



SLIDING COMPOUND MITRE SAW

MODEL NO: C2MS210MP/C2MS250MP

PART NO: 6461545/6461550

OPERATION & MAINTENANCE INSTRUCTIONS



ORIGINAL INSTRUCTIONS

GC0119 - ISS 1

INTRODUCTION

Thank you for purchasing this CLARKE Mitre Saw.

Before attempting to operate the machine, it is essential that you read this manual thoroughly and carefully follow all instructions given. In doing so you will ensure the safety of yourself and that of others around you, and you can also look forward to the product giving you long and satisfactory service.

GUARANTEE

This CLARKE product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

ENVIRONMENTAL PROTECTION



Recycle unwanted materials instead of disposing of them as waste. All unwanted accessories and packaging should be sorted and taken to a recycling centre for disposal in a manner which is compatible with the environment.

Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

SAFETY WARNINGS

WORK AREA

- Keep the work area clean and well lit. Cluttered and dark areas invite accidents.
- 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

- 1. Power tool plugs must match the outlet. Never modify the plug in any way. Do not use adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce the risk of electric shock.
- 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 cable. Never use the cable for carrying, pulling or unplugging the power tool. Keep the 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 cable suitable for outdoor use reduces the risk of electric shock.
- If operating the power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply

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 personal injury.
- 2. **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.
- 3. **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.

- 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, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- 7. A laser beam can cause serious eye injury. Never look into the laser outlet.

POWER TOOL USE AND CARE

- 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 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.
- 3. Disconnect the plug from the power source 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 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.
- 5. 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.
- 6. **Keep cutting tools sharp and clean.** Tools with sharp cutting edges are less likely to bind and are easier to control.
- 7. Use the power tool and accessories in accordance with these instructions and in the manner intended, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from intended use could result in a hazardous situation.

ADDITIONAL SAFETY RULES FOR MITRE SAWS

 Make sure all locking knobs and clamp handles are tight before starting any task.

- 2. Do not operate the saw without the guard in position, if the guard does not function correctly or is not maintained properly.
- 3. **Never** use your saw without the kerf plate.
- 4. **Never** place either hand in the blade area when the saw is connected to the electrical power source.
- Never attempt to stop a saw in motion rapidly by jamming a tool or other means against the blade; serious accidents can be caused unintentionally in this way.
- 6. **Before using any accessory** consult the instruction manual. The improper use of an accessory can cause damage.
- 7. **Observe** the maximum speed marked on the saw blade.
- 8. Always wear gloves when handling a saw blade.
- Do not use blades of larger or smaller diameter than recommended. For the proper blade rating refer to the technical data. Use only the blades specified in the specifications section of this manual.
- 10. **Do not** use cracked or damaged saw blades.
- 11. **Do not** use any abrasive discs.
- 12. **Raise the blade** from the kerf in the workpiece prior to releasing the switch.
- 13. Make sure that the arm is securely fixed when performing bevel cuts.
- 14. The blade guard on your saw will automatically raise when the arm is brought down and will lower over the blade when the arm is raised. The guard can be raised by hand when installing or removing saw blades or for inspection of the saw. Never raise the blade guard manually unless the saw is switched off.
- 15. Keep the surrounding area of the saw well maintained and free of loose materials, e.g. swarf and cut-offs.
- 16. **Before use**, check that the motor air slots are clean and free of swarf.
- 17. Replace the kerf plate when worn.
- 18. Disconnect the saw from the mains before carrying out any maintenance work or when changing the blade.
- 19. **Never** perform any cleaning or maintenance work when the saw is still running and the head is not in the rest position.
- 20. When possible, always mount the saw on to a bench or plywood base which is then clamped to a bench or mount the machine to a purpose built mitre saw stand available from your local Clarke dealer.

SAFETY SYMBOLS

The following safety symbols are to be found on the product.



Wear eye protection



Wear ear defenders



Do not put your hand near the blade



Read instruction manual before use



Laser Radiation, Class 2 Laser: Do not stare into the beam.



Take care not to damage the fence when using different compound mitre angles.

ELECTRICAL CONNECTIONS



WARNING! READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.

Before switching the product on, make sure that the voltage of your electricity supply is the same as that indicated on the rating plate. This product is designed to operate on 230V AC 50Hz. Connecting it to any other power source may cause damage.

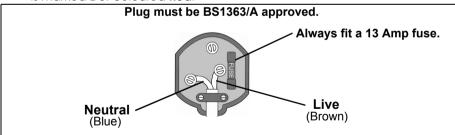
This product may be fitted with a non-rewireable plug. If it is necessary to change the fuse in the plug, the fuse cover must be refitted. If the fuse cover becomes lost or damaged, the plug must not be used until a suitable replacement is obtained.

If the plug has to be changed because it is not suitable for your socket, or due to damage, it should be cut off and a replacement fitted, following the wiring instructions shown below. The old plug must be disposed of safely, as insertion into a mains socket could cause an electrical hazard.



If the colours of the wires in the power cable of this product do not correspond with the markings on the terminals of your plug, proceed as follows.

- The wire which is coloured Blue must be connected to the terminal which is marked N or coloured Black.
- The wire which is coloured **Brown** must be connected to the terminal which is marked **L** or coloured **Red**.



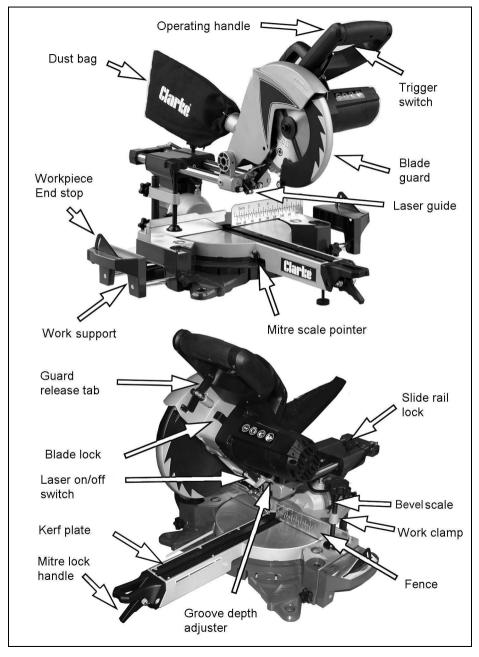
Ensure that the outer sheath of the cable is firmly held by the clamp

We strongly recommend that this machine is connected to the mains supply via a Residual Current Device (RCD).

If in any doubt, consult a qualified electrician. DO NOT attempt any repairs yourself.

	This symbol indicates that this is a class II product and does not requir	re
	This symbol indicates that this is a class II product and does not requir an earth connection.	

OVERVIEW



BEFORE USE

- 1. Remove the saw from the packaging carefully.
 - The following items should be supplied with the saw. If anything is missing contact your dealer.

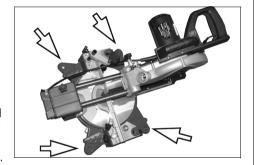
1 x Work Clamp	1 x Hexagon Key (6 mm)	
1 x Dust Collection Bag	2 x Workpiece Supports	
216 mm Diameter 40 Tooth Cutting Blade fitted to the C2MS210MP	255 mm Diameter 48 Tooth Cutting Blade fitted to the C2MS250MP	

BENCH MOUNTING

Holes are provided in all four feet to facilitate bench mounting.

 Always mount your saw firmly on a level surface to prevent movement.

The saw can also be mounted to a piece of 12.5 mm or thicker plywood which can then be clamped to your work bench or moved to other work sites and re-clamped when required.



 When mounting your saw to a piece of plywood, make sure that the mounting screws do not protrude from the bottom of the wood.

MITRE SAW STAND (NOT SUPPLIED)

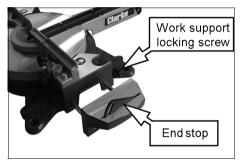
You can also mount the mitre saw on a purpose built stand available from your Clarke dealer.



SETTING THE WORK SUPPORTS

- Loosen the work support locking screws.
- With the saw upside down, slide the work support guide rods through the holes in the base of the saw and secure with the spring clips.
- 3. Set the saw upright.
- Extend the work supports as required and secure them in place using the work support locking screw.
- The work support incorporates a hinged end stop which can be raised if required.

Locking screw Work support Guide rod Spring clip

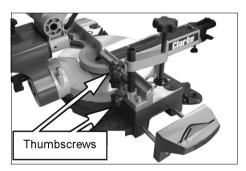


FITTING THE WORK CLAMP

- Loosen the clamp support thumbscrews.
- Slide the work clamp post into one of the clamp supports on either side of the saw and tighten the thumbscrew to lock it in place.

NOTE: When swivelling the saw to one side the motor may strike the clamp post.

- 3. Adjust the clamp to suit the workpiece.
- 4. Tighten the upper thumbscrew to secure the work clamp.



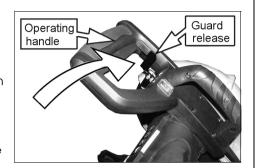
RELEASING/LOCKING THE SAW HEAD

RELEASING

- 1. Press down slightly on the operating handle.
- Pull out the head locking pin to release the arm for cutting and twist it 90° to remain locked in the 'out' position.

LOCKING

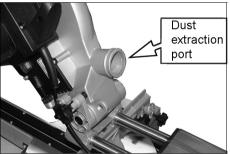
- Press down on the head while pushing the guard release to the side to release the safety catch and lower the head.
- Twist the head locking pin through 90° and push back in to secure the head for lifting.
- Gently release the downward pressure on the operating handle and allow the head to rise.



DUST EXTRACTION

This machine is provided with a dust extraction port for connection to a dust bag (supplied).

- 1. Place the dust bag over the dust extraction port using the clip on the neck of the dust bag.
- Make sure the zipper on the dust bag is closed.
- The dust extraction port may alternatively be connected to a suitable extraction system using the appropriate hose (not supplied).
 - The hose must have an inside diameter of 43 mm



ADJUSTMENTS

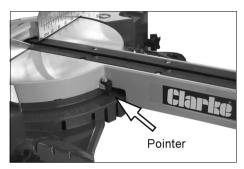


WARNING: MAKE SURE THAT THE SAW IS SWITCHED OFF AND UNPLUGGED FROM THE MAINS SUPPLY BEFORE PERFORMING ANY ADJUSTMENTS.

CHECK AND ADJUST THE MITRE POINTER

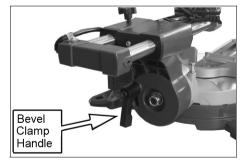
The saw can be set in a number of positions as determined by the mitre locking mechanism but the pointer should read zero when making straight cuts and remain true for other angles selected.

 If the pointer does not indicate zero on the mitre scale, loosen the pointer securing screw and adjust it as necessary.



CHECK AND ADJUST THE 90 DEGREE ANGLE STOP

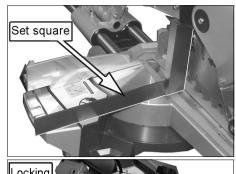
- 1. Loosen the bevel clamp handle.
- Press the saw head to the side to ensure it is fully vertical and tighten the bevel clamp handle.
- Pull down the operating handle until the blade just enters the kerf plate.

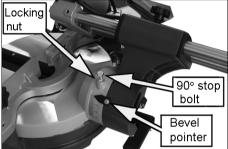


- 4. Place a set square on the table and up against the blade.
- Do not touch the extended tips of the blade teeth with the square.
 Lower the blade so as to present as much blade surface as possible to the set square.

If adjustment is required, proceed as follows:

- Use a spanner to release the stop bolt locking nut and turn the 90° stop bolt in or out until the blade is at 90° to the table.
- Loosen the set screw that secures the pointer and adjust the pointer as necessary to ensure the bevel pointer indicates zero on the bevel scale

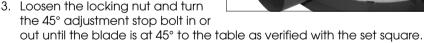




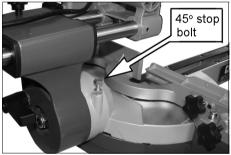
CHECK & ADJUST THE 45 DEGREE STOP

- 1. Loosen the bevel clamp handle and lean the saw head as far to the right as possible (i.e. at 45°).
- 2. Place a 45° set square on the table and up against the blade.

NOTE: Do not touch the tips of the blade teeth with the set square.



4. Adjust the bevel pointer if required as shown (in point 6) previously.



OPERATION

Always observe the safety instructions and applicable regulations.

BODY AND HAND POSITION

Proper positioning of your body and hands when operating the saw will make cutting easier and safer.

- Never place your hands near the cutting area or blade.
- Hold the workpiece tightly to the table and the fence when cutting.
- **Keep** your hands in position until the trigger switch has been released and the blade has completely stopped.
- Always make dry runs (without power) before cutting so that you can check the path of the blade.

NOTE: Before beginning any cuts, make sure that the fence assembly will not be struck by the saw blade.

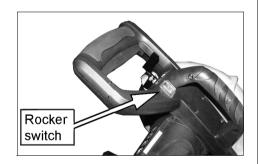
SELECTING THE SPEED

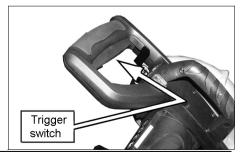
The saw has two operating speeds which are selected by the rocker switch shown.

- Speed I is for metal
- · Speed II is for wood

SWITCHING ON AND OFF

- 1. To start the saw, squeeze the trigger switch.
- Allow the motor to reach full speed before cutting.
- 2. To stop the saw, release the trigger switch.





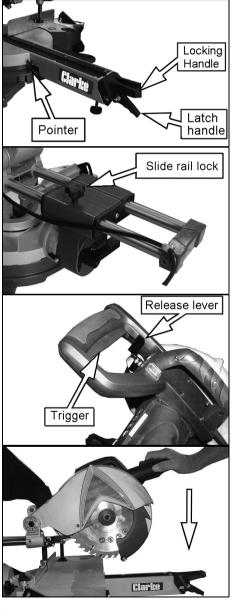


WARNING: THE BLADE WILL CONTINUE TO ROTATE AFTER THE SWITCH HAS BEEN RELEASED.

DIFFERENT SAW CUTS

VERTICAL STRAIGHT CROSS CUT

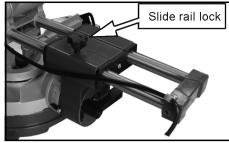
- Release the table mitre lock by lifting the latch handle and pressing the locking handle down.
- 2. Rotate the table so that the pointer lines up with the 0° position on the scale.
- 3. Release the latch handle to resecure the mitre lock.
- Release the slide rail lock and push the saw head back to the rear position.
- 5. Retighten the slide rail lock.
- 6. Place the wood to be cut against the fence.
- Take hold of the operating handle and press and hold the blade guard release lever to release the head.
- 8. Squeeze the trigger switch to start the saw.
- Lower the head, allowing the blade to cut through the timber and enter the kerf plate.
- Allow the blade to cut freely. Do not force the tool.
- After completing the cut, release the trigger and return the head to its upper rest position.



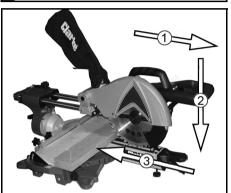
PERFORMING A SLIDING CUT

The guide rail allows cutting larger workpieces using an out-down-back sliding motion.

1. Release the slide rail lock.

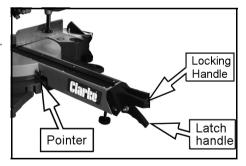


- 2. Switch the saw on and pull the saw head towards you (1).
- 3. Lower the saw blade (2) into the workpiece and push the head back (3) to complete the cut.
- Take extra care if perform sliding cuts on small workpieces which are tall enough to be unstable.
- Remember to lock the saw head in the rear position when the sliding cuts are finished.



MITRE CROSS-CUT

- Release the table mitre lock by lifting the latch handle and pressing the locking handle down.
- 2. Move the arm around until the pointer lines up with your chosen position on the mitre scale.
- 3. Release the latch to lock the table in your chosen position.
- The latch will engage with positive stops at 15°, 22.5°, 30° and 45°.



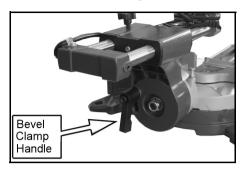
- Any angle can be set by lifting the locking handle.
- 4. Proceed as for a vertical straight cross-cut.

NOTE: When mitering the end of a piece of wood with a small off-cut, ensure that the off-cut is to the side of the blade with the greater angle to the fence.

BEVEL CUTS

Bevel angles can be set from 45° left to vertical and can be cut with the mitre arm set between zero and a maximum of 45° mitre position right or left.

- Loosen the bevel clamp handle and set the bevel to the desired angle.
- Tighten the bevel clamp handle firmly.
- Proceed as for a vertical straight cross-cut.
- Allow the blade to cut freely. Do not force the saw.



MITRE / BEVEL CUTS

As the number of sides changes, so do the mitre and bevel angles. The chart below gives the cutting angles for a variety of shapes, assuming that all sides are of equal length.

No. of sides	Angle mitre or bevel	
4	45°	
5	36°	
6	30°	
7	25.7°	
8	22.5°	
9	20°	
10	18°	

COMPOUND MITRE CUTS

A compound mitre is a cut made using a mitre angle and a bevel angle at the same time. This is the type of cut used to make frames or boxes with slanting sides.

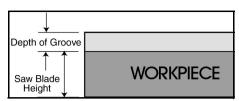
- Set your saw to the required angles and make a few trial cuts.
- 2. Practice fitting the cut pieces together.
- Always try cuts on a few scrap pieces of wood to verify the settings on the saw.



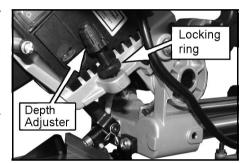
GROOVE CUTTING

Your saw is equipped with a thumbscrew adjuster to provide for groove cutting.

 Firstly, determine the depth of your groove and subtract this value from the thickness of your workpiece. This will give you the height above the table surface at which the saw blade must be set.



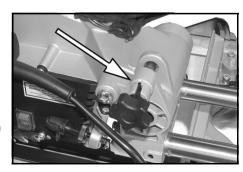
- Ideally, place a template or a piece of wood, the same thickness as the saw blade height setting, on the table beneath the saw blade
- 3. Loosen the locking ring and screw out the depth adjuster.
- Lower the head so that the blade lightly touches the template or is at the correct height as determined using a ruler.
- 5. Screw down the adjuster so that it touches the saw body, then tighten the locking ring.
- The saw blade is now set to cut your groove to your set depth.



- The width of the groove will, of course, be the width of the saw blade.
 However, by moving the workpiece along the table in small increments (2-3 mm), each time making a cut, it is possible to cut grooves to any width.
- 6. Before reverting to normal cutting, remember to slacken the locknut and turn the adjuster to its normal position, allowing for the full depth of cut.

TRANSPORTING

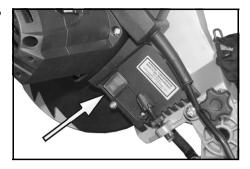
- Lower the head and lock it down using the head lock pin.
- 2. Slide the head back and tighten the slide rail lock.
- 3. Lock the head down with the locking pin.
- Lock the bevel clamp handle with the saw head in the vertical position.
- 5. Always lift the saw using the lifting handle.



THE LASER GUIDE

Your saw is fitted with a laser guide to assist with accurate cutting.

Switch the laser on/off using the on/off switch.



MAINTENANCE



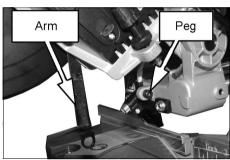
WARNING: MAKE SURE THAT THE SAW IS SWITCHED OFF AND UNPLUGGED FROM THE POWER SUPPLY BEFORE FITTING OR REMOVING THE BLADE.

WARNING: THE BLADE MUST BE RATED TO AT LEAST 7000 RPM.

CHANGING THE SAW BLADE

Only install the correct saw blade. Do not use excessively worn blades. The maximum rotation speed of the saw must not exceed that of the saw blade.

- Begin with the saw head in the raised position and with the slide rails locked.
- 2. Remove the spring clip holding the blade guard operating arm to the peg.
- Disconnect the arm, allowing the blade guard to be rotated back to expose the whole blade.
- Press and hold down the blade lock, then using the hex wrench supplied, undo and remove the centre screw and washer.
 - The screw has a LEFT HAND THREAD (turn it CLOCKWISE to undo).







WARNING: NEVER PUSH THE BLADE LOCK IN WHEN THE MOTOR IS RUNNING.

5. Pull off the outer disc followed by the saw blade.

NOTE: You should take this opportunity to thoroughly clean parts previously inaccessible.

6. Replace the blade, ensuring it has the correct diameter and bore.

- Ensure also that all parts are perfectly clean and the blades' teeth point down at the front as marked with an arrow on the blade.
- The blade must be rated to at least 7000 rpm.
- Spare blades are available from your local Clarke dealer.
- Replace the outer disc and washer and secure with the centre screw, remembering the screw has a LEFT HAND THREAD (turn it ANTICLOCKWISE to tighten).

CLEANING

Your saw has been designed to operate over a long period of time with a minimum of maintenance. Continuous satisfactory operation depends upon proper care and regular cleaning.

- Keep the motor ventilation slots clear and regularly clean the motor housing with a soft cloth.
- Regularly clean the table top.
- Regularly clean the dust collection bag.
- Avoid the use of cleaners or lubricants to maintain the tool. In particular spray and aerosol cleaners may chemically attack the plastic lower guard.

TECHNICAL SPECIFICATIONS

	C2MS210MP	C2MS250MP
Power Supply	230V @ 50Hz	
Electrical Insulation Class	II	
IP rating	IP20	
Blade Diameter	216 mm	255 mm
Blade bore	30 mm	
Max. blade thickness (Kerf)	2.8 mm	
Number of Teeth	40	48
Max. No Load Speed	7000 rpm	
Operating Speeds	3800 (metal) /5000 (wood) rpm	3200 (metal) /4500 (wood) rpm
Duty cycle	S6 (20% - 5 mins)	
Max. crosscut capacity at 90°	305 x 65 mm	305 x 90 mm
Max. mitre cut capacity at 45°	215 x 65 mm	215 x 90 mm
Max. bevel cross-cut 45°	305 x 36 mm	305 x 47 mm
Max. Compound Mitre Cut	215 x 36 mm	215 x 47 mm
Max Bevel Angle	45° (left/right)	
Sound pressure (L _{pA})	95 dB(A)	
Sound power (L _{WA})	108 dB(A)	
Uncertainty Factor (K)	3 dB(A)	
Dimensions (W x D x H) mm D = (carriage to rear/forward) W = (supports extended or retracted) H = saw head raised/lowered)	H = 542/345	D = 940 / 790 W = 713 / 585 H = 622 / 362
Weight	12.7 kg	15.8 kg

DECLARATION OF CONFORMITY





Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s): Machinery Directive. 2006/42/EC

Electromagnetic Compatibility Directive. Restriction of Hazardous substances. 2014/30/EU 2011/65/EU

The following standards have been applied to the product(s):

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the addocumentation required to compiled and is available for inspection by the relevant enforcement addocuments. EN 61029-1, EN 61029-2-9, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3.

The CE mark was first applied in: 2018

2 Speed, 10 inch Sliding Mitre Saw C2MS250MP N/A Serial / batch Number: Product Description: Model number(s):

29/10/2018 Date of Issue: J.A. Clarke

Signed:

Director

18-0161_Mitre Saw D.O.C_(1v0)

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INTERNATIONAL

Hemnall Street, Epping, Essex CM16 4LG

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following directive(s): Electromagnetic Compatibility Directive. Machinery Directive. 2006/42/EC 2014/30/EU

EN 61029-1, EN 61029-2-9, EN 55014-1, EN 55014-2, EN 61000-3-2, EN 61000-3-3. The following standards have been applied to the product(s):

Restriction of Hazardous substances.

2011/65/EU

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement

The CE mark was first applied in: 2013

Stationary, 2 Speed, 216 mm Sliding Mitre Saw Product Description:

C2MS210MP ΑX Serial / batch Number: Model number(s):

28/09/2018

Date of Issue:

Signed:

J.A. Clarke

18-0160_Mitre Saw D.O.C_(rv0)



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