

Clarke®



RANDOM ORBITAL SANDER

MODEL NO: CROS3

PART NO: 6462012

OPERATION & MAINTENANCE INSTRUCTIONS



ORIGINAL INSTRUCTIONS

GC 11/22 - Rev 2

INTRODUCTION

Thank you for purchasing this CLARKE Sander, which is designed for DIY and light workshop use only.

Read all safety warnings, instructions, illustrations and specifications provided with this power tool. 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. Failure to follow all instructions listed may result in electric shock, fire and/or serious injury.

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.

SPECIFICATIONS

Electrical Supply	230V 50Hz 1 ph
Power rating	450 Watt
Fuse rating	5 Amp
No Load Speed (variable)	7000 - 14000 rpm
Net Weight	2.6 kg
Disc Size	125 mm
Sound Pressure	81.7 dB (A)
Sound Power	92.7 dB LpA
Vibration Emissions	4.596 m/s ² / uncertainty value (k) =1.5 m/s ²

SAFETY PRECAUTIONS



WARNING: READ ALL INSTRUCTIONS. FAILURE TO FOLLOW ALL INSTRUCTIONS LISTED BELOW MAY RESULT IN ELECTRIC SHOCK, FIRE AND/OR SERIOUS INJURY. THE TERM "POWER TOOL" IN ALL WARNINGS LISTED BELOW REFERS TO YOUR RANDOM ORBITAL SANDER.

1) WORK AREA SAFETY

- a. **Keep work area clean and well lit.** *Cluttered or dark areas invite accidents.*
- b. **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.*
- c. **Keep children and bystanders away while operating a power tool.** *Distractions can cause you to lose control.*

2) ELECTRICAL SAFETY

- a. **Power tool plugs must match the power outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** *Unmodified plugs and matching power outlets will reduce risk of electric shock.*
- b. **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.*
- c. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d. **Do not abuse the cable. Never use the cable for carrying, pulling or unplugging the power tool. Keep cable away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cables increase the risk of electric shock.*
- e. **When operating a power tool outdoors, use an extension lead suitable for outdoor use.** *Use of a cable suitable for outdoor use reduces the risk of electric shock.*
- f. **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.*

3) PERSONAL SAFETY

- a. **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.*

- b. **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.*
- c. **Prevent unintentional starting. Ensure the trigger is in the off-position before connecting to power source, picking up or carrying the tool.** *Carrying power tools with your finger on the trigger or energising power tools that have the switch on invites accidents.*
- d. **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.*
- e. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
- f. **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.*
- g. **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.*

4) POWER TOOL USE AND CARE

- a. **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.*
- b. **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.*
- c. **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.*
- d. **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.*
- e. **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.*

- f. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g. **Use the power tool, and accessories 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.*

5) SERVICING

- a. **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.*

SAFE MANAGEMENT OF KICKBACK



WARNING: KICKBACK IS A SUDDEN REACTION TO A PINCHED OR SNAGGED ROTATING WHEEL, BACKING PAD, BRUSH OR ANY OTHER ACCESSORY. PINCHING OR SNAGGING CAUSES RAPID STALLING OF THE ROTATING ACCESSORY WHICH IN TURN CAUSES THE UNCONTROLLED POWER TOOL TO BE FORCED IN THE DIRECTION OPPOSITE OF THE ACCESSORY'S ROTATION AT THE POINT OF THE BINDING.







WARNING: KICKBACK IS THE RESULT OF POWER TOOL MISUSE AND/OR INCORRECT OPERATING PROCEDURES OR CONDITIONS AND CAN BE AVOIDED BY TAKING PROPER PRECAUTIONS AS GIVEN BELOW.

1. Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use the auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.
2. Never place your hand near the sanding pad. It may kickback over your hand.
3. Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in the direction opposite to the sanding pads movement at the point of snagging.
4. Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the sanding pad. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.

DUST EXTRACTION

1. The sander is provided with a dust extraction facility. Please note however, that this does not preclude the user from wearing a face mask to prevent the inhalation of dust particles.

SAFETY SYMBOLS

	Read instruction manual before use		Wear dust mask
	Wear safety glasses		Wear ear defenders
	The product falls under the WEEE Directive as stated on page 11		Class 2 Double Insulated cable

The above symbols may appear on the machine or packaging.

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. Connecting it to any other power source may cause damage.

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 due to damage, a replacement should be fitted, following the wiring instructions shown below. The old plug must be disposed of 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 **Blue** wire must be connected to the terminal marked **N** or coloured **Black**.
- The **Brown** wire must be connected to the terminal marked **L** or coloured **Red**.

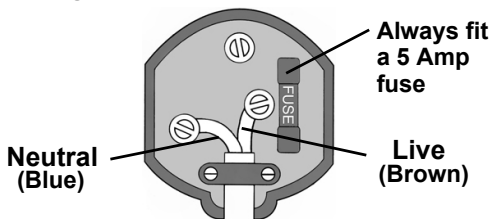
We strongly recommend that this machine is connected to the mains supply via a Residual Current Device (RCD)

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 require an earth connection.

Plug must be BS1363/A approved.



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

PRODUCT OVERVIEW



NO	DESCRIPTION
1	Handle
2	Speed Control
3	Trigger
4	Sanding Pad

NO	DESCRIPTION
5	Auxiliary Handle
6	Lock-On Button
7	Dust Bag
8	2 x 60G sanding discs (not shown) 2 x 100G sanding discs (not shown) 1 x 150G sanding disc (not shown)

PREPARATION AND USE

FITTING A SANDING DISC

1. Select the disc to be used.
 - This MUST be the correct 125mm diameter disc with hook and loop backing.
2. Ensure the sander is switched off and the plug is removed from the socket.
3. Line up the holes in the disc with those on the sanding pad.
 - This is necessary for dust extraction purposes.
4. Press the disc firmly onto the pad to secure it.



ADJUSTING THE AUXILIARY HANDLE

1. Loosen the handle adjustment knob.
2. Adjust the handle to the required position.
3. Retighten the handle adjustment knob.



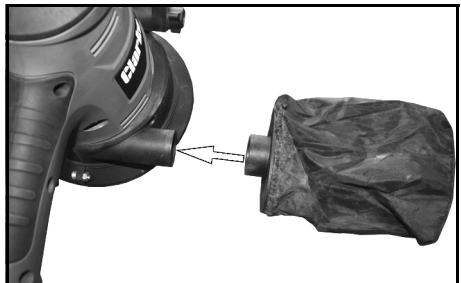
DUST COLLECTION

Slide the dust bag onto the outlet as shown.

The dust bag must be emptied regularly:- do not wait until it is completely full.

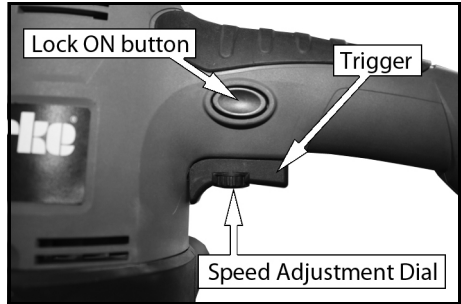
The dust bag is emptied as follows.

1. Ensure the sander is not running.
2. Gently remove the dust bag assy from the sander.
3. Take the dust bag to the dustbin and slip the bag off, (the bag has an elasticated top), empty the bag into the bin.
4. Reassemble the dust bag assy and fit back on to the sander.



OPERATION

1. Plug into the mains socket and switch on.
2. Place the sanding disc on the workpiece.
 - Hold the sander firmly with both hands.
3. Squeeze the trigger.
 - Work gently across the workpiece until smooth.
4. Release the trigger.
 - Wait until the motor has stopped fully before putting the sander down.



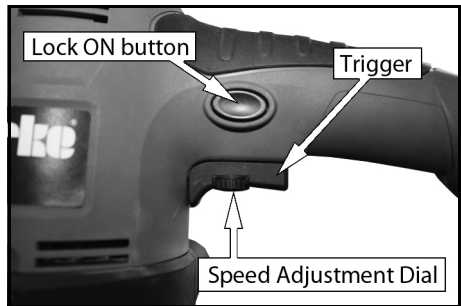
SPEED CONTROL

To control the speed, turn the knob located on the trigger in the direction marked, i.e. - = lower speed + = higher speed.

LOCK ON FEATURE

For continuous sanding:

1. Squeeze the trigger and then press the LOCK ON button.
 - The sander will continue to run even if the trigger is released.
2. To release the lock on feature, Squeeze the trigger again.



MAINTENANCE

1. Always inspect the sander before use and ensure it is in top condition.
2. Ensure all air vents are clear. (Use vacuum cleaner to clean the machine where possible).
3. Check the power cable to ensure it is sound and free from cracks, bare wires etc. Avoid using solvents when cleaning plastic parts, (most plastics are susceptible to damage from the various types of commercial solvents).
4. All bearings etc., in this tool are lubricated with sufficient high grade lubricant for the machine's lifetime under normal operating conditions, therefore no further lubrication is required.

REPLACEMENT DISCS

Abrasive Grit Size	PART NUMBER
60 grit (pack of 5)	6463051
100 grit (pack of 5)	6463052
150 grit (pack of 5)	6463053

ENVIRONMENTAL RECYCLING POLICY



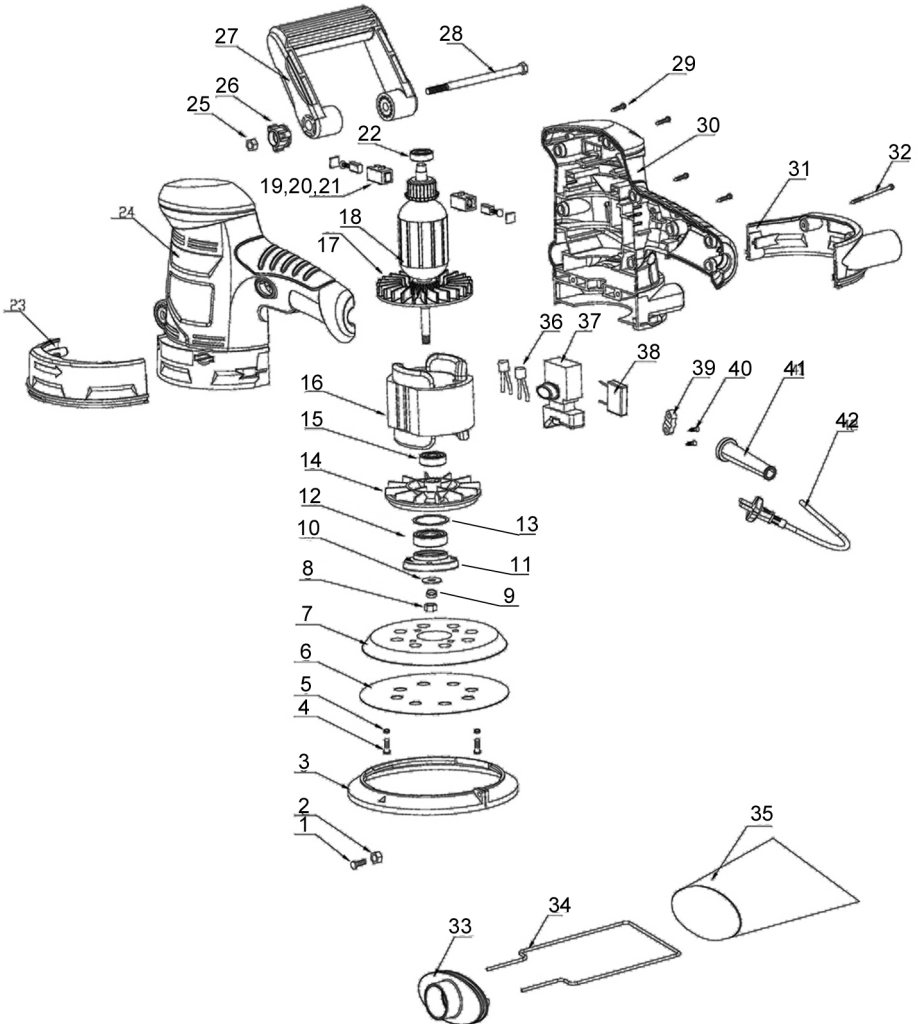
Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

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.

TROUBLESHOOTING

PROBLEM	CAUSE	REMEDY
Sander is overheating.	The machine is blocked with dust.	Clean the ventilation holes. Wipe the exterior with a dry cloth.
Excessive Sparking.	Worn brushes.	This problem is easily remedied but you should consult your CLARKE dealer for parts and advice.
Sander does not operate when switched on.	Check to ensure the fuse in the plug is sound.	If the fuse is sound or blows repeatedly, consult your CLARKE dealer.
Dust is not extracted.	The dust bag is full or the dust extractor flue is blocked.	Remove and empty the bag, also clear any blockage.

COMPONENT PARTS DIAGRAM



COMPONENT PARTS LIST

ID	DESCRIPTION
1	Screw
2	Nut
3	Dust entry surround
4	Self-tapping Screw
5	Spring washer
6	Sanding disc
7	Foam sanding pad
8	Nut
9	Spring washer
10	Washer
11	Bearing cover
12	Bearing
13	Lock spring
14	Fan
15	Bearing
16	Stator
17	Fan
18	Rotor
19	Carbon brush holder
20	Carbon brush
21	Carbon brush cover

ID	DESCRIPTION
22	Bearing
23	Left housing extension
24	Left Housing
25	Nut
26	Handle adjustment knob
27	Adjustable handle
28	Hex bolt
29	Self-tapping screw
30	Right housing
31	Right housing extension
32	Self tapping screw
33	Dust bag connector
34	Collection bag frame
35	Dust collection bag
36	Inductor
37	Switch
38	Capacitor
39	Strain relief
40	Self-tapping screw
41	Cable sleeve
42	Cable

DECLARATIONS OF CONFORMITY



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 directive(s):

2014/30/EU Electromagnetic Compatibility Directive
2006/42/EC Machinery Directive
2011/65/EU Restriction of the Use of Certain Hazardous Substances in Electrical & Electronic Equipment (RoHS) Directive

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

EN 55014-1:2017, EN 55014-2:2015, EN IEC 61000-3-2:2014, EN 61000-3-3:2013,
EN 62841-1:2015, EN 62841-2-4:2014, IEC 62321-1:2013, IEC 62321-2:2013, IEC 62321-3-1:2013,
IEC 62321-4:2013 + AMD1:2017 CSV, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015,
IEC 62321-7-2:2017, IEC 62321-8:2017, ISO 17075:2017.

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 authorities.

The CE mark was first applied in: 2009

Product Description: 450W Random Orbital Sander (230V)
Model number(s): CROSS
Serial / batch Number: N/A
Date of issue: 2010/02/22

Signed: _____

J.A. Clarke
Director



Clarke[®]
INTERNATIONAL

Hemmel 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 statutory requirement(s):

Electromagnetic Compatibility Regulations 2016
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 55014-1:2017, EN 55014-2:2015, EN IEC 61000-3-2:2014, EN 61000-3-3:2013,
EN 62841-1:2015, EN 62841-2-4:2014, IEC 62321-1:2013, IEC 62321-2:2013, IEC 62321-3-1:2013,
IEC 62321-4:2013 + AMD1:2017 CSV, IEC 62321-5:2013, IEC 62321-6:2015, IEC 62321-7-1:2015,
IEC 62321-7-2:2017, IEC 62321-8:2017, ISO 17075:2017.

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: 2022

Product Description: 450W Random Orbital Sander (230V)
Model number(s): CROSS
Serial / batch Number: N/A
Date of issue: 2010/02/22

Signed: _____

J.A. Clarke
Director

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Parts Enquiries

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Servicing & Technical Enquiries

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Clarke INTERNATIONAL Hemnall Street, Epping, Essex CM16 4LG
www.clarkeinternational.com