

**Miter Saw** 

**LS1030N** 



## SPECIFICATIONS

Model	LS1030N
Blade diameter	
Hole (arbor) diameter	
For all countries other than European countries	
For European countries	30 mm
Max. cutting capacities (H x W) with blade 260 mm in diameter	

Miter angle	0°	$45^{\circ}$ (left and right)
0°	90.5 mm x 95 mm 69 mm x 135 mm	90.5 mm x 67 mm 69 mm x 95 mm
No load speed (min <sup>-1</sup> ) Dimensions (L x W x H) Net weight		

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

• Note: Specifications may differ from country to country.

#### 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.

































































### Symbols

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



Read instruction manual.



DOUBLE INSULATION



To avoid injury from flying debris, keep holding the saw head down, after making cuts, until the blade has come to a complete stop.



□ For your safety, remove the chips, small pieces, etc. from the table top before operation.

# ENGLISH

## Explanation of general view

				~-	
1	Bolt	18	Lock-off button	35	Projection
2	Center cover	19	Switch lever	36	Holder
3	Socket wrench	20	Lever	37	Holder assembly
4	Shaft lock	21	Kerf board	38	Rod 12
5	Loosen	22	Turn base	39	Cutting line
6	Arrow	23	Adjusting bolt	40	Groove
7	Blade case	24	Pointer	41	Vise
8	Saw blade	25	Miter scale	42	Spacer block
9	Spindle	26	Latch spring	43	Aluminum extrusion
10	Flange	27	Grip	44	Over 10 mm
11	Ring	28	Vise rod	45	Over 460 mm
12	Hex bolt	29	Screw	46	Hole
13	Tighten	30	Guide fence	47	Set plate
14	Safety cover	31	Clamp screw	48	Triangular rule
15	Dust spout	32	Vise arm	49	Limit mark
16	Dust bag	33	Support	50	Screwdriver
17	Fastener	34	Knob	51	Brush holder cap

## SAFETY INSTRUCTIONS

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 these instructions before attempting to operate this product and save these instructions.

#### For safe operation:

- 1. Keep work area clean Cluttered areas and benches invite injuries.
- Consider work area environment Don't expose power tools to rain. Don't use power tools in damp or wet locations. Keep work area well lit. Don't use power tools in presence of flammable liquids or gases.
- Guard against electric shock Prevent body contact with grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).
- Keep children away Do not let visitors contact tool or extension cord. All visitors should be kept away from work area.
- Store idle tools When not in use, tools should be stored in dry, high, or locked-up place, out of the reach of children.

#### 6. Don't force tool

It will do the job better and safer at the rate for which it was intended.

7. Use right tool

Don't force small tools or attachments to do the job of a heavy duty tool. Don't use tools for purposes not intended; for example, don't use circular saw for cutting tree limbs or logs.

#### 8. Dress properly

Do not 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.

#### 9. Use safety glasses

Also use face or dust mask if cutting operation is dusty.

#### 10. Connect dust extraction equipment

If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.

#### 11. Don't abuse cord

Never carry tool by cord or yank it to disconnect it from receptacle. Keep cord from heat, oil and sharp edges.

#### 12. 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.

#### 13. Don't overreach

Keep proper footing and balance at all times.

#### 14. 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.

#### 15. Disconnect tools

When not in use, before servicing, and when changing accessories such as blades, bits and cutters.

#### 16. Remove adjusting keys and wrenches

Form the habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

#### 17. Avoid unintentional starting

Don't carry plugged-in tool with finger on switch. Be sure switch is off when plugging in.

# 18. Outdoor use extension cords

When tool is used outdoors, use only extension cords intended for use outdoors and so marked.

#### 19. Stay alert

Watch what you are doing. Use common sense. Do not operate tool when you are tired.

#### 20. 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 and authorized service center. Do not use tool if switch does not turn it on and off.

#### 21. Warning

The use of any other accessory or attachment other than recommended in this operating instruction or the catalog may present a risk of personal injury.

# 22. Have your tool repaired by an expert

This electric appliance is in accordance with the relevant safety rules. Repairing of electric appliances may be carried out only by experts otherwise it may cause considerable danger for the user.

## ADDITIONAL SAFETY RULES

- 1. Wear eye protection.
- 2. Do not operate saw without guards in place.
- 3. Don't use the tool in the presence of flammable liquids or gases.
- 4. Check the blade carefully for cracks or damage before operation. Replace cracked or damaged blade immediately.
- 5. Use only flanges specified for this tool.
- 6. Be careful not to damage the arbor, flanges (especially the installing surface) or bolt. Damage to these parts could result in blade breakage.
- 7. Make sure that the turn base is properly secured so it will not move during operation.
- 8. For your safety, remove the chips, small pieces, etc. from the table top before operation.
- 9. Avoid cutting nails. Inspect for and remove all nails from the workpiece before operation.
- 10. Make sure the shaft lock is released before the switch is turned on.
- 11. Be sure that the blade does not contact the turn base in the lowest position.
- 12. Hold the handle firmly. Be aware that the saw moves up or down slightly during start-up and stopping.
- 13. Do not perform any operation freehand. The workpiece must be secured firmly against the turn base and guide fence with the vise during all operations. Never use your hand to secure the workpiece.
- 14. Keep hands out of path of saw blade. Avoid contact with any coasting blade. It can still cause severe injury.
- 15. Never reach around saw blade.
- 16. Make sure the blade is not contacting the workpiece before the switch is turned on.
- 17. Before using the tool on an actual workpiece, let it run for a while. Watch for vibration or wobbling that could indicate poor installation or a poorly balanced blade.
- 18. Wait until the blade attains full speed before cutting.

- 19. Stop operation immediately if you notice anything abnormal.
- 20. Do not attempt to lock the trigger in the ON position.
- 21. Shut off power and wait for saw blade to stop before servicing or adjusting tool.
- Be alert at all times, especially during repetitive, monotonous operations. Don't be lulled into a false sense of security. Blades are extremely unforgiving.
- Always use accessories recommended in this manual. Use of improper accessories such as abrasive wheels may cause an injury.
- Don't abuse cord. Never yank cord to disconnect it from the receptacle. Keep cord away from heat, oil, water and sharp edges.
- 25. Do not use the saw to cut other than aluminum, wood or similar materials.
- 26. Connect miter saws to a dust collecting device when sawing.
- 27. Select saw blades in relation to the material to be cut.
- 28. Take care when slotting.
- 29. Replace the kerf board when worn.

### SAVE THESE INSTRUCTIONS.

## **OPERATING INSTRUCTIONS**

#### Carrying tool (Fig. 1)

When carrying the tool, lower the handle fully and press the stopper pin to lock the handle in the lowered position. Secure the turn base by means of the grip. The tool can then be conveniently carried by the carrying grip.

#### WARNING:

- Be sure that the tool is unplugged first.
- Stopper pin is for carrying purposes only and not for any cutting operations.

#### Bench mounting saw (Fig. 2)

This tool should be bolted with two bolts to a level and stable surface using the bolt holes provided in the tool's base. This will help prevent tipping and possible injury.

#### Installing or removing saw blade

#### Important:

Always be sure that the tool is switched off and unplugged before installing or removing the blade.

To remove the blade, use the socket wrench to loosen the hex bolt holding the center cover by turning it more than three turns counterclockwise. Raise the safety cover and center cover. (Fig. 3)

Press the shaft lock so that the blade cannot revolve and use the socket wrench to loosen the hex bolt clockwise. Then remove the hex bolt, outer flange and blade. (Fig. 4)

To install the blade, mount it onto the spindle, making sure that the direction of the arrow on the surface of the blade matches the direction of the arrow on the blade case. (Fig. 5) CAUTION:

# • For all countries other than European countries (Fig. 6)

The silver ring 25.4 mm in outer diameter is factoryinstalled onto the spindle. The black ring 25 mm in outer diameter is included as standard equipment. Before mounting the blade onto the spindle, always be sure that the correct ring for the arbor hole of the blade you intend to use is installed onto the spindle.

#### • For European countries (Fig. 6)

The ring 30 mm in outer diameter is factory-installed onto the spindle.

Install the flange and hex bolt, and then use the socket wrench to tighten the hex bolt securely counterclockwise while pressing the shaft lock. Then tighten the hex bolt clockwise to secure the center cover. (Fig. 7)

#### CAUTION:

Use only the Makita socket wrench provided to install or remove the blade. Failure to do so may result in overtightening or insufficient tightening of the hex bolt. This could cause an injury.

#### Safety cover (Fig. 8)

When lowering the handle, the safety cover rises automatically. The cover returns to its original position when the cut is completed and the handle is raised. NEVER DEFEAT OR REMOVE THE SAFETY COVER. In the interest of your personal safety, always maintain the safety cover in good condition. Any irregular operation of the safety cover should be corrected immediately. NEVER USE THE TOOL WITH A FAULTY SAFETY COVER. If the see-through safety cover becomes dirty, or sawdust adheres to it in such a way that the blade and/or workpiece is no longer easily visible, unplug the saw and clean the cover carefully with a damp cloth. Do not use solvents or any petroleum-based cleaners on the plastic cover.

#### Dust bag (Fig. 9 & 10)

The use of the dust bag makes cutting operations clean and dust collection easy. To attach the dust bag, fit the bag's entry port over the dust spout. When the dust bag is about half full, remove the dust bag from the tool and pull the fastener out. Empty the dust bag of its contents, tapping it lightly so as to remove particles adhering to the insides which might hamper further collection.

#### Switch action

CAUTION:

- Before plugging in the tool, always check to see that the switch lever actuates properly and returns to the "OFF" position when released.
- When not using the tool, remove the lock-off button and store it in a secure place. This prevents unauthorized operation.
- Do not pull the switch lever hard without pressing in the lock-off button. This can cause breakage of the switch.

# For all countries other than European countries (Fig. 11)

To prevent the switch lever from being accidentally pulled, a lock-off button is provided. To start the tool, press in the lock-off button and pull the switch lever. Release the switch lever to stop.

#### For European countries (Fig. 12)

To prevent the switch lever from being accidentally pulled, a lock-off button is provided. To start the tool, push the lever to the left, press in the lock-off button and then pull the switch lever. Release the switch lever to stop.

#### Kerf board (Fig. 13)

This tool is provided with the kerf board in the turn base. If the kerf groove has not yet been cut in the kerf board by the factory, you should cut the groove before actually using the tool to cut a workpiece. Switch on the tool and lower the blade gently to cut a groove in the kerf board.

# Maintaining maximum cutting capacity (Fig. 14 & 15)

Unplug the tool before any adjustment is attempted. This tool is factory adjusted to provide the max. cutting capacity for a 260 mm saw blade. When the diameter of the blade has been reduced due to sharpening, adjust the depth adjusting bolt by turning it with the socket wrench. The saw blade is lowered by turning the depth adjusting bolt counterclockwise and raised by turning it clockwise. Adjust so that when the handle is in the fully lowered position, there will be a distance of about 135 mm from the front face of the blade enters the kerf. With the tool unplugged, rotate the blade by hand while holding the handle all the way down. Be sure that the blade does not contact any part of the lower base when the handle is lowered completely.

#### Positioning for adjusting the miter angle (Fig. 16)

Loosen the grip by turning counterclockwise. Turn the turn base while pressing down the latch spring. When you have moved the grip to the position where the pointer indicates the desired angle on the miter scale, securely tighten the grip clockwise.

#### CAUTION:

When turning the turn base, be sure to raise the handle fully.

#### Securing workpiece

#### WARNING:

It is extremely important to always secure the workpiece properly and tightly with the vise. Failure to do so can cause the tool to be damaged and/or the workpiece to be destroyed. PERSONAL INJURY MAY ALSO RESULT. Also, after a cutting operation, DO NOT raise the blade until the blade has come to a complete stop.

1. Vertical vise (Fig. 17 & 21)

The vertical vise can be installed on the guide fence or the holder assembly (optional accessory). Insert the vise rod into the hole in the guide fence or the holder assembly and tighten the screw to secure the vise rod. Position the vise arm according to the thickness and shape of the workpiece and secure the vise arm by tightening the screw. Press the workpiece flat against the guide fence and the turn base. Position the workpiece at the desired cutting position and secure it firmly by tightening the clamp screw.

#### CAUTION:

The workpiece must be secured firmly against the turn base and guide fence with the vise during all operations.

If some part contacts the vise, re-position the vise arm. Press the workpiece flat against the guide fence and the turn base. Position the workpiece at the desired cutting position and secure it firmly by tightening the clamp screw of the vise.

#### CAUTION:

When cutting long workpieces, use supports that are as high as the top surface level of the turn base. (Fig. 18)

#### 2. Horizontal vise (optional accessory) (Fig. 19 & 20)

The horizontal vise can be installed on either the left or right side of the base. When performing 15° or greater miter cuts, install the horizontal vise on the side opposite the direction in which the turn table is to be turned. By turning the knob on the vise counterclockwise, the screw is released and the vise shaft can be moved rapidly in and out. By turning the knob clockwise, the screw remains secured. To grip workpieces, turn the knob gently clockwise until the projection reaches its topmost position, then fasten securely. If the knob is forced in or pulled out while being turned clockwise, the projection may stop at an angle. In this case, turn the knob back counterclockwise until the screw is released, before turning again gently clockwise.

# 3. Holders and holder assembly

#### (optional accessories)

The holders and the holder assembly can be installed on either side as a convenient means of supporting workpieces horizontally. Install them as shown in **Fig. 21**. Then tighten the screws firmly to secure the holders and the holder assembly. **(Fig. 21)** 

When cutting long workpieces, use the holder-rod assembly (optional accessory). It consists of two holder assemblies and two rods 12. (Fig. 22)

#### CAUTION:

Always support long workpieces level with the top surface of the turn base for accurate cuts and to prevent dangerous loss of control of the tool.

#### Operation

CAUTION:

- Before use, be sure to release the handle from the lowered position by pulling the stopper pin.
- Make sure the blade is not contacting the workpiece, etc. before the switch is turned on.
- Do not apply excessive pressure on the handle when cutting. Too much force may result in overload of the motor and/or decreased cutting efficiency.
- Gently press down the handle to perform the cut. If the handle is pressed down with force or if lateral force is applied, the blade will vibrate and leave a mark (saw mark) in the workpiece and the precision of the cut will be impaired.

When cutting with this tool, the thickness of the blade is cut out of the workpiece as well. Therefore, your cutting line should be on either the left or right side of the groove in the kerf board. Switch on the tool and wait until the blade attains full speed before lowering gently into the cut. When the blade contacts the workpiece, gradually bear down on the handle to perform the cut. When the cut is completed, switch off the tool and WAIT UNTIL THE BLADE HAS COME TO A COMPLETE STOP before returning the blade to its fully elevated position. A thin piece of cut off material could otherwise contact the coasting blade and be thrown around dangerously. (Fig. 23)

#### 1. Miter cutting

Refer to the previously covered "Positioning for adjusting the miter angle".

#### 2. Cutting aluminum extrusion (Fig. 24)

When securing aluminum extrusions, use spacer blocks or pieces of scrap as shown in Fig. 24 to prevent deformation of the aluminum. Use a cutting lubricant when cutting the aluminum extrusion to prevent build-up of the aluminum material on the blade.

#### CAUTION:

Never attempt to cut thick or round aluminum extrusions. Thick aluminum extrusions may come loose during operation and round aluminum extrusions cannot be secured firmly with this tool.

#### 3. Wood facing (Fig. 25)

Use of wood facing helps to assure splinter-free cuts in workpieces. Attach a wood facing to the guide fence using the holes in the guide fence.

#### CAUTION:

- Use straight wood of even thickness as the wood facing.
- See Fig. 25 concerning the dimensions for a suggested wood facing.

#### 4. Cutting repetitive lengths (Fig. 26)

When cutting several pieces of stock to the same length, ranging from 240 mm to 400 mm, use of the set plate (optional accessory) will facilitate more efficient operation. Install the set plate on the holder as shown in **Fig. 26**. Align the cutting line on your workpiece with either the left or right side of the groove in the kerf board, and while holding the workpiece from moving, move the set plate flush against the end of the workpiece. Then secure the set plate with the screw. When the set plate is not used, loosen the screw and turn the set plate out of the way.

## MAINTENANCE

#### CAUTION:

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

### Alignment for squareness (Fig. 27 & 28)

This tool is carefully adjusted and aligned at the factory, but rough handling may have affected the alignment. If your tool is not aligned properly, perform the following: Loosen the grip and set the turn base at zero degrees by turning the turn base. Tighten the grip securely and loosen the hex bolts on the guide fence. Square the side of the blade with the face of the guide fence using a trianguidar rule, try-square, etc. by moving the right side of the guide fence. Then securely tighten the hex bolts on the guide fence in the order indicated in **Fig. 28**.

# Replacement of carbon brushes

#### (Fig. 29 & 30)

Replace carbon brushes when they are worn down to the limit mark. Both identical carbon brushes should be replaced at the same time.

To maintain product safety and reliability, repairs, maintenance or adjustment should be carried out by a Makita Authorized Service Center.

# Makita Corporation Anjo, Aichi, Japan Made in China

884146A8