

# Clarke®

## **METALWORKER**



## **ELECTRIC DRILL BIT SHARPENER**

MODEL NO: CBS16

PART NO: 6480230

### OPERATION & MAINTENANCE INSTRUCTIONS



LS0910

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## INTRODUCTION

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Thank you for purchasing this CLARKE electric drill bit sharpener.

Before attempting to use this product, please read this manual 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 your purchase giving you long and satisfactory service.

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## IMPORTANT

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Please read all of the safety and operating instructions carefully before using this product. Please pay particular attention to all sections of these instructions that display warning symbols and notices.



**WARNING! This is a Warning symbol. This symbol is used throughout the user guide whenever there is a risk of personal injury. Ensure that these warnings are read and understood at all times.**

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## GUARANTEE

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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.

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## GENERAL SAFETY RULES

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**WARNING: WHEN USING ELECTRIC TOOLS, MACHINES, OR EQUIPMENT, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND PERSONAL INJURY.**

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1. **KEEP WORK AREA CLEAN.** Cluttered areas invite injuries. Keep work area well lit.
2. **NEVER** use power tools in damp, wet, or poorly lit locations. Don't expose to rain. Do not use electrically powered tools in the presence of flammable gases or liquids.
3. **KEEP CHILDREN AWAY.** Children must never be allowed in the work area. Do not let them handle machines, tools, or extension cable.
4. **STORE IDLE EQUIPMENT.** When not in use, tools must be locked up in a dry location to inhibit rust. Always lock up tools and keep out of reach of children.
5. **DO NOT FORCE THE TOOL.** It will do the job better and more safely at the rate for which it was intended.
6. **DRESS PROPERLY.** Do not wear loose clothing or jewellery which could be caught in moving parts.
7. **USE EYE AND HAND PROTECTION.** Always wear approved impact safety goggles.
8. **DO NOT ABUSE THE POWER CABLE.** Do not yank it to disconnect it from the socket. Do not carry tools by the cable.
9. **DISCONNECT POWER.** Unplug when not in use, before servicing, and when changing accessories.
10. **AVOID UNINTENTIONAL STARTING.** Be sure the switch is in the OFF position when not in use and before plugging in.
11. **STAY ALERT.** Watch what you are doing, use common sense. Do not operate any tool when you are tired.
12. **CHECK DAMAGED PARTS.** Before using any tool, any part that appears damaged should be carefully checked to determine that it will operate properly and perform its intended function. Do not use the tool if the switch does not turn on and off properly.
13. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces such as pipes, radiators.
14. **REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Use of any other parts will void the warranty. Only use accessories intended for use with this tool.
15. **DO NOT OPERATE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS.** If there is any doubt, do not operate the tool.
16. **KEEP AWAY FROM LIQUIDS.** Tool is designed for dry sharpening operations only.
17. **HEAT PRODUCED WHEN SHARPENING.** The sharpening head and any bits being sharpened will become hot. Be careful when handling; allow drill tips to cool before storing.

## 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 230VAC 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.

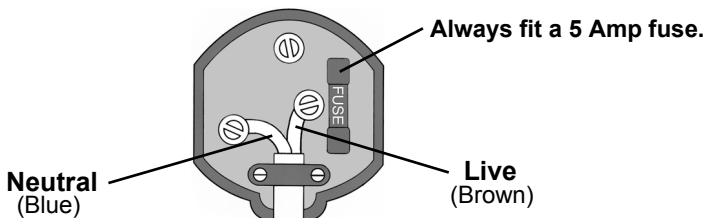


**WARNING! The wires in the power cable of this product are coloured in accordance with the following code:  
Blue = Neutral    Brown = Live**

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**.

**Plug must be BS1363/A approved.**



**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 require an earth connection.**

## PRODUCT OVERVIEW



NO	DESCRIPTION
1	Grinding Wheel Height Adjustment Knob
2	Head Assembly
3	On/Off Switch

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# OPERATIONS

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## PROPERLY SHARPENED BITS

Your bit is properly sharpened when it has the following characteristics.

- A sharp point in the center of the bit.
- Two sharp and equal cutting edges
- Two trailing edges that are slightly lower than the cutting edges.

## SHARPENING PROCEDURE

1. Place sharpener on a flat, sturdy surface and plug in.
2. Put a single drill bit (HSS only) into the appropriate hole
3. Turn the unit on.
  - Exert a slight downward pressure onto the bit and rotate the bit back and forth about 20 degrees while sharpening.
  - The bit must be kept in motion whilst in the machine.
4. Turn unit off after approximately 5-10 seconds of sharpening.
  - Examine bit according to the "Sharpening Hints" section below.
5. Ensure both sides of the drill bit are sharpened using the same amount of time and pressure.
6. Repeat the above steps as necessary.
7. Do not run the machine for longer than 2 minutes at a time.



## SHARPENING HINTS

- If the tip of bit starts to turn blue, it is overheating. Reduce the amount of pressure and sharpening time. Cool the bit in water between sharpening cycles.
- If one edge is longer than the other, sharpen the drill bit a little more.
- If you are sharpening a broken (rather than blunt) bit and the time required to restore the shape is too long, rough the bit into shape first using a bench grinder.

## ADJUSTING THE GRINDING WHEEL

1. Turn the grinding wheel height adjustment knob clockwise to raise the wheel.
  - This will give you an aggressive cutting action. This is also useful when you are working with short bits.
2. Lower the wheel by turning the adjusting knob to the left.
  - This will produce a finer ground edge, though it will take longer and require more repetitions.

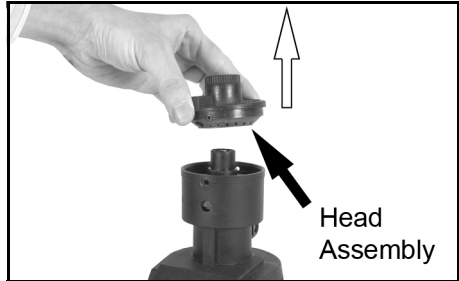
Grinding Wheel Height Adjustment Knob



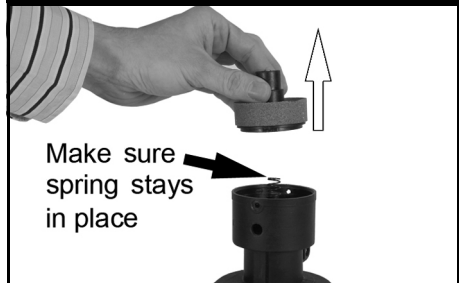
# MAINTENANCE

## CHANGING THE WHEEL

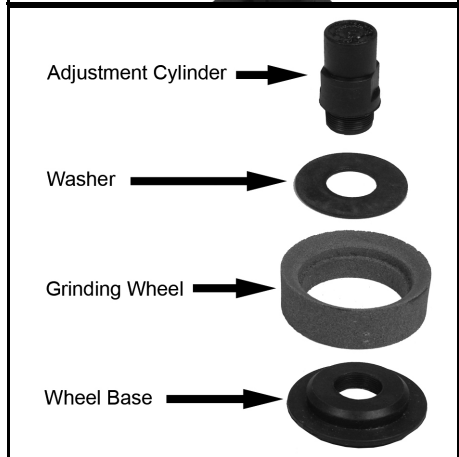
1. Make sure that the sharpener is switched off and disconnected from the mains power supply.
2. Remove the two screws that hold the head assembly in place and remove the head assembly.



3. Remove the wheel assembly.
  - Make sure the spring underneath stays in place.



4. Unscrew the adjustment cylinder from the wheel base by turning clockwise.
5. Prise out the washer (#6).
6. Pop out the wheel base and remove the worn grinding wheel.
7. Press new grinding wheel onto the wheel base, replace the washer, and screw the adjustment cylinder back in.
8. Replace wheel assembly onto the unit.
  - Make sure that the inner flats of the adjustment cylinder line up with the outer flats of the drive spindle.



9. Replace the head assembly and screws.



## CLEANING

1. Keep the surface of your sharpener free of grit, dirt, and grease. Use soapy water or non-toxic solvents. Do not use petroleum based solvents.
2. Keep the air vents free of foreign matter at all times.
3. If the motor does not operate, it needs to be serviced or replaced by a qualified technician.

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## TROUBLESHOOTING

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If the motor turns on, but the wheel does not spin, make sure the adjustment cylinder's inner flats line up with the outer flats of the spindle as described in "Changing The Wheel" on page 8.

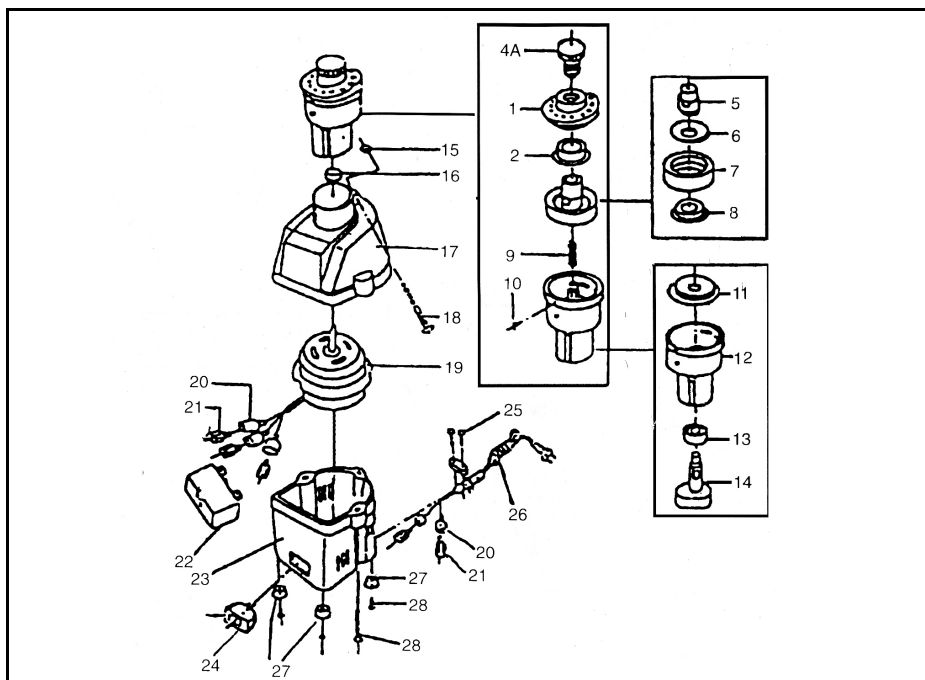
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## SPECIFICATION

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Model Number	CSB16
Voltage	230 V @ 50Hz
Operating Temperature	-15°C - +40°C
Drill Bit Sizes And Type	3.0 mm to 10 mm HSS
Duty Cycle	S3 20% (2 minutes on, 8 minutes off)
No Load Speed	1600 rpm
Sound Pressure Level (L <sub>pA</sub> dB)	61 dB(A)
Guaranteed Sound Power (L <sub>wA</sub> dB)	74 dB(A)
Dimensions (L x W x H)	140 x 130 x 240 mm
Weight	2.2 Kg

# PARTS LIST AND DIAGRAM



ID	DESCRIPTION	PART NO	ID	DESCRIPTION	PART NO
4A	Adjustment Knob	HTCBS1604A	16	Connector (Male)	HTCBS16016
1	Index	HTCBS16001	17	Upper Motor Housing	HTCBS16017
2	Cap Ring	HTCBS16002	18	Bolt	HTCBS16018
5	Adjustment Cylinder	HTCBS16005	19	Motor	HTCBS16019
6	Washer	HTCBS16006	20	Cover	HTCBS16020
7	Grinding Wheel	HTCBS16007	21	Terminal	HTCBS16021
8	Wheel Base	HTCBS16008	22	Capacitor	HTCBS16022
9	Spring	HTCBS16009	23	Lower Motor Housing	HTCBS16023
10	Screw	HTCBS16010	24	Switch	HTCBS16024
11	Cover	HTCBS16011	25	Screw	HTCBS16025
12	Housing	HTCBS16012	26	Cable	HTCBS16026
13	Ball Bearing	HTCBS16013	27	Rubber Pad	HTCBS16027
14	Drive Spindle	HTCBS16014	28	Screw	HTCBS16028
15	Nut	HTCBS16015			

# 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):**

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.

EN 55014-1:2006, EN 55014-2:1997+A1:2001+A2:2008, EN 61000-3-2:2006, EN 61000-3-3:2008  
EN 61029-1:2000+A11:2003+A12:2003, 61029-1:2009, EN 61029-2-4:2003+A1:2003

The CE mark was first applied in: 2006

**Product Description:** Electric Drill Sharpener  
**Model number(s):** CBS16  
**Serial / batch Number:** N/A  
**Date of Issue:** 05/03/2010

**Signed:**



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**J.A. Clarke**  
**Director**

# A SELECTION FROM THE VAST RANGE OF

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