

# Clarke®

## WOODWORKER



### 1/3 SHEET ORBITAL SANDER

MODEL No. COS200

## OPERATING & MAINTENANCE INSTRUCTIONS



LS0610



## SPECIFICATIONS

Elec. Supply .....	230V 50Hz 1 ph
Power Rating .....	150 Watts
Fuse Rating .....	5 Amps
No Load Speed .....	10,000 RPM (Orbits/min)
Dust Extraction Port Dia. (Inner/Outer) .....	31/38mm
Pad Size .....	1/3rd Sheet
Noise Level (Sound Pressure Level) .....	72.6dB(A)
Vibration emissions (measured) .....	12.755 m/s <sup>2</sup> **

\*\* See notes on page 11

Please note that the details and specifications contained herein, are correct at the time of going to print. However, CLARKE International reserve the right to change specifications at any time without prior notice.



**When disposing of this product, do not dispose of with general waste. It must be disposed of according to the laws governing Waste Electrical and Electronic equipment, at a recognised disposal facility.**



Thank you for selecting this CLARKE 1/3 Sheet Orbital Sander, which is designed for DIY use only.

Before attempting to use the machine, please read this leaflet thoroughly 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 the Sander 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 therefore, 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.

Please note that the backing pad is not covered by this warranty.

## PARTS & SERVICE

For Spare Parts and Service, please contact your nearest dealer, or CLARKE International, on one of the following numbers.

**PARTS & SERVICE TEL: 020 8988 7400**

**PARTS & SERVICE FAX: 020 8558 3622**

or e-mail as follows:

**PARTS: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com)**

**SERVICE: [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)**

# SAFETY PRECAUTIONS



**WARNING:**



*As with all machinery, there are certain hazards involved with their operation and use. Exercising respect and caution will considerably lessen the risk of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator or damage to property, may result.*

1. **ALWAYS** Learn the machines' applications, limitations and the specific potential hazards peculiar to it. Read and become familiar with the entire operating manual.
2. **ALWAYS** use a face or dust mask if sanding operation is particularly dusty.
3. **ALWAYS** check for damage. before using the machine, any damaged part, should be checked to ensure that it will operate properly, and perform its intended function. Check for alignment of moving parts, breakage of parts, mountings, and any other condition that may affect the machines' operation. Any damage should be properly repaired or the part replaced. If in doubt, **DO NOT** use the machine. Consult your local dealer.
4. **ALWAYS** disconnect the tool/machine from the power supply before servicing and when changing accessories.
5. **ALWAYS** wear safety goggles, manufactured to the latest European Safety Standards. Everyday eyeglasses do not have impact resistant lenses, they are not safety glasses.
6. **ALWAYS** keep work area clean. cluttered areas and benches invite accidents.
7. **ALWAYS** ensure that adequate lighting is available. A minimum intensity of 300 lux should be provided. Ensure that lighting is placed so that you will not be working in your own shadow.
8. **ALWAYS** keep children away. all visitors should be kept a safe distance from the work area, especially whilst operating the machine.
9. **ALWAYS** maintain machine in top condition. keep tools/machines clean for the best and safest performance. follow maintenance instructions.
10. **ALWAYS** handle with extreme care do not carry the tool/machine by its' electric cable, or yank the cable to disconnect it from the power supply .
11. **ALWAYS** ensure the switch is off before plugging in to mains. Avoid accidental starting.
12. **ALWAYS** concentrate on the job in hand, no matter how trivial it may seem. be aware that accidents are caused by carelessness due to familiarity.
13. **ALWAYS** keep your proper footing and balance at all times - don't overreach. For best footing, wear rubber soled footwear. keep floor clear of oil, scrap wood, etc.



14. **ALWAYS** wear proper apparel. loose clothing or jewellery may get caught in moving parts. wear protective hair covering to contain long hair.
15. **ALWAYS** use recommended accessories. the use of improper accessories could be hazardous.
16. **ALWAYS** remove plug from electrical outlet when adjusting, changing parts, or working on the machine.
17. **NEVER** operate machine while under the influence of drugs, alcohol or any medication.
18. **NEVER** leave machine running unattended. turn power off. do not leave the machine until it comes to a complete stop.
19. **NEVER** force the machine. it will do a better and safer job at the rate for which it was designed.
20. **NEVER** use power tools in damp or wet locations or expose them to rain. keep your work area well illuminated. do not use in explosive atmosphere (around paint, flammable liquids etc.). Avoid dangerous environment.



## ADDITIONAL PRECAUTIONS FOR ORBITAL SANDERS

1. Do not use the machine if the electric cable, plug or the motor, is in poor condition.
2. Keep the mains cable well away from the sander, and ensure an adequate electrical supply is close at hand so that the operation is not restricted by the length of the cable.
3. Switch the machine OFF immediately the task is completed.
4. Never allow the ventilation slots in the machine to become blocked.
5. Always use the appropriate sanding medium for the material being worked. Both metal and wood sanding media of various grades are available from all good hardware stores.
6. Do not attempt any electrical repair yourself. Consult a qualified electrician, or our Service Dep't on **020 8988 7400**

**Additionally, please keep these instructions in a safe place for future reference.**

# ELECTRICAL CONNECTIONS



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 at any time, ensure that a plug of identical specification is used.



*This appliance is Doubly Insulated, and the two wires in the mains lead should be wired up in accordance with the following colour code:*

**BLUE** - **NEUTRAL**

**BROWN** - **LIVE**

- Connect the BLUE coloured cord to the plug terminal marked a letter "N"
- Connect the BROWN coloured cord to the plug terminal marked a letter "L"

If this appliance is fitted with a plug which is moulded on to the electric cable (i.e. non-rewireable) please note:

1. The plug must be thrown away if it is cut from the electric cable. There is a danger of electric shock if it is subsequently inserted into a socket outlet.
2. Never use the plug without the fuse cover fitted.
3. Should you wish to replace a detachable fuse carrier, ensure that the correct replacement is used (as indicated by marking or colour code).
4. Replacement fuse covers can be obtained from your local dealer or most electrical stockists.

## FUSE RATING

The fuse in the plug must be replaced with one of the same rating (**5 amps**) and this replacement must be ASTA approved to BS1362.

If in doubt, consult a qualified electrician. Do not attempt any electrical repairs yourself.

## CABLE EXTENSION.

Do not use an extension longer than 10 metres, with the conductor size at least the same size as that on the machine.

## DUST EXTRACTION

The sander is provided with a dust extraction facility, where a vacuum extractor may be connected to the outlet at the rear of the machine. An adapter is provided for this purpose. Please note however, that this does not preclude the user from wearing a face mask to prevent the inhalation of dust particles.

It is an EEC requirement that a dust extraction facility be provided on power tools, however, due to the nature of the tool, some of the dust produced will be forced into the surrounding atmosphere, and will not be collected.

## OPERATION

With the mains cable disconnected from the mains supply, select the abrasive paper appropriate for the job in hand, and attach it to the Base Plate, by releasing the two spring clips - one for each end.

Align the abrasive sheet so that the holes are perfectly aligned with those in the base plate, and bend the ends over, securing at each end with the spring clip.

It is important that the abrasive sheet should be taught and not sag.

If required, attach the dust extractor adapter by pushing the end into the orifice at the rear of the tool until it locks into place. The vacuum dust extractor may then be attached to it.

The ON/OFF trigger switch is located under the grip.

DO NOT plug in to the mains, unless you have ensured the tool is switched OFF. To do this, pull the switch fully upwards, and then release it.

To switch the machine ON, pull the trigger switch and hold in position. A button lock is provided on the side of the handle which may be used for prolonged use. Simply push it in with the trigger pressed then release the trigger.

To release the switch lock, and switch OFF, pull the trigger switch a second time.

## GENERAL HINTS FOR SANDING

Always use abrasive paper that is in top condition, worn paper will cause damage to the base plate. Please note, that base plates are NOT covered by the warranty.

When starting, **ALWAYS** place the sander on the work **BEFORE** switching ON. This will prevent the work from being badly scored, because if the tool is placed on the work after switching on, it will be running at high speed, and almost impossible to place on the work smoothly and evenly.

Move the machine evenly and smoothly over the surface of the work, with only light pressure, evenly spread on the front hand post, and the handle. This helps to expel dust particles, and produce an even finish, and will also prolong the life of the abrasive paper.

Let the machine do the work. Ensure the tool is flat on the work surface and DO NOT apply excessive downwards pressure, as this will not only produce an uneven finish, but will overload the motor causing it to burn out.

Be cautious when sanding off the end of a workpiece, as the paper could come off the base plate, damaging the pad in the process.

## MAINTENANCE

Always inspect the machine before use, and ensure it is in top condition.

Ensure all air vents are clear, (use compressed air to clean the machine where possible).

Check the cable to ensure it is sound and free from cracks, bare wires etc.

## RENEWING THE BASE PLATE

Ensure the machine is disconnected from the mains supply, then unscrew the four screws securing the plate to the machine.

Replace the plate and reassemble ensuring you DO NOT overtighten the four screws.

## TROUBLE SHOOTING

### Sander is overheating

This indicates the machine is dirty. Clean the ventilation holes, and blow out with compressed air or a clean dry cloth.

Overloading the machine will also cause overheating. Do not use for heavy duty work, and do not apply excessive pressure.

### Excessive sparking occurs

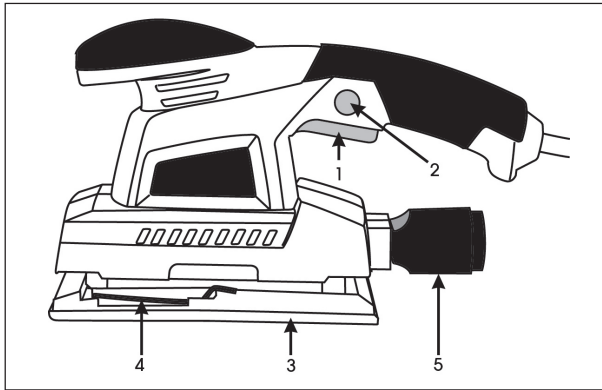
This indicates worn brushes. This problem is quickly remedied but you should consult your CLARKE dealer for parts and advice.

### Sander does not operate when switched ON

Check to ensure the fuse is sound, and replace if necessary. If the fuse is sound, or the blows repeatedly, consult your CLARKE dealer.



## PARTS DIAGRAM



## PARTS LIST

Item	Description	Part No.
1	ON/OFF Trigger Mechanism	*
2	Trigger Lock	*
3	Base Plate	HTCOS20003
4	Abrasive Paper Retaining Clip	HTCOS20004
5	Dust Extraction Adapter	HTCOS20005

\* Consult your CLARKE dealer.

# VIBRATION EMISSIONS

*Employers are advised to refer to the HSE publication “Guide for Employers”.*

All hand held power tools vibrate to some extent, and this vibration is transmitted to the operator via the handle, or hand used to steady the tool. Vibration from about 2 to 1500 herz is potentially damaging and is most hazardous in the range from about 5 to 20 herz.

Operators who are regularly exposed to vibration may suffer from Hand Arm Vibration Syndrome (HAVS), which includes ‘dead hand’, ‘dead finger’, and ‘white finger’. These are painful conditions and are widespread in industries where vibrating tools are used.

The health risk depends upon the vibration level and the length of time of exposure to it.....in effect, a daily vibration dose.

Tools are tested using specialised equipment, to approximate the vibration level generated under normal, acceptable operating conditions for the tool in question. For example, a grinder used at 45° on mild steel plate, or a sander on softwood in a horizontal plane etc.

These tests produce a value ‘a’, expressed in metres per second per second, which represents the average vibration level of all tests taken, in three axes where necessary, and a second figure ‘K’, which represents the uncertainty factor, i.e. a value in excess of ‘a’, to which the tool could vibrate under normal conditions. These values appear in the specification panel below.

You will note that a third value is given in the specification - the highest measured reading in a single plane. This is the maximum level of vibration measured during testing in one of the axes, and this should also be taken into account when making a risk assessment.

‘a’ values in excess of 2.5 m/s<sup>2</sup> are considered hazardous when used for prolonged periods. A tool with a vibration value of 2.8 m/s<sup>2</sup> may be used for up to 8 hours (cumulative) per day, whereas a tool with a value of 11.2 m/s<sup>2</sup> may be used for ½ hour per day only.

The graph opposite shows the vibration value against the maximum time the respective tool may be used, per day.

The uncertainty factor should also be taken into account when assessing a risk. The two figures ‘a’ and ‘K’ may be added together and the resultant value used to assess the risk.

It should be noted that if a tool is used under abnormal, or unusual conditions, then the vibration level could possibly increase significantly. Users must always take this into account and make their own risk assessment, using the graph above as a reference.

Some tools with a high vibration value, such as impact wrenches, are generally used for a few seconds at a time, therefore the cumulative time may only be in the order of a few minutes per day. Nevertheless, the cumulative effect, particularly when added to that of other hand held power tools that may be used, must always be taken into account when the total daily dose rate is determined.



MODEL No: **COS200**  
 DESCRIPTION: **1/3 SHEET ORBITAL SANDER**

Declared vibration emission value in accordance with EN12096

Measured vibration emission value - a: ..... 12.755m/s<sup>2</sup>

Uncertainty value - K: ..... 1.5m/s<sup>2</sup>

Highest measured reading in a single plane ..... 19.635m/s<sup>2</sup>

Values determined according to EN28622-2

# DECLARATION OF CONFORMITY



**Clarke**<sup>®</sup>  
**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):

- 2004/108/EC *Electromagnetic Compatibility Directive.*
- 2006/42/EC *Machinery Directive.*
- 2006/95/EC *Low Voltage Equipment Directive.*
- 2002/95/EC *Restriction of Hazardous substances.*

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

- EN60745-1:2009, EN60745-2-4:2009, EN55014-1:2006, EN55014-2:1997+A1:2001,
- EN61000-3-2:2006, EN61000-3-3:1995+A1:2001+A2:2005.

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: 2006

**Product Description:** Orbital Sander (1/3 Sheet)  
**Model number(s):** COS200  
**Serial / batch Number:** N/A  
**Date of Issue:** 25/06/2010

Signed:

J.A. Clarke  
Director

# A SELECTION FROM THE VAST RANGE OF

# Clarke®

## QUALITY PRODUCTS

### AIR COMPRESSORS

From DIY to industrial, Plus air tools, spray guns and accessories.

### GENERATORS

Prime duty or emergency standby for business, home and leisure.

### POWER WASHERS

Hot and cold, electric and engine driven - we have what you need

### WELDERS

Mig, Arc, Tig and Spot. From DIY to auto/industrial.

### METALWORKING

Drills, grinders and saws for DIY and professional use.

### WOODWORKING

Saws, sanders, lathes, mortisers and dust extraction.

### HYDRAULICS

Cranes, body repair kits, transmission jacks for all types of workshop use.

### WATER PUMPS

Submersible, electric and engine driven for DIY, agriculture and industry.

### POWER TOOLS

Angle grinders, cordless drill sets, saws and sanders.

### STARTERS/CHARGERS

All sizes for car and commercial use.



**PARTS & SERVICE: 0208 988 7400**

**E-mail: [Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com) or [Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)**

**SALES: UK 01992 565333 or Export 00 44 (0)1992 565335**

**Clarke®** INTERNATIONAL Hemnall Street, Epping, Essex CM16 4LG  
[www.clarkeinternational.com](http://www.clarkeinternational.com)