Clarke®

160 MM PLUNGE SAW

MODEL NO: CPS160

PART NO: 6460240

OPERATION & MAINTENANCE INSTRUCTIONS

ORIGINAL INSTRUCTIONS

GC0624 - ISS 3

INTRODUCTION

Thank you for purchasing this CLARKE 160 mm Plunge Saw.

Read this manual fully before you use this product and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

GUARANTEE

This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required 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.

CARTON CONTENTS

The following items should be supplied in the carton. If any parts are missing or damaged, please contact the Clarke dealer where you purchased the tool.

- 1 x Plunge Saw
- 1 x Guide Rail Assembly (2 halves and a joining bar)
- 1 x TCT Blade - 160 mm Ø x 20 mm (bore) x 2.4 mm (thickness).
- 1 x Tilt protection clamp (polymer)
- 1 x Tilt protection clamp nut

SPECIFICATIONS

Model Number	CPS160
Rated Voltage	230V~50Hz
No Load Speed	5500 RPM
Maximum Depth of Cut	55 mm @ 90° - 41 mm @ 45°
Blade Dimensions	Diameter - 160 mm Bore - 20 mm Blade Thickness - 2.4 mm
Length of Track	2 pieces 700 mm each
Sound Pressure Level LpA	95 dB(A)
Sound Power Level LWA	106 dB(A)
Uncertainty Factor (K)	3 dB(A)
Weight	7.4 kg
Vibration (main handle)	5.72 m/s^2 Uncertainty Factor 1.5
Dimensions (L x W x H)	340 x 235 x 260 mm

EXPLANATION OF SYMBOLS & PICTOGRAMS

Read Instruction Manual Before Use

Wear Eye Protection

Wear Gloves

GENERAL POWER TOOL SAFETY WARNINGS

WORK AREA

1. **Keep the work area clean and well lit.** Cluttered and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use adaptor plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce the risk of electric shock.
2. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
3. **Do not abuse the cable. Never use it for carrying, pulling or unplugging the power tool. Keep the cable away from heat, oil, sharp edges or moving parts.** Damaged or entangled cables increase the risk of electric shock.
4. **When operating a power tool outdoors, use an extension cable suitable for outdoor use.** Use of a cable suitable for outdoor use reduces the risk of electric shock
5. **If operating the power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.**

PERSONAL SAFETY

1. **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**. Make sure that 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 wrench before turning the power tool on**. A wrench left attached to a rotating part 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.

6. **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.

POWER TOOL USE AND CARE

1. **Do not force the power tool.** Use the correct accessories for your application. The correct power tool will do the job better and safer at the rate which it was designed for.
2. **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 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 it.** 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 tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
6. **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 could result in a hazardous situation.
7. The performance of this tool may vary, depending upon variations in line voltage. Extension cable usage may also affect performance.

SERVICE

1. **Have your power tool serviced by qualified service personnel using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

CIRCULAR SAW SAFETY WARNINGS

CIRCULAR SAW - CUTTING PROCEDURES

a. **Keep hands away from cutting area and the blade. Keep your second hand on the auxiliary handle, or motor housing.** If both hands are holding the saw, they cannot be cut by the blade.

b. **Do not reach underneath the workpiece.** The guard cannot protect you from the blade below the workpiece.

c. **Adjust the cutting depth to the thickness of the workpiece**. Less than a full tooth of the blade teeth should be visible below the workpiece.

d. **Never hold the piece being cut in your hands or across your leg. Secure the workpiece to a stable platform. I**t is important to support the work properly to minimise body exposure, blade binding, or loss of control.

e. **Hold the power tool by insulated gripping surfaces, when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will also make exposed metal parts of the power tool "live" and could give the operator an electric shock.

f. When ripping, always use a rip fence or straight edge guide. This improves the accuracy of cut and reduces the chance of blade binding

g. **Always use blades with the correct size and shape of arbor holes.** Blades that do not match the mounting hardware of the saw will run eccentrically, causing loss of control.

h. **Never use damaged or incorrect blade washers or bolt**. The blade washers and bolt were specially designed for your saw, for optimum performance and safety of operation.

KICKBACK CAUSES AND RELATED WARNINGS

Kickback is a sudden reaction to a pinched, bound or misaligned saw blade, causing an uncontrolled saw to lift up and out of the workpiece toward the operator.

When the blade is pinched or bound tightly by the kerf closing down, the blade stalls and the motor reaction drives the unit rapidly back toward the operator.

If the blade becomes twisted or misaligned in the cut, the teeth at the back edge of the blade can dig into the top surface of the wood causing the blade to climb out of the kerf and jump back toward the operator. Kickback is the result of saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

a. **Maintain a firm grip with both hands on the saw and position your arms to resist kickback forces. Position your body to either side of the blade, but not in line with the blade.** Kickback could cause the saw to jump backwards, but kickback forces can be controlled by the operator, if proper precautions are taken.

b. **When the blade is binding, or when interrupting a cut for any reason, release the trigger and hold the saw motionless in the material until the blade comes to a complete stop. Never attempt to remove the saw from the work or pull the saw backward while the blade is in motion or kickback may occur.** Investigate and take corrective actions to eliminate the cause of the blade binding.

c. **When restarting a saw in the workpiece, centre the saw blade in the kerf so that the saw teeth are not engaged into the material.** If a saw blade binds, it may walk up, or kickback from the workpiece as the saw is restarted.

d. **Support large panels to minimise the risk of blade pinching and kickback.** Large panels tend to sag under their own weight. Supports must be placed under the panel on both sides near the line of cut and near the edge of the panel.

e. **Do not use dull or damaged blades.** Un-sharpened or improperly set blades produce a narrow kerf causing excessive friction, blade binding and kickback.

f. **Blade depth and bevel adjusting locking levers must be tight and secure before making the cut.** If the blade adjustment shifts while cutting, it may cause binding and kickback.

g. **Use extra caution when sawing into existing walls or other blind areas.** The protruding blade may cut hidden objects that can cause kickback.

BLADE SAFETY WARNINGS

a. The maximum speed marked on the tool shall not exceed the maximum speed marked on the blade.

b. Cracked circular saw blades must be scrapped (repairing is not permitted). Composite (tipped) circular saw blades, where the tip dimension is reduced to less than 1 mm, shall be taken out of service.

c. Fastening screws and nuts shall be tightened using the tools supplied.

d. Clamping surfaces shall be cleaned to remove any dirt, grease, oil or water.

e. Do not use loose rings or bushes to "make up" bore sizes on circular saw blades.

SAFETY INSTRUCTIONS FOR PLUNGE TYPE SAWS

GUARD FUNCTION

a. **Check the guard for proper closing before each use. Do not operate the saw if the guard does not move freely and enclose the blade instantly. Never clamp or tie the guard so that the blade is exposed.** If the saw is accidentally dropped, the guard may be bent. Check to make sure that the guard moves freely and does not touch the blade or any other part, in all angles and depths of cut.

b. **Check the operation of the guard return spring. If the guard and the spring are not operating properly, they must be serviced before use.** The guard may operate sluggishly due to damaged parts, gummy deposits, or a build-up of debris.

c. **Make sure that the base plate of the saw will not shift while performing a "plunge cut".** Blade shifting sideways will cause binding and likely kick back.

d. **Always observe that the guard is covering the blade before placing the saw down on bench or floor.** An unprotected, coasting blade will cause the saw to walk backwards, cutting whatever is in its path. Be aware of the time it takes for the blade to stop after the switch is released.

RIVING KNIFE FUNCTION

a. **Use the appropriate saw blade for the riving knife.** For the riving knife to function, the body of the blade must be thinner than the riving knife and the cutting width of the blade must be wider than the thickness of the riving knife.

b. **Adjust the riving knife as described in this instruction manual.** Incorrect spacing, positioning and alignment can make the riving knife ineffective in preventing kickback.

c. **For the riving knife to work, it must be engaged in the workpiece.** The riving knife is ineffective in preventing kickback during short cuts.

d. **Do not operate the saw if the riving knife is bent.** Even a light interference can slow the closing rate of a guard.

ELECTRICAL CONNECTIONS

WARNING: READ THESE ELECTRICAL SAFETY INSTRUCTIONS FULLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.

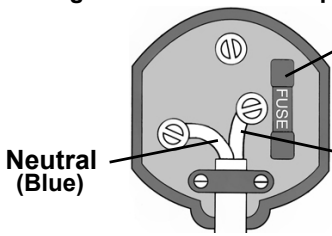
This product is provided with a standard 13 amp, 230 volt (50Hz), BS 1363 plug, for connection to a standard, domestic electrical supply. Should the plug need changing, make sure that a plug of identical specification is used.

WARNING: THE WIRES IN THE CABLE ARE COLOURED AS FOLLOWS:
BLUE = NEUTRAL BROWN = LIVE

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

- Connect the **blue** wire to the terminal which is marked **N**.
- Connect the **brown** wire to the terminal which is marked **L**.

Plug must be BS1363/A approved.



Always fit a 5 Amp fuse.

Neutral (Blue)

Live (Brown)

make sure that the outer sheath of the cable is firmly held by the clamp

We recommend that this plunge saw is connected to the mains supply via a Residual Current Device (RCD)

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

This symbol indicates that this is a Class II product, and does not require an earth connection.

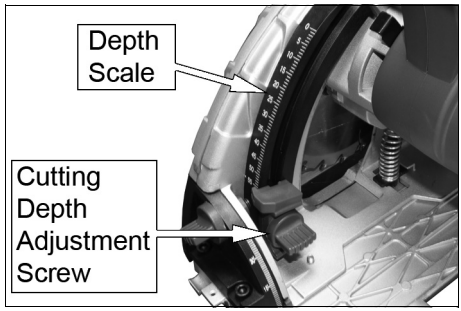
ADJUSTMENTS

DEPTH OF CUT ADJUSTMENT

The cutting depth can be adjusted from 0 to 55 mm.

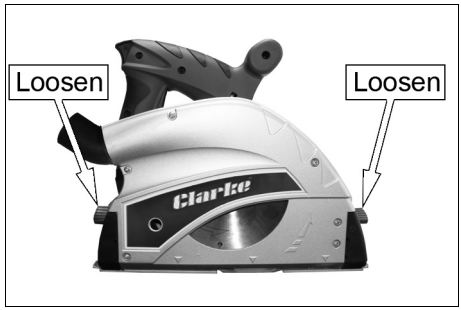
1. Loosen the cutting depth adjustment screw.
2. Set the required depth using the scale.
3. Retighten the screw.

NOTE: The dimensions on the scale shows the cutting depth without the rail.

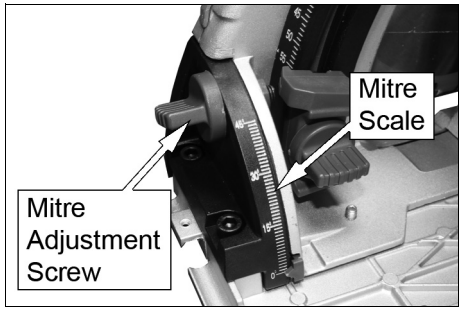


MITRE ADJUSTMENT

1. Loosen the mitre adjustment screws on both sides.



2. Set the desired mitre angle.
   - The mitre angle can be set from 0° to 45°. and is shown on the Mitre Scale.
   - Use the bevel scale as a guide only, for accurate angles use a protractor.
3. Retighten both mitre adjustment screws to lock the base at the required angle.



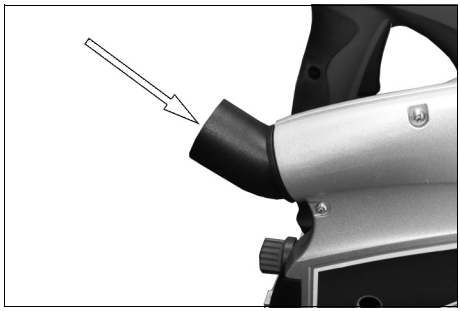
OPERATION & USE

- Secure the work piece so that it cannot be moved while sawing.
- Only move the saw in the forwards direction.
- When using a guide rail it must be fastened with suitable clamps.
- Make sure the power cable is kept well clear of the blade.

DUST EXTRACTION

The plunge saw can be connected to a dust extraction system using a suitable hose adaptor (not supplied).

- Internal diameter is 34 mm
- External diameter is 38 mm



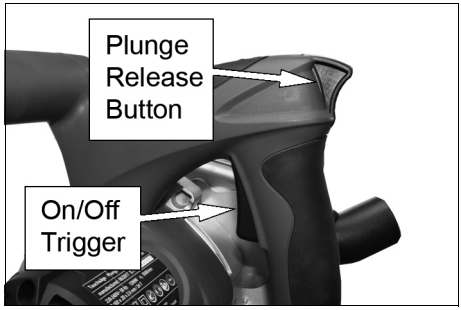
CORRECT HAND POSITION

For your safety, grip the saw as shown in this picture, with one hand on the main handle and the other on the front handle.

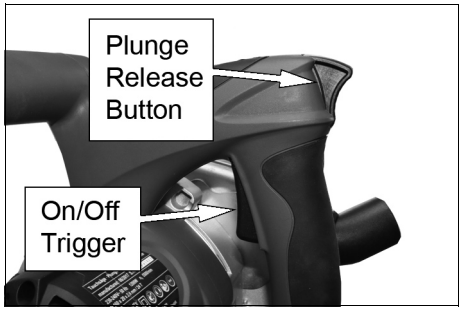
SWITCHING ON/OFF

The on/off trigger is fitted with a safety button which prevents the saw from being started accidentally. To start the saw:

1. Slide the plunge release button upward and squeeze the on/off trigger to start the saw.
2. Release the on/off trigger. and allow the saw to spring up when the saw cutting is complete.
   - The blade will continue to rotate for several seconds after the trigger has been released

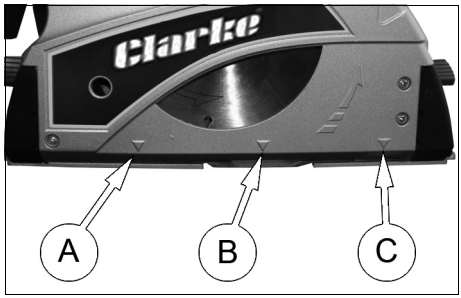


SAWING



1. Place the front part of the plunge saw onto the work piece.
2. Slide the plunge release button upward and squeeze the on/off trigger to start the saw.
3. Push the saw down until you reach the set cutting depth.
4. Push the saw forward along the cut line.
5. Release the on/off trigger. and allow the saw to spring up when the saw cutting is complete.

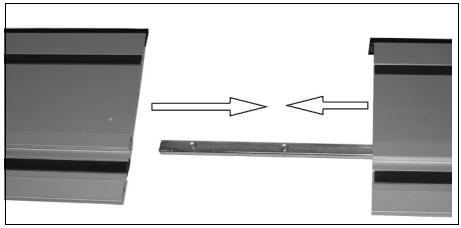
PLUNGE CUTS



1. Mark the beginning and end of the cut on the workpiece, place the plunge saw onto the work piece.
2. Align the cutting indicator (A) with the start of the plunge-cut.
3. Slide the plunge release button upward and squeeze the on/off trigger to start the saw.
4. Push the saw down until you reach the set cutting depth.
5. Move the saw forwards until the front cutting indicator (C) reaches the end of the plunge cut.
6. Release the on/off trigger. and allow the saw to spring up when the saw cutting is complete.

GUIDE RAILS

JOINING THE RAILS TOGETHER

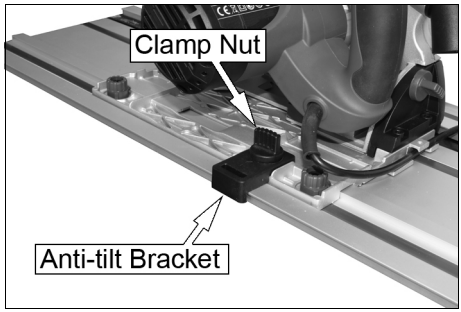


1. Insert the joining bar half way into one of the rails and secure using 2 of the set screws on the joining bar.
2. Slide the second rail over the other half of the joining bar until the rails are touching and secure using the remaining 2 set screws on the joining bar.

USING THE RAILS

NOTE: Before using for the first time, perform a full length cut on a scrap piece of wood to cut the rubber lip on the rails flush to the blade.

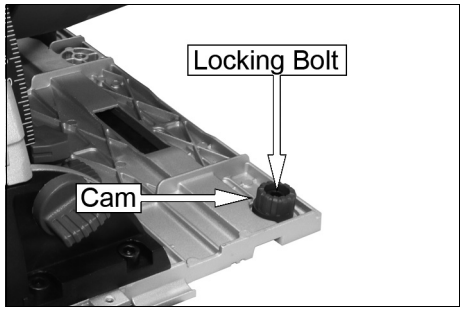
1. Place the plunge saw onto the guide rails as shown.
2. Slide the plunge release button upward and squeeze the on/off trigger to start the saw.
3. Push the saw down until you reach the set cutting depth.
   - Remember to add the thickness of the rails to your measured cutting depth (approximately 5 mm).
4. Push the saw forwards to make the cut.
5. Release the on/off trigger and allow the saw to spring up when the saw cutting is complete.
6. If you are performing a mitre cut using the rail, you may need to fit the anti-tilt bracket as shown using the clamp nut supplied.



RAIL ADJUSTMENT

If you notice that the saw is loose on the rail,

1. Use the hex key supplied to loosen the locking bolt at each end.
2. Adjust the cam until the saw slides easily but without any play left or right.
3. Retighten the locking bolt.



MAINTENANCE

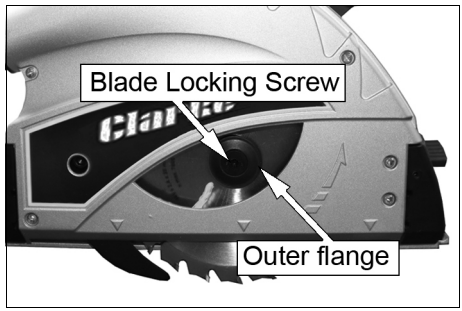
WARNING: DISCONNECT THE PLUNGE SAW FROM THE MAINS SUPPLY BEFORE FITTING REPLACEMENT BLADES, CLEANING OR ADJUSTMENT.

WARNING: WEAR PROTECTIVE GLOVES WHEN HANDLING THE SAW BLADE.

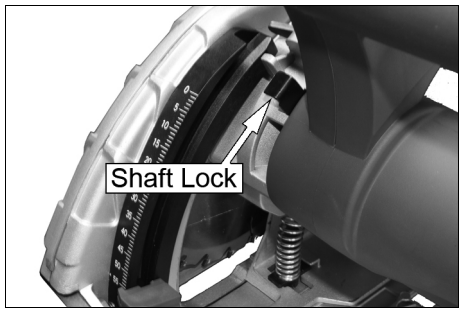
Keep the plunge saw clean by wiping off dust with a clean cloth.

REPLACING THE BLADE

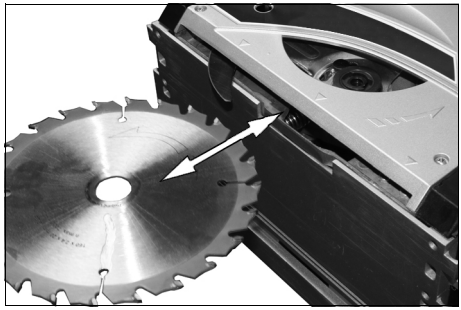
1. Slide the plunge release button upward and set the blade depth to 25 mm.
   - At this depth you should be able to see the blade locking screw through the hole in the blade guard.



2. Insert the hex key supplied into the blade locking screw.
3. Press the shaft lock and rotate the saw blade by hand until the lock clicks into place.
4. Keep holding the shaft lock down and turn the blade locking screw counter clockwise.



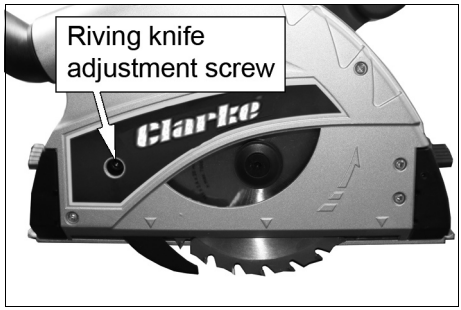
5. Remove the outer flange and then the saw blade.
6. Insert the new blade and replace the flange.
7. Tighten the saw blade locking screw whilst holding down the shaft lock.
8. Release the shaft lock and set the plunge saw depth to its original position.



9. Make sure that all adjustment keys are removed before use.

ADJUSTING THE RIVING KNIFE

1. Slide the plunge release button upward and set the blade depth to 25 mm.
   - At this depth you should be able to see the riving knife adjustment screw through the hole in the blade guard.
2. Insert the hex key supplied and loosen the riving knife adjustment screw.



3. Adjust the riving knife so that is it equally spaced around the blade.
4. Tighten the riving knife adjustment screw and set the plunge saw depth to its original position.
5. Make sure that the hex key is removed before use.

UK CA

Clarke® 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 legislation:

The Electromagnetic Compatibility Regulations 2016

The Supply of Machinery (Safety) Regulations 2008

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

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

EN 61000-3-3:2013/A1:2019, EN 55014-1:2017/A11:2020, EN IEC 55014-1:2021, EN 62321-2:2014, EN IEC 61000-3-2:2019, EN 62321-5:2014, EN 62321-6:2015, EN 62321-8:2017, EN 55014-2:2015, EN 62321-7-1:2015, EN 62321-7-2:2017, EN IEC 55014-2:2021, EN 62321-4:2014/A1:2017, EN 62321-3-1:2014, EN 62841-2-5:2014, EN 62841-1:2015

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

The UKCA mark was first applied in: 2024

Product Description:	Plunge Saw
Model Number(s):	CPS160
Serial/Batch Number:	Refer to product/packaging label
Date of Issue:	19/06/2024

Signed:

J.A Clarke

Director

CE

Clarke® INTERNATIONAL

Fitzwilliam Hall, Fitzwilliam Place, Dublin 2

DECLARATION OF CONFORMITY

This is an important document and should be retained.

We hereby declare that this product(s) complies with the following legislation:

2014/30/EU	*Electromagnetic Compatibility Directive*
2006/42/EC	*Machinery Directive*
2011/65/EU	*Restriction of Hazardous Substances (RoHS) Directive*

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

EN 61000-3-3:2013/A1:2019, EN 55014-1:2017/A11:2020, EN IEC 55014-1:2021, EN 62321-2:2014, EN IEC 61000-3-2:2019, EN 62321-5:2014, EN 62321-6:2015, EN 62321-8:2017, EN 55014-2:2015, EN 62321-7-1:2015, EN 62321-7-2:2017, EN IEC 55014-2:2021, EN 62321-4:2014/A1:2017, EN 62321-3-1:2014, EN 62841-2-5:2014, EN 62841-1:2015

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

The CE mark was first applied in: 2018

Product Description:	Plunge Saw
Model Number(s):	CPS160
Serial/Batch Number:	Refer to product/packaging label
Date of Issue:	19/06/2024

Signed:

J.A Clarke

Director

A SELECTION FROM THE VAST RANGE OF

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