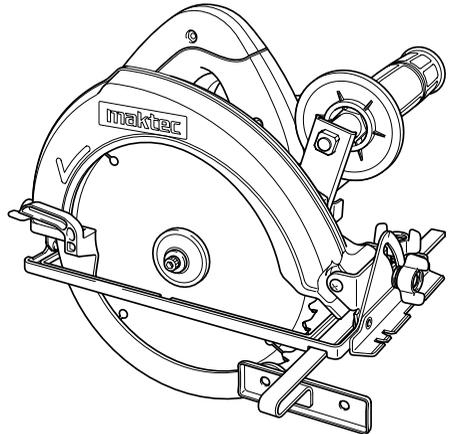


# Circular Saw

MODEL MT581



005337



DOUBLE  
INSULATION

## INSTRUCTION MANUAL

**⚠ WARNING:**

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

# SPECIFICATIONS

Model		MT581
Blade diameter		185 mm
Max. cutting depth	at 90°	64 mm
	at 45°	42 mm
No load speed (min <sup>-1</sup> )		4,700
Overall length		299 mm
Net weight		3.4 kg
Safety class		□ /II

- Due to our continuing programme of research and development, the specifications herein are subject to change without notice.
- Note: Specifications may differ from country to country.

## SYMBOLS

END201-1

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



.....Read instruction manual.



.....DOUBLE INSULATION

## Intended use

The tool is intended for performing lengthways and crossways straight cuts and mitre cuts with angles in wood while in firm contact with the workpiece.

## Power supply

The tool should be connected only to a power supply of the same voltage as indicated on the nameplate, and can only be operated on single-phase AC supply. They are double-insulated in accordance with European Standard and can, therefore, also be used from sockets without earth wire.

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# GENERAL SAFETY RULES

ENA100-1

## WARNING:

**Read all instructions.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term “power tool” in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

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## SAVE THESE INSTRUCTIONS

### Work area

1. **Keep work area clean and well lit.** Cluttered 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 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.

### Personal safety

9. **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.
10. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

11. **Avoid accidental starting. Ensure the switch is in the off position before plugging in.** Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
12. **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.
13. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
14. **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.
15. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust related hazards.

### Power tool use and care

16. **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.
17. **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.
18. **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.
19. **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.
20. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

21. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
22. **Use the power tool, accessories and tool bits etc. in accordance with these instructions and in the manner intended for the particular type of power tool, 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.

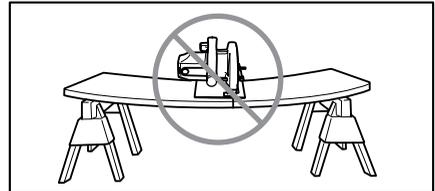
**Service**

23. **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.

## ADDITIONAL SAFETY RULES FOR TOOL

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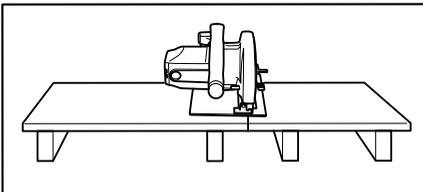
1. **Wear hearing protection.**
2. **Keep Guards In Place and In Working Order.** Never wedge or tie lower guard open. Check operation of lower guard before each use. Don't use if lower guard does not close briskly over saw blade.  
**CAUTION:** If saw is dropped, lower guard may be bent, restricting full return.
3. **Do not use blades which are deformed or cracked.**
4. **Do not use blades made of high speed steel.**
5. **Do not stop the blades by lateral pressure on the saw blade.**
6. **Keep Blades Clean and Sharp.** Sharp blades minimize stalling and kickback.
7. **DANGER: Keep Hands Away From Cutting Area.** Keep hands away from blades. Don't reach underneath work while blade is rotating. Don't attempt to remove cut material when blade is moving.  
**CAUTION:** Blades coast after turn off.
8. **Support Large Panels (Fig. 1 & 2).** Large panels must be supported as shown in Fig. 1 to minimize the risk of blade pinching and kickback.  
When cutting operation requires the resting of the saw on the workpiece, the saw shall be rested on the larger portion and the smaller piece cut off.



**Fig. 2**

Do not support board or panel away from the cut.

9. **Use Rip Fence.** Always use a fence or straight edge guide when ripping.
10. **Guard Against Kickback. (Fig. 1 & 3)** Kickback occurs when the saw stalls rapidly and is driven back towards the operator. Release switch immediately if blade binds or saw stalls. Keep blades sharp. Support large panels as shown in Fig. 1. Use fence or straight edge guide when ripping. Don't force tool. Stay alert-exercise control. Don't remove saw from work during a cut while the blade is moving. NEVER place your hand or fingers behind the saw. If kickback occurs, the saw could easily jump backwards over your hand, possibly causing severe injury.



**Fig. 1**

To avoid kickback, do support board or panel near the cut.



**Fig. 3**

11. **Lower guard should be retracted manually only for special cuts such as "Compound Cuts".** Raise lower guard by Retracting Lever. As soon as blade enters the material, lower guard must

be released. For all other sawing, the lower guard should operate automatically.

12. **Adjustments.**  
Before cutting be sure depth and bevel adjustments are tight.
13. **Use Only Correct Blades In Mounting.**  
Don't use blades with incorrect size holes. Never use defective or incorrect blade washers or bolts.
14. **Avoid Cutting Nails.**  
Inspect for and remove all nails from lumber before cutting.
15. **When operating the saw, keep the cord away from the cutting area and position it so that it will not be caught on the workpiece during the cutting operation. Operate with proper hand support, proper workpiece support, and supply cord routing away from the work area.**

**WARNING:**

It is important to support the workpiece properly and to hold the saw firmly to prevent loss of control which could cause personal injury. Fig. 4 illustrates typical hand support of the saw.

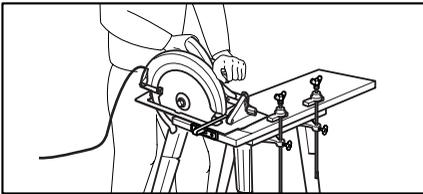


Fig. 4

A typical illustration of proper hand support, workpiece support, and supply cord routing.

16. **Place the wider portion of the saw base on that part of the workpiece which is solidly supported, not on the section that will fall off when the cut is made.**  
As example, Fig. 5 illustrates the RIGHT way to cut off the end of a board, and Fig. 6 the WRONG way. If the workpiece is short or small, clamp it

down. **DON'T TRY TO HOLD SHORT PIECES BY HAND!** (Fig. 6)

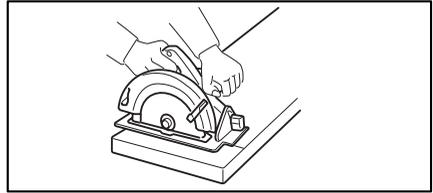


Fig. 5



Fig. 6

17. **Never attempt to saw with the circular saw held upside down in a vise. This is extremely dangerous and can lead to serious accidents. (Fig. 7)**

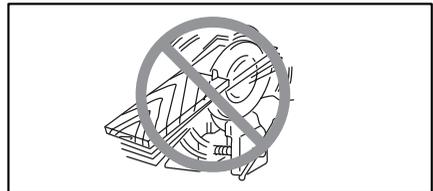


Fig. 7

18. **Before setting the tool down after completing a cut, be sure that the lower (telescoping) guard has closed and the blade has come to a complete stop.**
19. **Using manufacturer data**
  - Ensure that the diameter, thickness and other characteristics of the saw blade are suitable for the tool.
  - Ensure that the saw blade is suitable for the spindle speed of the tool.
20. **Do not use any abrasive wheel.**

**SAVE THESE INSTRUCTION**

## FUNCTIONAL DESCRIPTION

### ⚠ CAUTION:

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

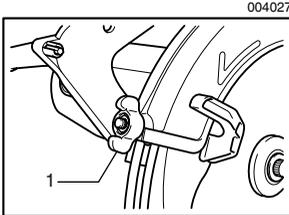
### Adjusting depth of cut

### ⚠ CAUTION:

- After adjusting the depth of cut, always tighten the clamping screw securely.

Loosen the clamping screw on the depth guide and move the base up or down. At the desired depth of cut, secure the base by tightening the clamping screw.

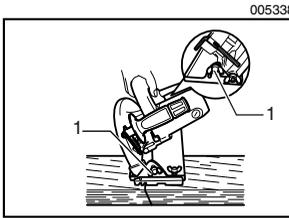
For cleaner, safer cuts, set cut depth so that no more than one blade tooth projects below workpiece. Using proper cut depth helps to reduce potential for dangerous KICKBACKS which can cause personal injury.



1. Clamping screw

### Bevel cutting

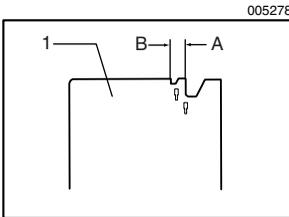
Loosen two clamping screws on the bevel scale plates on the front and back of the base. Set for the desired angle ( $0^\circ - 45^\circ$ ) by tilting accordingly, then tighten the clamping screws securely.



1. Clamping screw

### Sighting

For straight cuts, align the A position on the front of the base with your cutting line. For  $45^\circ$  bevel cuts, align the B position with it.



1. Base plate

### Switch action

### ⚠ CAUTION:

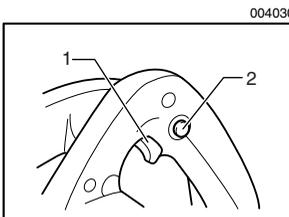
- Before plugging in the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

#### For tool with lock button

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

For continuous operation, pull the switch trigger and then push in the lock button.

To stop the tool from the locked position, pull the switch trigger fully, then release it.



1. Switch trigger  
2. Lock button

## ASSEMBLY

### For tool without lock button

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

**⚠ CAUTION:**

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

### Removing or installing saw blade

**⚠ CAUTION:**

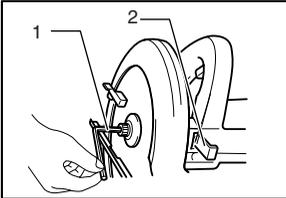
- Be sure the blade is installed with teeth pointing up at the front of the tool.
- Use only the Makita wrench to install or remove the blade.

To remove the blade, press the shaft lock so that the blade cannot revolve and use the wrench to loosen the hex bolt counterclockwise. Then remove the hex bolt, outer flange and blade.

To install the blade, follow the removal procedure in reverse. **BE SURE TO TIGHTEN THE HEX BOLT CLOCKWISE SECURELY.**

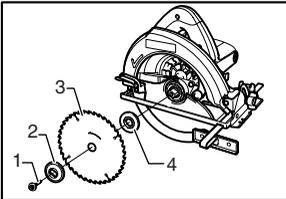
When changing blade, make sure to also clean upper and lower blade guards of accumulated sawdust. Such efforts do not, however, replace the need to check lower guard operation before each use.

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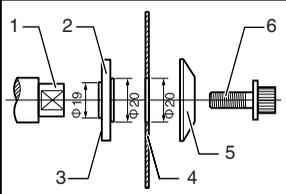
1. Hex wrench
2. Shaft lock

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1. Hex bolt
2. Outer flange
3. Saw blade
4. Inner flange

004033

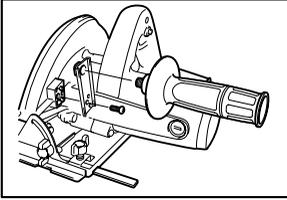


1. Mounting shaft
2. Inner flange
3. 19mm marking
4. Saw blade
5. Outer flange
6. Hex bolt

**⚠ CAUTION:**

- The inner flange has a 20 mm diameter on one side and a 19 mm diameter on the other. The side with 19 mm diameter is marked by "19". Use the correct side for the hole diameter of the blade you intend to use. Mounting the blade on the wrong side can result in the dangerous vibration.

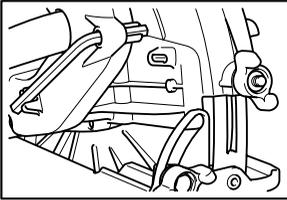
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### Side grip (auxiliary handle) (Accessory)

Align the hole in the grip holder with the hole in the blade case (upper blade guard) and secure the grip holder onto the blade case using the screw as shown in the figure. Securely screw the side grip clockwise into the hole in the grip holder.

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### Hex wrench storage

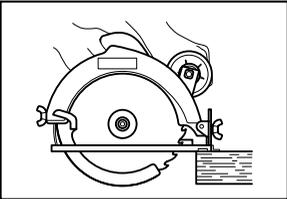
When not in use, store the hex wrench as shown in the figure to keep it from being lost.

## OPERATION

### ⚠ CAUTION:

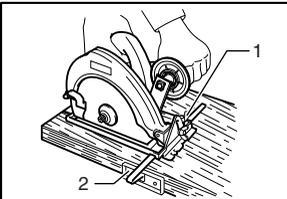
- Be sure to move the tool forward in a straight line gently. Forcing or twisting the tool will result in overheating the motor and dangerous kickback, possibly causing severe injury.

005339



Hold the tool firmly. Set the base plate on the workpiece to be cut without the blade making any contact. Then turn the tool on and wait until the blade attains full speed. Now simply move the tool forward over the workpiece surface, keeping it flat and advancing slowly until the sawing is completed. To get clear cuts, keep your sawing line straight and your speed of advancing uniform.

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### Rip fence (Guide rule)

The handy rip fence allows you to do extra-accurate straight cuts. Simply slide the rip fence up snugly against the side of the workpiece and secure it in position with the screw on the front of the base. It also makes repeated cuts of uniform width possible.

1. Screw
2. Rip fence

# MAINTENANCE

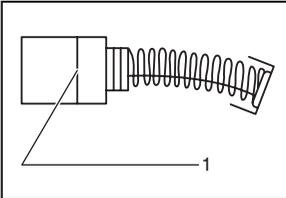
**⚠ CAUTION:**

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

## Replacing carbon brushes

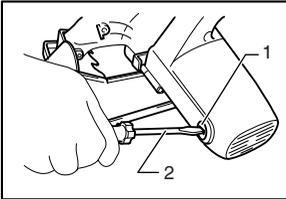
Remove and check the carbon brushes regularly. Replace when they wear down to the limit mark. Keep the carbon brushes clean and free to slip in the holders. Both carbon brushes should be replaced at the same time. Use only identical carbon brushes.

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1. Limit mark

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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.

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.





Makita Corporation