying case**
Part No. 824310-9





12.7 mm (1/2") CORDLESS IMPACT WRENCH Model 6900D



Note: The switch and other part configurations may differ from country to country.

ITEM NO.	NO. USED	DESCRIPTION	ITEM NO.	NO. USED	DESCRIPTION
<u>MACHINE</u>			<u>MACHINE</u>		
1	1	Pan Head Screw M3x14 (With Washer)	20	1	Hammer
2	1	Switch	21	1	Steel Ball 5.6
3	1	Pan Head Screw M3x14 (With Washer)	22	1	Steel Ball 5.6
4	1	Trigger	23	1	Anvil
5	1	Compression Spring 2	24	1	Flat Washer 18
6	1	Housing Set (With Item 28)	25	1	Rubber Washer 24
7	1	Leaf Spring	26	1	Sleeve 18
8	1	Lever	27	1	Oil Seal 18
9	1	Plane Bearing 4	28	1	Housing Set (With Item 6)
10	1	Gear Complete 11-43	29	8	Pan Head Screw M4x22 (With Washer)
11	1	Plane Bearing 4	30	1	Name Plate
12	1	DC Motor 9.6 V	31	1	Set Plate
13	1	O Ring 17	32	1	Control Circuit
14	1	Flat Washer 16	33	1	Switch
15	1	Ball Bearing 627LB	34	1	Battery Holder
16	1	Spindle	35	1	Battery 9000
17	1	Compression Spring 19	903	1	Clip
18	1	Washer 1528	904	1	Pin 4
19	1	Thrust Ball Bearing 1627			

Note: The switch and other part specifications may differ from country to country.

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 Centers. 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:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- 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.

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 legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.



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