**INSTRUCTION MANUAL** 



# Recipro Saw JR3060T JR3070CT





DOUBLE INSULATION Read before use.

# ECIFICATIONS

Model		JR3060T	JR3070CT
Length of stroke		32 1	mm
Max. cutting capacities	Pipe	130	mm
	Wood	255	mm
Strokes per minute (min <sup>-1</sup> )		0 - 2,800	
Overall length		485 mm	
Net weight		4.4 kg	4.6 kg
Safety class			///

Due to our continuing program of research and development, the specifications herein are subject to change without notice.

- Specifications may differ from country to country.
- Weight according to EPTA-Procedure 01/2014

## **Symbols**

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

	Read instruction manual.
	DOUBLE INSULATION
X	Only for EU countries Do not dispose of electric equipment together with household waste material! In observance of the European Directive, 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.

#### Intended use

The tool is intended for sawing wood, plastic, metal and building materials with a strong impact. It is suitable for straight and curved cutting.

#### 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 and can, therefore, also be used from sockets without earth wire.

#### Noise

The typical A-weighted noise level determined according to EN62841-2-11:

#### Model JR3060T

Sound pressure level  $(L_{DA})$ : 87 dB (A) Sound power level (L<sub>WA</sub>) : 98 dB (A) Uncertainty (K): 3 dB (A) Model JR3070CT Sound pressure level  $(L_{pA})$  : 88 dB (A) Sound power level (L<sub>WA</sub>) : 99 dB (A)

Uncertainty (K): 3 dB (A)

NOTE: The declared noise emission value(s) has been measured in accordance with a standard test method and may be used for comparing one tool with another

NOTE: The declared noise emission value(s) may also be used in a preliminary assessment of exposure.

## AWARNING: Wear ear protection.

AWARNING: The noise emission during actual use of the power tool can differ from the declared value(s) depending on the ways in which the tool is used especially what kind of workpiece is processed.

AWARNING: Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

#### Vibration

The vibration total value (tri-axial vector sum) determined according to EN62841-2-11:

> Model JR3060T Work mode : cutting boards Vibration emission (a<sub>h.B</sub>) : 15.5 m/s<sup>2</sup> Uncertainty (K) : 2.0 m/s<sup>2</sup> Work mode : cutting wooden beams Vibration emission (a<sub>h,WB</sub>) : 21.0 m/s<sup>2</sup> Uncertainty (K): 1.5 m/s Model JR3070CT Work mode : cutting boards Vibration emission (a<sub>h,B</sub>) : 9.5 m/s<sup>2</sup> Uncertainty (K): 1.5 m/s<sup>2</sup> Work mode : cutting wooden beams Vibration emission (a<sub>h,WB</sub>): 10.5 m/s<sup>2</sup> Uncertainty (K): 1.5 m/s<sup>2</sup>

NOTE: The declared vibration total value(s) has been measured in accordance with a standard test method and may be used for comparing one tool with another.

**NOTE:** The declared vibration total value(s) may also be used in a preliminary assessment of exposure.

**A**WARNING: The vibration emission during actual use of the power tool can differ from the declared value(s) depending on the ways in which the tool is used especially what kind of workpiece is processed.

AWARNING: Be sure to identify safety measures to protect the operator that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger time).

## EC Declaration of Conformity

#### For European countries only

The EC declaration of conformity is included as Annex A to this instruction manual.

## General power tool safety warnings

**WARNING:** Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below 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.

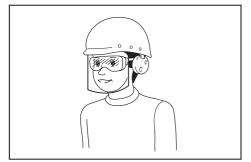
#### **Electrical Safety**

- 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.
- 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.
- 3. Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- 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.

- 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.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.
- 7. Use of power supply via an RCD with a rated residual current of 30 mA or less is always recommended.
- Power tools can produce electromagnetic fields (EMF) that are not harmful to the user. However, users of pacemakers and other similar medical devices should contact the maker of their device and/ or doctor for advice before operating this power tool.
- 9. Do not touch the power plug with wet hands.
- 10. If the cord is damaged, have it replaced by the manufacturer or his agent in order to avoid a safety hazard.

#### **Personal Safety**

- 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.
- Use personal protective equipment. Always wear eye protection. Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.
- 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.
- 4. 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.
- 5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- 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.
- Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.
- Always wear protective goggles to protect your eyes from injury when using power tools. The goggles must comply with ANSI Z87.1 in the USA, EN 166 in Europe, or AS/NZS 1336 in Australia/New Zealand. In Australia/New Zealand, it is legally required to wear a face shield to protect your face, too.



It is an employer's responsibility to enforce the use of appropriate safety protective equipments by the tool operators and by other persons in the immediate working area.

#### Power tool use and care

- 1. 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.
- 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.
- Disconnect the plug from the power source and/or remove the battery pack, if detachable, 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.
- 4. 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.
- Maintain power tools and accessories. 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.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- 7. 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.
- Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.
- 9. When using the tool, do not wear cloth work gloves which may be entangled. The entanglement of cloth work gloves in the moving parts may result in personal injury.

Service

- 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.
- 2. Follow instruction for lubricating and changing accessories.

## Recipro saw safety warnings

- Hold the 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.
- Use clamps or another practical way to secure and support the workpiece to a stable platform. Holding the workpiece 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. Always use the correct dust mask/respirator for the material and application you are working with.
- 15. Some material contains chemicals which may be toxic. Take caution to prevent dust inhalation and skin contact. Follow material supplier safety data.

## SAVE THESE INSTRUCTIONS.

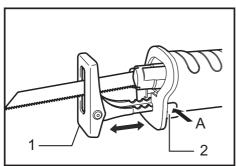
AWARNING: DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

# FUNCTIONAL DESCRIPTION

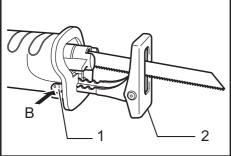
## ACAUTION:

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

## Adjusting the shoe



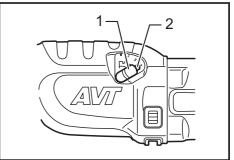
Shoe 2. Shoe button



▶ 1. Shoe button 2. Shoe

When the blade loses its cutting efficiency in one place along its cutting edge, reposition the shoe to utilize a sharp, unused portion of its cutting edge. This will help to lengthen the life of the blade. To reposition the shoe, push the shoe button in the "A" direction with a click and reposition as shown in the figure which allows you to make five-way adjustment. To secure the shoe, push the shoe button in the "B" direction with a click.

## Selecting the cutting action



## 1. Lever 2. Stopper

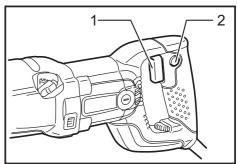
This tool can be operated with an orbital or a straight line cutting action. The orbital cutting action thrusts the blade forward on the cutting stroke and greatly increases cutting speed. To change the cutting action, press the stopper and turn the lever to the desired cutting action position. Then, release the stopper to lock the lever. Refer to the table to select the appropriate cutting action.

#### NOTE:

 Orbital action means that the saw blade moves up and down, and back and forth at the same time. This increases the efficiency of cutting.

Position	Cutting action	Applications
0	Straight line cutting action	For cutting mild steel, stainless steel and plastics. For clean cuts in wood and plywood.
I	Small orbit cutting action	For cutting mild steel, aluminum and hard wood.
Ш	Medium orbit cutting action	For cutting wood and plywood. For fast cutting in aluminum and mild steel.
ш	Large orbit cutting action	For fast cutting in wood and plywood.

## Switch action



Switch trigger 2. Lock button

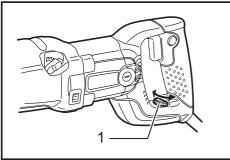
## ACAUTION:

 Before plugging in 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.

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.

## Speed adjusting dial (For JR3070CT)



1. Adjusting dial

The strokes per minute can be adjusted just by turning the adjusting dial. This can be done even while the tool is running. The dial is marked 1 (lowest speed) to 6 (full speed). Turn the adjusting dial without positive stops between 1 and 6 according to your work. Refer to the table to select the proper speed for the workpiece to be cut. However, the appropriate speed may differ with the type or thickness of the workpiece. In general, higher speeds will allow you to cut workpieces faster but the service life of the blade will be reduced.

Number on adjusting dial	Strokes per minute
6	2,800
5	2,500
4	1,850
3	1,400
2	1,000
1	950

Workpiece to be cut	Number on adjusting dial
Wood	6
Autoclaved lightweight concrete	5 - 6
Mild steel	3 - 4
Aluminum	3 - 5
Plastics	1 - 4
Stainless steel	1 - 2

### NOTE:

- If the tool is operated continuously at low speeds for a long period of time, the operation life of the motor will be reduced.
- The speed adjusting dial can be turned only as far as 6 and back to 1. Do not force it past 6 or 1, or the speed adjusting function may no longer work.

The tools equipped with electronic function are easy to operate because of the following features.

## **Constant speed control**

Electronic speed control for obtaining constant speed. Possible to get fine finish, because the rotating speed is kept constant even under load condition.

## Soft start feature

Safety and soft start because of suppressed starting shock.

# ASSEMBLY

## ACAUTION:

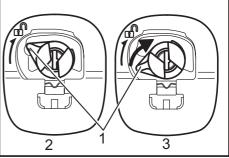
 Always be sure that the tool is switched off and unplugged before carrying out any work on the tool.

## Installing or removing the saw blade

## ACAUTION:

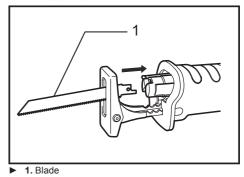
 Always clean out all chips or foreign matter adhering to the blade, blade clamp and/or slider.
Failure to do so may cause insufficient tightening of the blade, resulting in a serious injury.

To install the saw blade, always make sure that the blade clamp lever is in released position of on the insulation cover before inserting the saw blade. If the blade clamp lever is in fixed position, rotate the blade clamp lever in the direction of the arrow so that it can be locked at the released position of.



1. Blade clamp sleeve 2. Released position 3. Fixed position

Insert the saw blade into the blade clamp as far as it will go. The blade clamp lever rotates and the saw blade is fixed. Make sure that the saw blade cannot be extracted even though you try to pull it out.



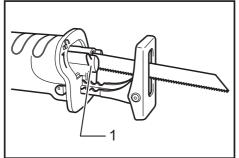
<sup>6</sup> ENGLISH

### NOTE:

 If you do not insert the saw blade deep enough, the saw blade may be ejected unexpectedly during operation. This can be extremely dangerous.

If the lever is positioned inside the tool, switch on the tool just a second to let the blade out as shown in the figure.

Switch off and unplug the tool from the mains. To remove the saw blade, rotate the blade clamp lever in the direction of the arrow fully. The saw blade is removed and the blade clamp lever is fixed at the released position.

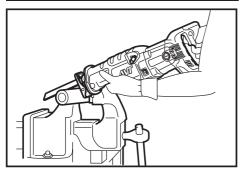


1. Blade clamp lever

#### NOTE:

- Keep hands and fingers away from the lever during the switching operation. Failure to do so may cause personal injuries.
- If you remove the saw blade without rotating the blade clamp lever fully, the lever may not be locked in the released position. In this case, rotate the blade clamp lever fully again, then make sure that the blade clamp lever locked at the released position.

# OPERATION



## ACAUTION:

- Always press the shoe firmly against the workpiece during operation. If the shoe is removed or held away from the workpiece during operation, strong vibration and/or twisting will be produced, causing the blade to snap dangerously.
- Always wear gloves to protect your hands from hot flying chips when cutting metal.
- Be sure to always wear suitable eye protection which conforms with current national standards.
- Always use a suitable coolant (cutting oil) when cutting metal. Failure to do so will cause premature blade wear.

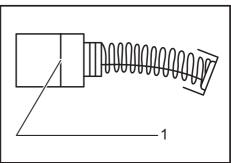
Press the shoe firmly against the workpiece. Do not allow the tool to bounce. Bring the blade into light contact with the workpiece. First, make a pilot groove using a slower speed. Then use a faster speed to continue cutting.

## MAINTENANCE

## ACAUTION:

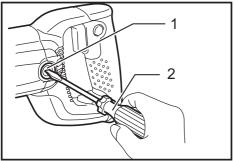
- Always be sure that the tool is switched off and unplugged before attempting to perform inspection or maintenance.
- Never use gasoline, benzine, thinner, alcohol or the like. Discoloration, deformation or cracks may result.

## **Replacing carbon brushes**



## • 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.



▶ 1. Brush holder cap 2. Screwdriver

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.

## OPTIONAL ACCESSORIES

## ACAUTION:

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.

- Recipro saw blades
- Plastic carrying case

#### NOTE:

 Some items in the list may be included in the tool package as standard accessories. They may differ from country to country.

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