

Clarke®



850W HAMMER DRILL

MODEL NO: CHD850B

PART NO: 6479502

OPERATION & MAINTENANCE INSTRUCTIONS



GC0416

INTRODUCTION

Thank you for purchasing this CLARKE Hammer Drill.

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.

Please keep these instructions in a safe place for future reference.

ENVIRONMENTAL PROTECTION



Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of 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 SYMBOLS

	Read instruction manual before use		Wear ear defenders
	Wear dust mask		Wear safety glasses

The above safety symbols appear on the product.

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 850W HAMMER DRILL.

WORK AREA

1. **Keep 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.*
4. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges or refrigerators.** *There is an increased risk of electric shock if your body is earthed or grounded.*
5. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
6. **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.*

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, or hearing protection used for appropriate conditions will reduce personal injuries.*
3. **Avoid accidental starting. Ensure the switch is in the off position before connecting to the power supply.**
4. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
5. **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 power tool for your application.** *The correct power tool will do the job better and safer at the rate which it was designed.*
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 battery 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.** *Poorly maintained cutting 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 for the particular type of power tool, 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.*

HAMMER DRILL SAFETY INSTRUCTIONS

1. Only use the drill in the manner and for the functions described.
2. Using the correct bit. Use the appropriate drill bit for the material being drilled. Different bits are available from your Clarke dealer.
3. **Use of the mains cable.** Keep the mains cable well away from the drill and ensure an adequate electrical supply is close at hand so that the operation is not restricted by the length of the cable.
4. **Working on the bench.** Allow sufficient clearance beneath the work to ensure the drill bit does not come into contact with the floor, table etc.
5. **Switching off.** Never place the drill on a table or bench if it has not completely stopped. The drill bit will continue to rotate for a short time after the trigger has been released to stop the drill.
6. **Drilling into walls.** Do not drill into walls or cavities before checking for hidden electrical wires or water pipes etc.

7. **Finishing drilling.** Do not touch the drill bit immediately after use, allow time for it to cool.
8. **Use outdoor extension leads.** If working outdoors, always use an approved cable extension suitable for the power rating of this tool (see specifications), the conductor size should also be at least the same size as that on the machine, or larger. When using a cable reel, always unwind the cable completely. We strongly recommend that this machine is connected to the mains supply via a Residual Current Device (RCD).
9. **Cooling agents.** When drilling metals, always use a cooling agent i.e. cutting/soluble oil.

SERVICE

1. **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.*

SPECIFICATIONS

Item	Specification
Operating Modes	Drill or Drill & Hammer Action/Reverse
Chuck Capacity	1.5 mm -13 mm
Rated No-load Speed	0 - 2800 rpm
Weight	2.17 kg
Impact Rate	4200 blows/min
Rated Drilling Capacity (mm)	Wood, 32/ Steel, 12 / Masonary, 16
Dimensions (L x W x H)	313 x 67 x 207 mm
Operating voltage & Frequency	230V~50Hz
Fuse rating	13 A
Motor Power	850W
Sound Pressure Level	91.34 dB LpA
Sound Power Level	102.34 dB LwA
Vibration Level using 6 mm drill bit	Front 6.228 m/s ² , Aux. 5.017 m/s ²
Vibration Level using 8 mm drill bit	Front 15.163 m/s ² , Aux. 9.601 m/s ²

ELECTRICAL CONNECTIONS



WARNING! Read these electrical safety instructions thoroughly before connecting the product to the mains supply.

This product battery charger 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.

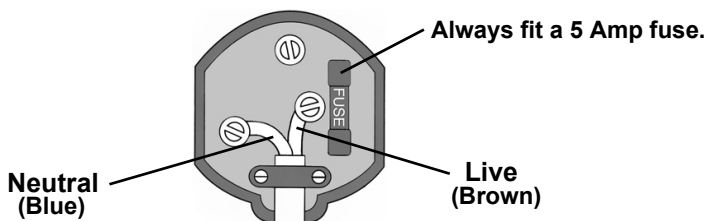


WARNING! The wires in the power cable of this product are coloured in accordance with the following code:
Blue = Neutral Brown = Live

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.

OVERVIEW



The CLARKE CHD850B is a variable-speed hammer drill designed for DIY use. It is equipped with a variable speed control and hammer operation. It also has a lock-on button for continuous operation.

When unpacking, check for damage or shortages etc. Any found should be reported to your CLARKE dealer where the drill was originally purchased. This drill is supplied with the following components:

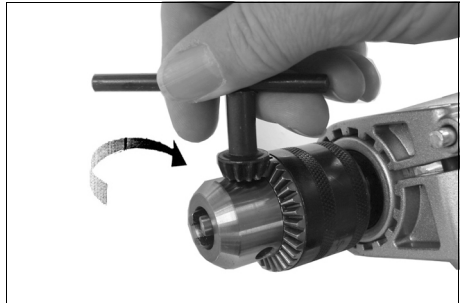
- 1 x Hammer Drill
- 1 x Chuck Key
- 1 x Depth Stop Rod
- 1 x Auxilliary (Side) Handle

OPERATION

IMPORTANT: To avoid accidental starting, ensure the drill is switched OFF before plugging in to the mains. To do this, briefly pull the switch, and release to ensure the trigger lock is not set in the 'lock' position.

INSERTING A DRILL BIT

1. Open the chuck by rotating the chuck sleeve anticlockwise until the jaws are open sufficiently to take the drill bit.
2. Place the drill bit in the jaws of the chuck as far as it will go.
3. Insert the chuck key in one of the three holes in the chuck and tighten in a clockwise direction.
 - Make sure that the head of the chuck key is located on the cog barrel of the chuck when tightening.



WARNING: REMOVE THE CHUCK KEY BEFORE OPERATING THE DRILL.



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- To remove the bit, release the jaws by inserting the chuck key in one of the holes and turning in an anticlockwise direction.

SWITCHING ON & CONTINUOUS OPERATION

1. Plug into a 13amp socket and squeeze the trigger to start the drill.
2. During use, press the trigger lock-on button and the drill will run continuously. Squeeze the trigger again briefly to release the trigger lock & stop the drill.

HAMMER DRILL SELECTION

Slide the drill/hammer drill mode selector switch to the 'Hammer' symbol on the drill body.

NORMAL DRILL SELECTION

Slide the drill/hammer drill mode selector switch to the 'Drill' symbol on the drill body.

NOTE: Both these operations should only be performed when the drill is at a complete stop.



FORWARD / REVERSE SELECTION

1. Set the forward/reverse selector switch to the position marked 'R' for normal 'Right Hand' (forward) rotation for drilling holes.
2. Set the forward/reverse selector switch to the position marked 'L' for 'Left Hand' (reverse) rotation to reverse the drill out of the workpiece.

NOTE: This operation should only be performed when the drill is at a complete stop.



SPEED SELECTION

1. Turn the variable speed control in the centre of the trigger until the drill runs at your chosen speed.
2. The drill can be locked running by pressing the lock-on button after the trigger is squeezed.
3. To stop the drill, just squeeze the trigger again.

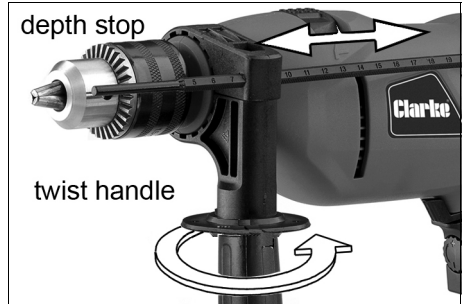


AUXILIARY HANDLE

1. Fit the handle by loosening it off prior to sliding it over the chuck and onto the body of the drill.
2. Rotate the handle to the desired position and secure in position by twisting the handle grip clockwise.

DEPTH STOP

1. The depth stop is fitted within the auxiliary handle and can only be used if the handle is installed.
2. Loosen the handle and insert the depth stop rod through the holder in the handle assembly.
3. Slide the rod in and out to the required position. Lock in place by turning the handle clockwise.



GENERAL DRILLING TECHNIQUE

- After drilling material to the full depth, maintain chuck rotation to ease drill withdrawal.
- Always drill directly in line with the bit. Do not use sideways movement as this may damage the drill or cause the bit to break.
- If the drill is not cutting the metal then sharpen the drill bits, ensuring the various cutting angles are correct.
- Always use sharp, good quality drill bits. The performance of your drill is dependant on the quality of the bits used.
- Reduce the pressure on the drill bit when it is about to break through. This will prevent the drill from jamming.
- If drilling a large hole, first drill a pilot hole using a smaller drill bit.
- Always apply pressure to your drill bit in a straight line and, where possible, at right angles to the workpiece.
- When drilling holes or driving screws into walls, floors etc., always make sure that there are no live electrical wires in the path of the bit.
- When drilling in metal, the materials being drilled can become hot. To reduce overheating use a suitable cooling lubricant. No cooling lubricant is necessary when drilling cast iron or brass as they should be drilled dry.
- When drilling metal, the harder the metal the slower the drill speed. Similarly, the bigger the drill bit the slower the speed.

- To prevent the drill bit from slipping when starting to drill a hole in metal, use a centre punch to make an indentation at the start point.
- Always start drilling at the slowest speed to prevent the drill from slipping out of the pop mark or indent.
- Select the speed according to the drill bit being used whilst maintaining a MODERATE pressure ONLY. NEVER force the drill bit into the work. This will overheat the tip and cause it to dull very quickly.
- When drilling in wood, clamp a piece of scrap wood to the underside of the material to avoid splintering.
- Always drill directly in line with the bit. Do not use sideways movement as this may damage the drill or cause the bit to break.
- Large holes should be drilled with wood augers, flat wood bits or hole saws.

MAINTENANCE

Before commencing any maintenance procedures, always ensure the drill is isolated from the electrical supply by switching off and removing the plug from the socket.

BEFORE USE

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

CLEANING

1. Ensure all air ventilation slots are clear of blockages, (use compressed air to clean the machine if possible).
2. After use, clean all dust and swarf from the drill.
3. Clean the exterior of the drill with a soft cleaning cloth. Never use any chemicals/ solvents or harsh abrasives to clean the drill.

GENERAL MAINTENANCE

- All bearings etc, in this tool are lubricated with a sufficient amount of high grade lubricant for the tools lifetime under normal operating conditions, therefore no further lubrication is necessary.
- Refer to your CLARKE dealer if internal maintenance is required.

FAULTFINDING

Problem	Possible Cause	Remedy
Tool will not operate	No power supply	Check supply & rectify as necessary
	Switch is faulty	Consult your Clarke dealer
	Fuse blown	Check & replace if necessary
	Motor is faulty	Consult your Clarke dealer
Motor runs but drill bit does not move.	Drill fastening not tight	Secure drill bit
	Drive gear broken	Consult your Clarke dealer
Heavy internal sparking	Faulty motor	Consult your Clarke dealer
	Worn brushes	Consult your Clarke dealer
Motor becomes hot	Unduly heavy use	Reduce the force applied to the tool. Let the tool do the work
	Air vent have become blocked	Clean out the air vents using compressed air or clean with a dry cloth
	Low supply voltage	Ensure supply voltage is correct. If an extension cable is used, ensure it is the correct rating and is fully unwound
Excessive vibration.	Drill bit bent or not mounted correctly	Check and rectify
	Machine bearings worn	Consult your Clarke dealer

COMPONENT PARTS LIST

No	Description
1	Chuck Retaining Screw
2	Chuck Cable
3	Drive Spindle
4	Woodruff Key
5	Impact Spring
6	Bearing 6001
7	Carbon Brush Holder
8	Gear
9	Circlip
10	Drive Support Block
11	Impact Piece
12	Impact Selector
13	Bearing
14	Motor Fan
15	Motor Rotor
16	Carbon Brush
17	Brush Spring

No	Description
18	Carbon Brush Holder
19	Screw
20	Motor Bearing 607
21	Torsion Spring
22	Inductor
23	Motor Stator
24	Trigger Assembly
25	Capacitor
26	X-head Screw
27	Cable Clamp
28	Power Cable & Plug
29	Cable Sleeve
30	Casing (LH)
31	Casing (RH)
32	Casing Screw
33	Auxiliary Handle
34	Depth Stop Rod

When ordering spare parts please quote the reference WGCHD850B followed by the number above.

An extensive selection of accessories including Drill Bit Sets, Socket & Bit Sets and Drill Bit Sharpeners are available from your CLARKE dealer.

The following drill bit sets are suggested for use with your hammer drill.

CHT342 - 30 Piece Titanium Coated HSS Drill Set (Imperial Sizes) **Part No: 1801342**

CHT348 - 30 Piece Titanium Coated HSS Drill Set (Metric Sizes) **Part No: 1801348**

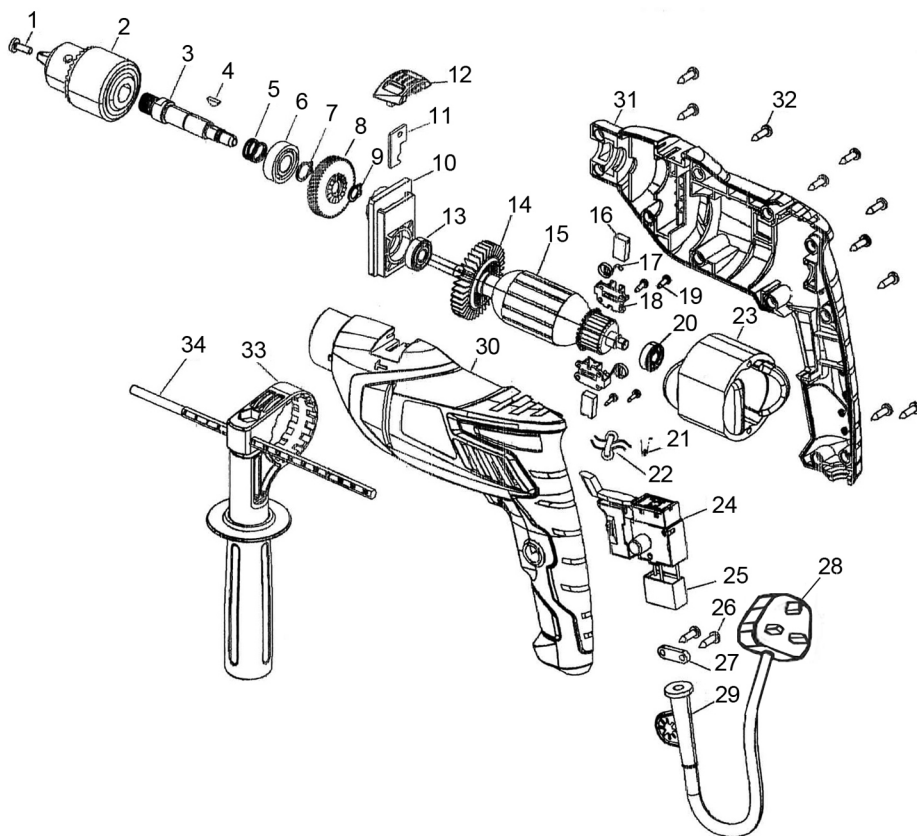
Titanium coated HSS bits last up to 6 times longer than standard bits which can be sharpened using a Clarke Drill Sharpener such as the CBS43 or the CBS16.

CHT383 - 19 Piece (Metric) Cobalt Steel Drill Set **Part No: 1801383**

CHT384 - 25 Piece (Metric) Cobalt Steel Drill Set **Part No: 1801384**

Suitable for drilling carbon steel, super alloys, titanium and stainless steel.

COMPONENT PARTS



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.

DECLARATION OF CONFORMITY



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 directive(s):

2004/108/EC *Electromagnetic Compatibility Directive.*

2006/42/EC *Machinery Directive.*

2011/65/EU *Restriction of Hazardous substances.*

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

EN 55014-1:2006 +A1:2009 +A2:2011, EN 55014-2:1997 +A1:2001 +A2:2008, EN 61000-3-2:2014,

EN 61000-3-3:2013, EN 60745-1:2009 +A11: 2010, EN 60745-2-1:2010.

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: 2015

Product Description:	Impact Drill
Model number(s):	CHD850B
Serial / batch Number:	N/A
Date of Issue:	01/02/2016

Signed:

J.A. Clarke
Director

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