

BENCH MORTISER MODEL NO: CBM1-C

PART NO: 6500008

OPERATING & MAINTENANCE INSTRUCTIONS



ORIGINAL INSTRUCTIONS

DL0822 - ISS 1

INTRODUCTION

Thank you for purchasing this CLARKE Bench Mortiser.

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.

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.

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.

PARTS & SERVICE

This product has been designed to give long and trouble free service. If, however, having followed the instructions in this booklet carefully, you encounter problems, refer to your local CLARKE dealer.

SPECIFICATIONS

Model Number	CBM1C
Dimensions (L x W x H)	337 x 340 x 646 mm (780mm Handle Up)
Weight	27 kg
Power Supply	230V @50Hz 1ph, Class B
Rated Input Power Rating	370 Watts
Speed	1400 rpm
Spindle to Fence (Max.)	90 mm
Chisel to Table (Max.)	125 mm
Chisel Capacity	6 - 12 mm
Drill Chuck Capacity	1 - 13 mm
Chisel Shank Size	19.05 mm
Max. Workpiece Depth	125 mm
Max. mortise Depth	76 mm
Table Size	340 x 150 mm

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.

SAFETY LABELS

Read instruction manual before use	Wear ear defenders
Wear safety glasses	Wear a mask.

SAFETY WARNINGS



WARNING: READ ALL SAFETY WARNINGS AND ALL INSTRUCTIONS. FAILURE TO FOLLOW THE WARNINGS AND INSTRUCTIONS CAN RESULT IN ELECTRIC SHOCK, FIRE AND/OR INJURY.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated electric bench mortiser.

WORK AREA SAFETY

- 1. Keep work area clean and well lit. Cluttered or 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 can 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

- Power tool plugs must match the outlet. DO NOT modify the plug in any way. DO NOT use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.
- 2. **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.
- 3. **DO NOT** expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- 4. **DO NOT** abuse the cable. **DO NOT** 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.
- 5. 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.
- 6. 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.

PERSONAL SAFETY

- 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 can result in personal injury.
- 2. Use personal protective equipment. **ALWAYS** wear eye and ear protection. Protective equipment such as dust mask, non-skid safety shoes or hearing protection used for appropriate conditions will reduce personal injuries. This machine develops considerable noise when in use.
- 3. Prevent unintentional starting. Ensure the switch is in the **OFF** position before connecting to power source.
- 4. 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 can 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 correctly. **DO NOT** wear loose clothing or jewellery. Keep your hair, and clothing 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 for 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 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.
- 4. Store idle power tools out of the reach of children and **DO NOT** let 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 can 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. Keep cutting tools sharp and clean. Sharp cutting edges are less likely to bind and are easier to control.

7. Use the power tool, accessories and tool bits etc. 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.

ADDITIONAL SAFETY INSTRUCTIONS FOR MORTICING MACHINES

- 1. **DO NOT** use until unit is completely assembled and installed according to these instructions.
- 2. If you are not thoroughly familiar with the operation of morticing machines, obtain advice from a qualified person.
- 3. Ensure the machine is secured to a workbench to prevent it from tipping over during operation, see page 10.
- 4. **NEVER** turn the morticing machine on before clearing the table of all objects (tools, scrap pieces, etc.).
- 5. **ALWAYS** keep hands, fingers and hair well away from the rotating bit.
- 6. **DO NOT** attempt to mortise materials that **DO NOT** have a flat surface, unless a suitable support is used.
- 7. **ALWAYS** use the `Hold Down' to prevent work from lifting when withdrawing the chisel.
- 8. ALWAYS support the workpiece securely against fence to prevent rotation.
- 9. ALWAYS ensure chisel and bit is sharp, undamaged and properly secured.
- 10. **ALWAYS** ensure the chuck key is removed before starting.
- 11. **NEVER** start the machine with the drill bit or chisel pressed against the workpiece.
- 12. **NEVER** perform layout, assembly, or set-up work on the machine with the cutting tool rotating.
- 13. **ALWAYS** adjust the depth stop to avoid drilling into the table.
- 14. ALWAYS stop the machine before removing scrap pieces from the table.
- 15. **ALWAYS** shut off the power, remove the drill bit and chisel and clean the table before leaving the machine.
- 16. **NEVER** place your fingers in a position where the drill or cutting tool could contact them if the workpiece should shift unexpectedly.

ELECTRICAL CONNECTIONS

WARNING! READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.

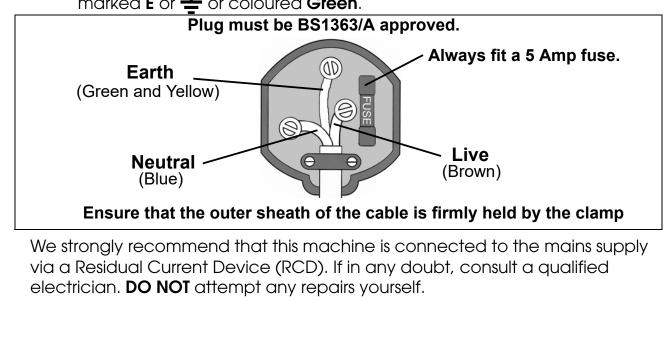
Before switching the product on, make sure that the voltage of your electricity supply is the same as that indicated on the rating plate. This product is designed to operate on 230VAC 50Hz. Connecting it to any other power source may cause damage.

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.

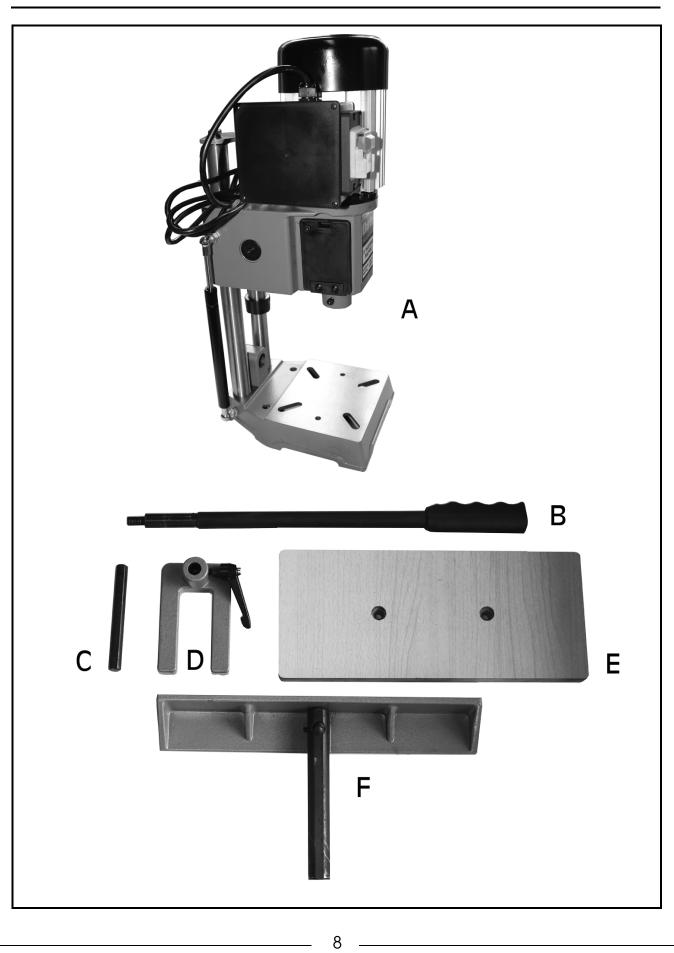
If the plug has to be changed because it is not suitable for your socket, or due to damage, it should be cut off and a replacement fitted, following the wiring instructions shown below. The old plug must be disposed of safely, as insertion into a mains socket could cause an electrical hazard.

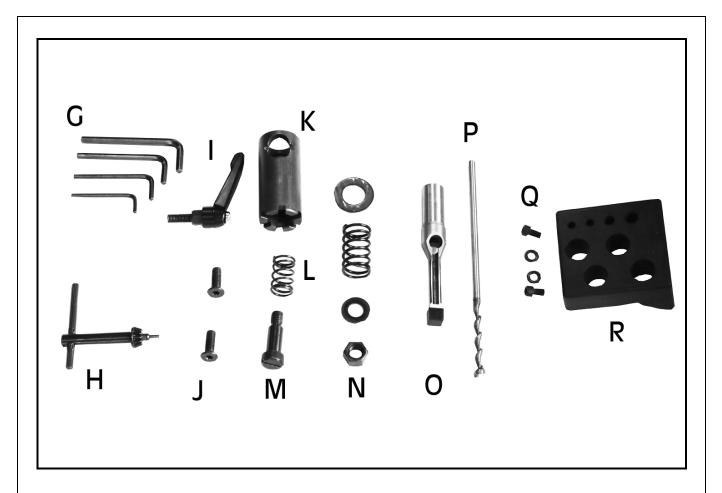
If the colours of the wires in the power cable of this product do not correspond with the markings on the terminals of your plug, proceed as follows.

- 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**.



COMPONENTS





When unpacking please check contents and advise your dealer immediately if any parts are missing. The essential components are as follows.

DESCRIPTION
Motor, Head & Stand Unit
Raise/Lower Handle
Hold Down Bar
Hold Down Clamp & Lock Handle
Table
Fence
4 x Hex Keys
Chuck Key
Fence Lock Handle

NO	DESCRIPTION
J	2 x Counter Sunk Bolts for Table
K	Handle Lever Assembly
L	Handle Lever Spring
Μ	Handle Lever Bolt
Ν	Handle Nut, Spring & 2 x Washers
0	Chisel
Ρ	Drill Bit
Q	2 x Tool Holder Bolt & Washer
R	Tool & Chisel Holder

ASSEMBLY

WARNING: FOR YOUR OWN SAFETY, DO NOT CONNECT THE MORTICING MACHINE TO A POWER SOURCE UNTIL IT IS FULLY ASSEMBLED, AND YOU HAVE READ AND UNDERSTOOD ALL SAFETY AND OPERATIONAL INSTRUCTIONS.

INSTALLATION

IMPORTANT: Before using the machine, it must be bolted down to a firm and stable workbench to prevent it from tipping during operation. Two holes are supplied in the base for this purpose.

Additionally, the chisel and bit must be

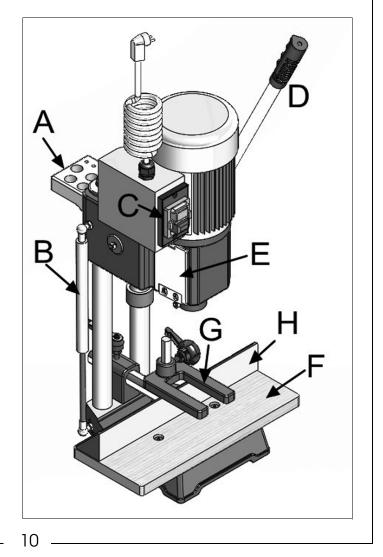
installed and various adjustments made

before the machine can be used. These procedures are described on the fol-

lowing pages.

KNOW YOUR MORTISER

A: Tool Storage Rack B: Gas Spring C: On/Off Switch D: Handle Lever E: Chuck Access Cover F: Table G: Hold Down H: Fence

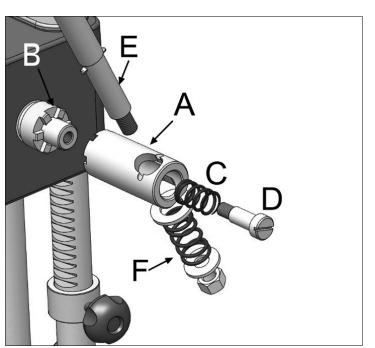


Bolt Down

Holes

INSTALLING THE HANDLE LEVER.

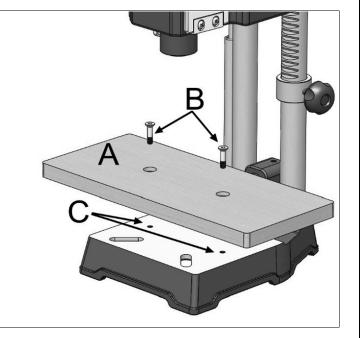
- Place the hub of the handle lever assembly (A) to the end of the pinion shaft (B) and fasten handle to pinion shaft using special screw (D) and spring (C).
- Fasten the handle (E) using the nut, washers and spring (F) into the hub of the handle (A).
- 3. Raise the mortising machine head to the up position by turning the handle (E) clockwise.



NOTE: Handle (E) is spring loaded and can be repositioned by pulling out the handle to the right and repositioning it on the pinion shaft (B).

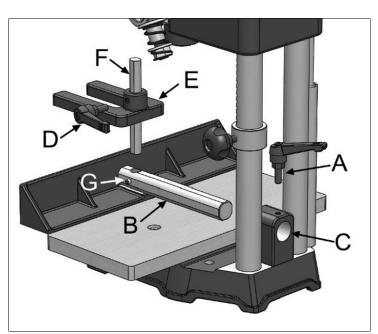
INSTALLING THE TABLE

- Screw the table (A) to the base using the two flat head screws (B).
- 2. Thread the two screws (B) into the two holes (C) in the table base.
- The table (A) can be moved in or out by loosening the two screws (B) and repositioning the table, and then tightening the screws (B).



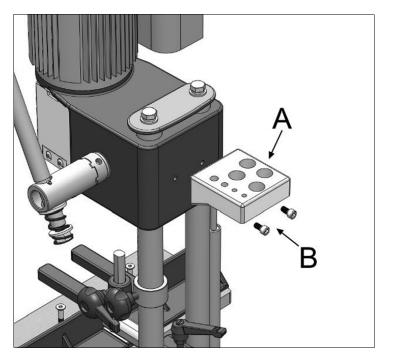
INSTALLING THE FENCE AND HOLD DOWN

- Insert the fence bar (B) into the hole (C) and fasten by the lock handle (A).
- Insert the hold down (E) onto the hold down bar (F) and fasten with the lock handle (D).
- Place the hold down bar (F) into the fence bar (B)mortise and fasten using the screw (G).



INSTALLING THE TOOL AND CHISEL HOLDER

- Place the tool and chisel holder (A) to the rear of the machine and screw into place using the two bolts (B) as shown.
 - NOTE: The holder will hold the chuck key, wrench, chisels and bits when not in use.

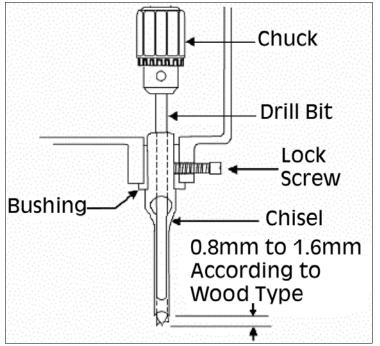


INSTALLING THE CHISEL AND BIT

CAUTION: THE CHISEL AND DRILL BIT ARE EXTREMELY SHARP...TAKE CARE WHEN HANDLING!

Installing the Chisel

- 1. Loosen the lock screw.
- 2. Insert the chisel bushing (with the hole facing the screw hole in the head) into the head. Tighten the screw just enough to hold the chisel in place.
 - NOTE: Set the slot in the side of the chisel to the left or right, NOT to the front or back. This will allow chips to escape when cutting.
- 3. Push the chisel up as far as possible into the head. Then lower the chisel



approximately 0.8mm to 1.6mm, depending on the type of wood being worked. Tighten the screw to hold the chisel in place.

Installing the Bit

- 1. Open the chuck access cover at either side of the head, by unscrewing the single securing screw then pulling down on the plastic catch to expose the chuck.
- 2. Push the bit up through the chisel opening as far as it will go. Lock the drill bit in place with the chuck key.
- 3. Loosen screw and push chisel up against the bushing, then tighten screw. This should provide the proper distance between the points of the chisel and the bit.

PREPARING FOR USE



WARNING: MAKE SURE THE MACHINE IS DISCONNECTED FROM THE MAINS SUPPLY BEFORE PERFORMING CHECKS, ADJUSTMENTS, OR SETUP PROCEDURES.

Note is important that the drill bit bottoms out on the CHISEL and NOT the chuck, before setting the 1/16" (2mm) clearance.

If the bit does bottom out in the chuck first, slacken off the grub screw securing the chisel and lower it approx. 1/16" (2mm) and try again.

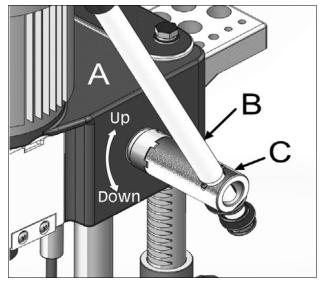
• Alternatively, grind off a portion of the drill shank.

This adjustment is IMPORTANT to ensure a proper clearance is provided between the cutting tips of the bit and the points of the chisel.

For certain types of wood, it may be necessary to increase this distance up to a maximum of 3/16" (5mm). This will become obvious when cutting commences and chips are not being ejected satisfactorily.

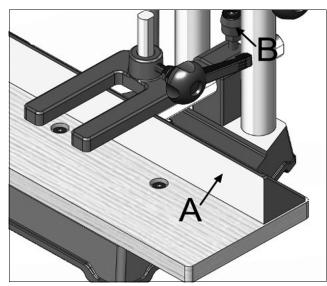
RAISING & LOWERING THE HEAD

The head (A) is raised and lowered by means of the lever (B). For maximum leverage during morticing, the lever (B) can be repositioned by pulling out the hub (C) of the lever assembly and repositioning the hub on the pinion shaft.



ADJUSTING THE FENCE

- The fence (A) can be moved in or out by slackening the locking lever (B), sliding the fence to the desired position and re-tightening the locking lever.
 - **NOTE:** The lever (B) is spring loaded and can be repositioned by pulling up on the lever and repositioning it on the serrated nut located underneath the lever.



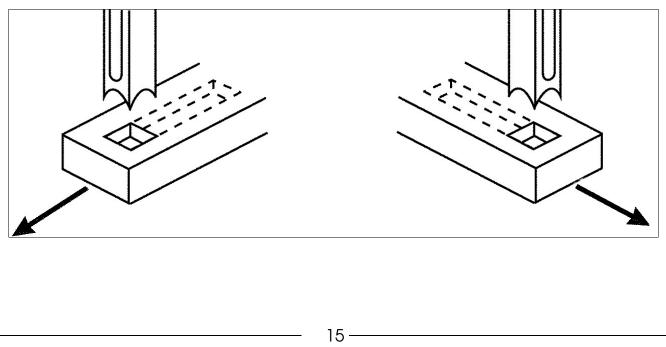
ADJUSTING CHISEL PARALLEL TO WORKPIECE

It is important that the chisel is square to the workpiece. To achieve this, slacken the chisel securing screw and rotating the chisel until the back surface is flat against the workpiece, or a piece of wood with parallel sides, resting against the fence, then retighten the screw, ensuring a distance of at least 1/16" (2mm) is maintained between the chisel and the end of the drill bit.



It is also IMPORTANT to remember that

the slot in the side of the chisel should always face TOWARDS THE DIRECTION OF MOVEMENT OF THE WORKPIECE (see diagram below).

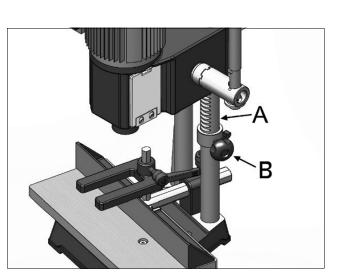


ADJUSTING THE DEPTH STOP

A depth stop is provided which can be used to limit the depth of the chisel cut.

To adjust the depth stop guide (A), loosen the securing knob (B) so that the stop is capable of being moved, but will not drop under its own weight, then raise the stop so that it contacts the underside of the head.

Lower the head to the desired depth, then tighten the securing knob (B).



ADJUSTING THE HOLD DOWN

The purpose of the `Hold Down' in to prevent the workpiece from lifting as the chisel is raised up, out of the hole.

The hold down should be adjusted so it just touches the top of the workpiece and allows the workpiece to slide left or right. Packing pieces may be used if necessary.

OPERATION

- 1. Set the fence to suit the position of the mortise on the workpiece. Make sure the fence and chisel are square to each other (see p15), and tighten in place.
- 2. Make any fine adjustments to the fence to move the workpiece in or out by using the adjuster at the rear of the fence (see p15).
- 3. Set the Depth Stop to the required depth of cut as described above.
- 4. Ensure the Hold Down rests gently on the surface of the workpiece, but not so tight as it prevents the workpiece from moving, and lock into position as described above. If necessary, use packing pieces between the workpiece and the hold down.
 - If working on long workpieces, support the timber along its length.
- 5. Ensure the workpiece is held firmly against the fence.

SWITCHING ON AND OFF

- The ON-OFF switch is located on the left hand side of the motor. Push the GREEN (I) button to switch the machine ON.
- 2. Push the RED (O) button to switch the machine OFF.

NOTE: The switch is a No Volt Release type. If the supply is interrupted, the ON/OFF switch will automatically



revert to the OFF position. This is a safety device to prevent the machine from starting again, should the supply be restored.

3. With the machine running, feed the chisel and bit steadily into the workpiece by pulling down on the operating handle.

NOTES

- It is recommended that you check the position and depth of cut, on a piece of scrap before cutting your workpiece.
- The rate of penetration of the chisel must be fast enough to prevent burning at the tip of the drill bit, but not so fast as to cause the machine to slow or stall. With experience you will find suitable feed rates to suit various types of timber.
- You may encounter smoke from the bit or material once the chisel has engaged the material. The smoke created is a natural operating occurrence in hollow chisel morticing and is caused by material chip friction and the resins in the stock being burned off. Blueing of the chisel after initial use is not indicative of a dull chisel, but a combination of friction and resin buildup on the cutting faces of the chisel.
- A dull chisel can be detected by the amount of excess force required to complete a cut.
- After the first cut, the workpiece must be moved along in the correct direction relative to the slot in the chisel, to allow chips to clear freely. Move the workpiece so that the chisel slot is releasing chips into the already cut part of the mortise.
- **DO NOT** have the slot against the blind end of the mortise, as the chips will not be able to clear from the chisel. This will cause overheating and possible breakage to the chisel or bit.
- When cutting deep mortises, make the cut in several stages of approximately 25mm each, to allow chips to clear.

- When performing a through mortise, a piece of wood should be placed between the workpiece and the table. This prevents the wood from splintering when breaking through the bottom of the mortise and also prevents damage to the table.
- **ALWAYS** switch the morticing machine off after use. **NEVER** leave the machine running unattended.

MAINTENANCE



WARNING: FOR YOUR OWN SAFETY, TURN OFF POWER AND DISCONNECT TOOL FROM POWER SOURCE BEFORE PERFORMING ANY MAINTENANCE.

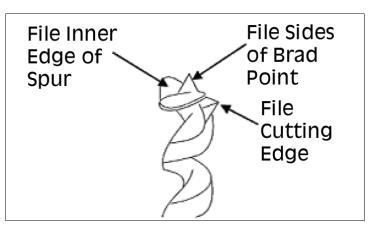
The machine is maintenance free except for periodically cleaning away any dust accumulation and the application a light coat of oil to all non-painted surfaces, particularly the two columns.

All of the bearings are packed with grease at the factory and require no further lubrication.

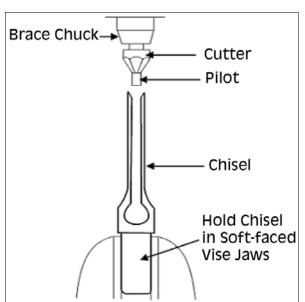
SHARPENING THE DRILL BIT & CHISEL

For best performance the chisel and bit need to be kept sharp. Blunt cutting edges will give untidy and inaccurate mortises, and can cause overheating and breaking of the chisel and bit. Chisels and bits will need replacing when they become badly worn and difficult to sharpen.

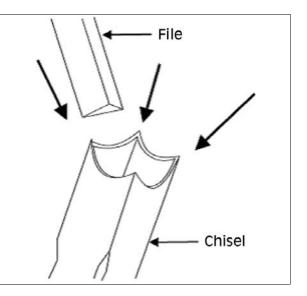
 Sharpen the bit by using a small smooth file, following the original shape of the bit.
File the inside edge of the spur, the sides of the brad point, and the cutting edge inwards towards the flutes of the bit to restore sharpness.
DO NOT file the outside edge of the spur as this will affect the diameter of the bit.



2. Use a mortise chisel cutter with the correct size pilot to sharpen the chisel (pilot size will differ depending on the size of the chisel). Two or three turns of the cutter in a carpenters hand brace should be enough to sharpen the chisel.



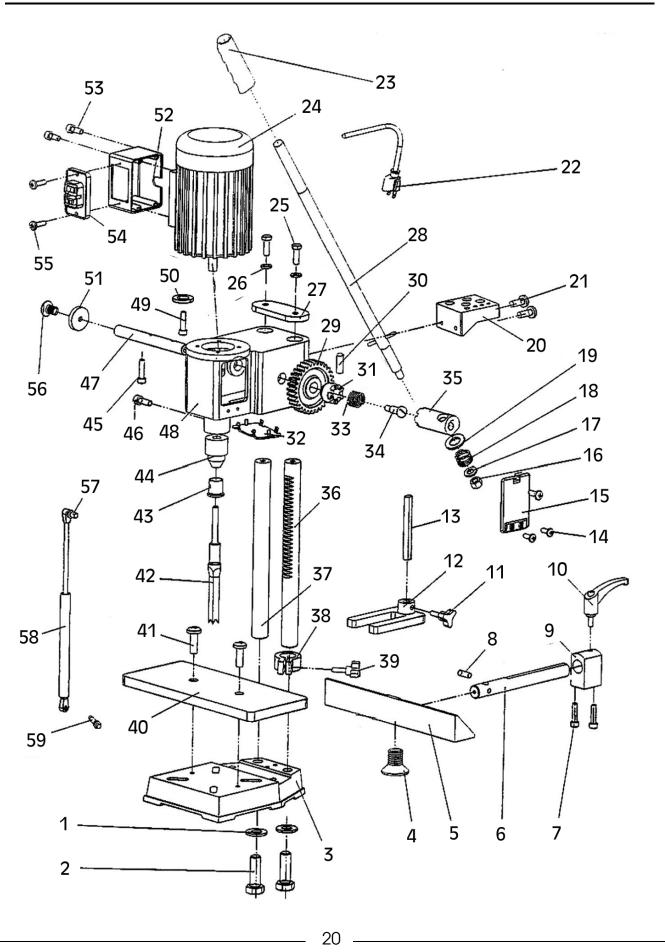
 Use a small, triangular, smooth file to relieve the inner corners of the chisel. Remove any burrs from the outside of the chisel with a fine oil-stone.



The following replacement mortise chisels can be obtained from your local Clarke dealership

- 1/4" Mortise Chisel, Part Number: 6500025
- 3/8" Mortise Chisel, Part Number: 6500026
- 1/2" Mortise Chisel, Part Number: 6500027
- 5/8" Mortise Chisel, Part Number: 6500028

COMPONENT PARTS



Parts & Service: 020 8988 7400 / E-mail: Parts@clarkeinternational.com or Service@clarkeinternational.com

COMPONENT PARTS

1 2 3 4 5 6 7 8 9 10	Lock Washer Bolt Base Screw Fence Guide Column Screw Screw
3 4 5 6 7 8 9	Base Screw Fence Guide Column Screw Screw
4 5 6 7 8 9	Screw Fence Guide Column Screw Screw
5 6 7 8 9	Fence Guide Column Screw Screw
6 7 8 9	Guide Column Screw Screw
7 8 9	Screw Screw
8 9	Screw
9	
10	Guide Bracket
10	Lock Handle
11	Knob
12	Hold-Down Clamp
13	Guide Column
14	Screw
15	Cover
16	Nut
17	Washer
18	Spring
19	Washer
20	Tool Rack
21	Screw
22	Power Cable
23	Handle Grip
24	Motor
25	Bolt
26	Lock Washer
27	Step Plate
28	Handle
29	Gear
30	Pin

No	Description
31	Connecting Bend A
32	Cover
33	Spring
34	Screw
35	Connecting Bend B
36	Gear Column
37	Guide Column
38	Depth Set Guide
39	Lock Handle
40	Wood Table
41	Screw
42	Chisel
43	Chisel Bushing
44	Chuck
45	Screw
46	Screw
47	Gear Shaft
48	Gear Casing
49	Screw
50	Lock Washer
51	Cover
52	Switch Box
53	Screw
54	On/Off Switch
55	Screw
56	Screw
57	Screw
58	Gas Spring
59	Screw

DECLARATION OF CONFORMITY - UKCA

UK CA	CIAPER INTERNATIONAL
	Hemnall Street, Epping, Essex CM16 4LG
	DECLARATION OF CONFORMITY
This	is an important document and should be retained.
We hereby declare that th	is product(s) complies with the following statuary requirement(s):
Electromagnetic Con	npatibility Regulations 2016
	(Safety) Regulations 2008
The Restriction of the Regulations 2012	e Use of Certain Hazardous Substances in Electrical and Electronic Equipment
The following standards h	have been applied to the product(s):
EN 55014-1:2017/A1	1:2000, EN 55014-2:2015, EN IEC 61000-3-2:2019, EN 61000-3-3:2013/A1:2019,
IEC 60204-1:2016, E	N 60204-1:2018, EN ISO 12100:2010.
	The UKCA mark was first applied in: 2022
Product Description:	Bench Mortiser
Model number(s):	CBM1C
Serial / batch Number:	N/A
Date of Issue:	01/08/2022
Signed:	John Clarke
	J.A. Clarke
	Director

DECLARATION OF CONFORMITY - CE

CE	CIAPER INTERNATIONAL
	Fitzwilliam Hall, Fitzwilliam Place, Dublin 2
	DECLARATION OF CONFORMITY
Т	his is an important document and should be retained.
	at this product(s) complies with the following directive(s):
	Electromagnetic Compatibility Directive
	Machinery Directive
	Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Directive
The following standa	rds have been applied to the product(s):
EN 55014-1:201	7/A11:2000, EN 55014-2:2015, EN IEC 61000-3-2:2019, EN 61000-3-3:2013/A1:2019,
IEC 60204-1:201	16, EN 60204-1:2018, EN ISO 12100:2010.
The technical docume aforementioned directiv authorities.	ntation required to demonstrate that the product(s) meet(s) the requirement(s) of the ve(s) has been compiled and is available for inspection by the relevant enforcement The CE mark was first applied in: 2022
Product Description:	Bench Mortiser
Model number(s):	CBM1C
Serial / batch Number	
Date of Issue:	01/08/2022
Signed:	J.A. Clarke
	Director
	0122 Page 1 of 1



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