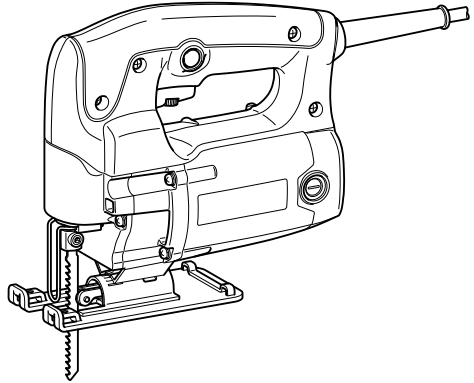




Jig Saw

M420



009634



DOUBLE INSULATION

⚠WARNING:

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

ENGLISH

SPECIFICATIONS

Model		M420
Length of stroke		26 mm
Max. cutting capacities	Wood	55 mm
	Steel	6 mm
Strokes per minute (min ⁻¹)		0 - 3,100
Overall length		219 mm
Net weight		2.6 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.

END201-4

GEA005-2

Symbols

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



- Read instruction manual.



- DOUBLE INSULATION



- 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.

ENE019-1

Intended use

The tool is intended for the sawing of wood, plastic and metal materials. As a result of the extensive accessory and saw blade program, the tool can be used for many purposes and is very well suited for curved or circular cuts.

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.

ENF002-1

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.

Service

24. **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.
25. **Follow instruction for lubricating and changing accessories.**
26. **Keep handles dry, clean and free from oil and grease.**

GEB016-2

SPECIFIC SAFETY RULES

DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to jig saw 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 cutting accessory may contact hidden wiring or its own cord.** Cutting accessory contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

2. **Use clamps or another practical way to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body leaves it unstable and may lead to loss of control.
3. **Always use safety glasses or goggles. Ordinary eye or sun glasses are NOT safety glasses.**
4. **Avoid cutting nails. Inspect workpiece for any nails and remove them before operation.**
5. **Do not cut oversize workpiece.**
6. **Check for the proper clearance beyond the workpiece before cutting so that the blade will not strike the floor, workbench, etc.**
7. **Hold the tool firmly.**
8. **Make sure the blade is not contacting the workpiece before the switch is turned on.**
9. **Keep hands away from moving parts.**
10. **Do not leave the tool running. Operate the tool only when hand-held.**
11. **Always switch off and wait for the blade to come to a complete stop before removing the blade from the workpiece.**
12. **Do not touch the blade or the workpiece immediately after operation; they may be extremely hot and could burn your skin.**
13. **Do not operate the tool at no-load unnecessarily.**
14. **Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.**
15. **Always use the correct dust mask/respirator for the material and application you are working with.**

SAVE THESE INSTRUCTIONS.

⚠WARNING:

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

FUNCTIONAL DESCRIPTION

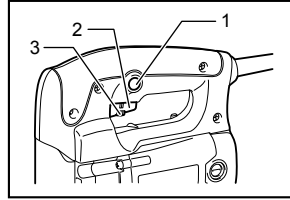
⚠CAUTION:

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

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.



009635

1. Lock button
2. Switch trigger
3. Speed control screw

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.

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.

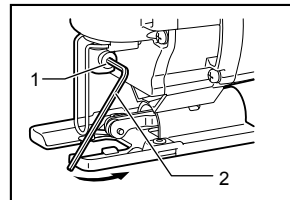
A speed control screw is provided so that maximum tool speed can be limited (variable). Turn the speed control screw clockwise for higher speed, and counterclockwise for lower speed.

ASSEMBLY

⚠CAUTION:

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

Installing or removing saw blade



009636

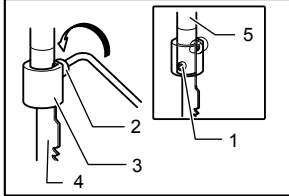
1. Hex socket head bolt
2. Hex wrench

⚠CAUTION:

- Always clean out all chips or foreign matter adhering to the blade and/or blade holder. Failure to do so may cause insufficient tightening of the blade, resulting in serious personal injury.
- Do not touch the blade or the workpiece immediately after operation as they may be extremely hot and could cause burn injury.
- Always secure the blade firmly. Insufficient tightening of the blade may cause blade breakage or serious personal injury.

First, use the hex wrench to remove the bolt that secures the blade clamp to the blade holder shaft.

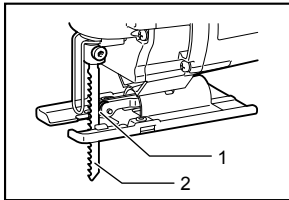
With the blade teeth facing forward, place the shank of the blade over the flat side of the blade holder shaft. Then place the blade clamp over the other side of the blade shank. Secure this assembly together with the bolt. Make sure that the bolt passes through the larger hole in the blade shank.



009657

1. Pin
2. Hex socket head bolt
3. Blade clamp
4. Saw blade
5. Slider

Adjusting roller



009637

1. Roller
2. Saw blade

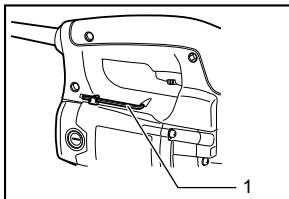
Loosen the bolt on the back of the base with the hex wrench. Move the retainer so that the roller contacts the blade lightly. Then tighten the bolt to secure the base and the retainer.

However, when using the blade that does not have a straight back, slide the retainer back so that the roller will not contact the blade.

NOTE:

- Occasionally lubricate the roller.

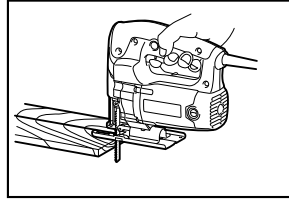
Hex wrench storage



009658

When not in use, the hex wrench can be conveniently stored.

OPERATION



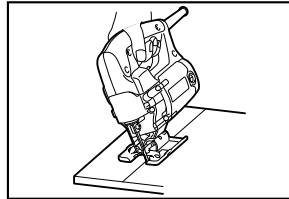
009639

⚠CAUTION:

- Hold the tool firmly with one hand on the main handle when using the tool. If necessary, the front part of the tool may be supported by the other hand.
- Always hold the base flush with the workpiece. Failure to do so may cause blade breakage, resulting in serious injury.
- Advance the tool very slowly when cutting curves or scrolling. Forcing the tool may cause a slanted cutting surface and blade breakage.

Turn the tool on without the blade making any contact and wait until the blade attains full speed. Then rest the base flat on the workpiece and gently move the tool forward along the previously marked cutting line.

Bevel cutting



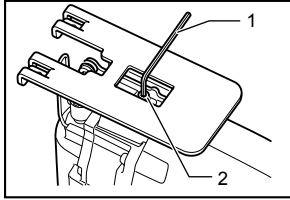
009640

⚠CAUTION:

- Always be sure that the tool is switched off and unplugged before tilting the base.

With the base tilted, you can make bevel cuts at any angle between 0° and 45° (left or right).

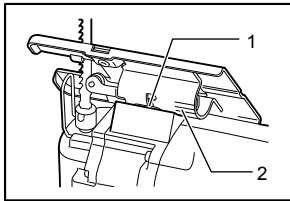
Loosen the bolt on the back of the base with the hex wrench and slide the base backwards.



1. Hex wrench
2. Hex bolt

009641

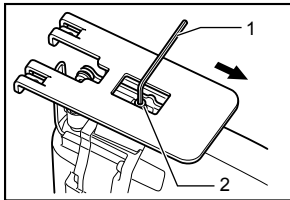
Tilt the base until the desired bevel angle is obtained. The edge of the motor housing indicates the bevel angle by graduations. Then check the contact between the back edge of the blade and the roller. Now tighten the bolt to secure the base.



1. Edge of housing
2. Graduation

009642

Front flush cuts



1. Hex wrench
2. Hex bolt

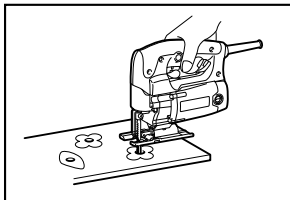
009643

Loosen the bolt on the back of the base with the hex wrench and slide the base all the way back. Then tighten the bolt to secure the base.

Cutouts

Cutouts can be made with either of two methods A or B.

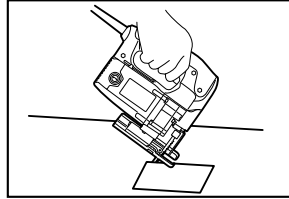
A) Boring a starting hole



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For internal cutouts without a lead-in cut from an edge, pre-drill a starting hole 12 mm or more in diameter. Insert the blade into this hole to start your cut.

B) Plunge cutting

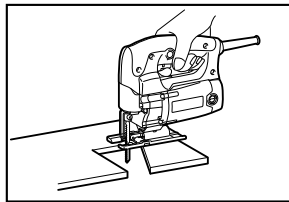


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You need not bore a starting hole or make a lead-in cut if you carefully do as follows.

- (1) Tilt the tool up on the front edge of the base with the blade point positioned just above the workpiece surface.
- (2) Apply pressure to the tool so that the front edge of the base will not move when you switch on the tool and gently lower the back end of the tool slowly.
- (3) As the blade pierces the workpiece, slowly lower the base of the tool down onto the workpiece surface.
- (4) Complete the cut in the normal manner.

Finishing edges



009646

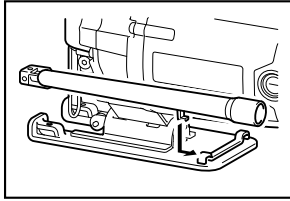
To trim edges or make dimensional adjustments, run the blade lightly along the cut edges.

For smoother cutting of plywood or other workpiece with easily splintered surfaces, transparent tape may be used over your cutting line.

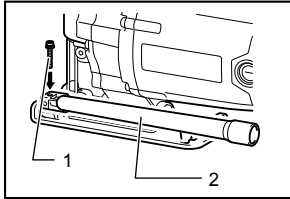
Metal cutting

Always use a suitable coolant (cutting oil) when cutting metal. Failure to do so will cause significant blade wear. The underside of the workpiece can be greased instead of using a coolant.

Dust extraction



009654



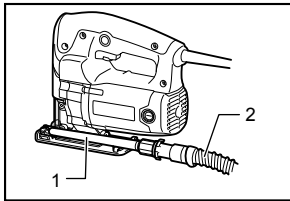
1. Screw
2. Dust nozzle

009655

The dust nozzle (accessory) is recommended to perform clean cutting operations.

To attach the dust nozzle on the tool, insert the hook of dust nozzle into the hole in the base.

Then connect a Makita vacuum cleaner to the dust nozzle.



1. Dust nozzle
2. Hose of vacuum cleaner

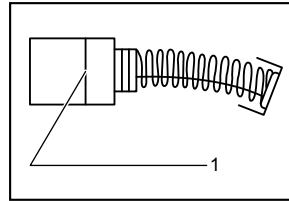
009656

MAINTENANCE

⚠ CAUTION:

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

Replacing carbon brushes

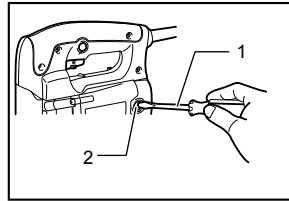


001145

1. Limit mark

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.

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.



009653

1. Screwdriver
2. Brush holder cap

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.

- Hex wrench 4
- Dust nozzle

Makita Corporation