

# DRAPER®

INSTRUCTIONS FOR

# 370W Bench Morticer

Stock No.33651

Part No.BM13C

**IMPORTANT:** PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



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DRAPER®

## GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

# 1. TITLE PAGE

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## **1.1 INTRODUCTION:**

USER MANUAL FOR:

## **370W BENCH MORTICER**

Stock no. 33651

Part no. BM13C

## **1.2 REVISIONS:**

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Date first published July 2013.

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As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://www.drapertools.com/b2c/b2cmanuals.pgm>

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## **1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:**

**WARNING!** Information that draws attention to the risk of injury or death.

**CAUTION!** Information that draws attention to the risk of damage to the product or surroundings.

**NOTE!** Important information.

## **1.4 COPYRIGHT © NOTICE:**

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## 3. GUARANTEE

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### **3.1 GUARANTEE**

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. The guarantee is extended to 24 months for parts only. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

# 4. INTRODUCTION

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## 4.1 SCOPE

A **morticer** is a specialised woodworking machine used to cut square or rectangular holes in a piece of wood.

The **Bench Morticer** (also called a hollow chisel morticer), combines the cutting of a four-sided chisel with the action of a drill bit in the centre. The bit clears out most of the material to be removed and the chisel ensures the edges are straight and clean.

## 4.2 SPECIFICATION

Stock no .....	33651
Part no .....	BM13C
Rated input.....	370W
Rated voltage .....	230V/50Hz
Chisel capacity.....	12.7mm (1/2")
Max. morticing depth .....	76mm
Max. clamping height .....	90mm
Chuck capacity.....	13mm
Fence to chisel centre .....	84mm
Speed (no load) .....	1400r/min
Table size .....	340 x 150mm
Base size.....	190 x 256mm
Dimensions (L x W x H) .....	760 x 250 x 230mm
Sound power level .....	77.5dB(A)
Sound pressure level .....	66.6dB(A)
Vibration level .....	<2.5m/s <sup>2</sup>
Weight (gross) .....	27kg

## 4.3 HANDLING & STORAGE

Care must be taken when handling and lifting. Dropping this machine will have an effect on the accuracy and may also result in personal injury. This machine is not a toy and must be respected.

The environment will have a negative result on its operation if you are not careful. If the air is damp, components will rust. If the machine is unprotected from dust and debris; components will become clogged: And if not cleaned and maintained correctly or regularly the machine will not perform at its best.

## 5. HEALTH & SAFETY INFORMATION

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### **5.1 GENERAL SAFETY INSTRUCTIONS FOR POWER TOOL USE**

When using any type of power tool there are steps that should be taken to make sure that you, as the user, remain safe.

Common sense and a respect for the tool will help reduce the risk of injury.

**Read the instruction manual fully.** Do not attempt any operation until you have read and understood this manual.

Most important you must know how to safely start and stop this machine, especially in an emergency.

**Keep the work area tidy and clean.** Attempting to clear clutter from around the machine during use will reduce your concentration. Mess on the floor creates a trip hazard. Any liquid spilt on the floor could result in you slipping.

**Find a suitable location.** If the machine is bench mounted; the location should provide good natural light or artificial lighting as a replacement. Avoid damp and dust locations as it will have a negative effect on the machine's performance.

If the machine is portable; do not expose the tool to rain. In all cases do not operate power tools near any flammable materials.

**Beware of electric shock.** Avoid contact with earthed surfaces; because they can conduct electricity if there is an electrical fault with the power tool. Always protect the power cable and route it away from danger.

**Keep bystanders away.** Children, onlookers and passers by must be restricted from entering the work area for their own protection. The barrier must extend a suitable distance from the tool user.

**Unplug and house all power tools that are not in use.** A power tool should never be left unattended while connected to the power supply. They must be housed in a suitable location, away locked up and from children.

**Do not overload or misuse the tool.** All tools are designed for a purpose and are limited to what they are capable of doing. Do not attempt to use a power tool (or adapt it in any way) for an application it is not designed for. Select a tool appropriate for the size of the job. Overloading a tool will result in tool failure and user injury: This covers the use of accessories.

**Dress properly.** Loose clothing, long hair and jewellery are all dangerous because they can become entangled in moving machinery: This can also result in parts of body being pulled into the machine.

Clothing should be close fitted, with any long hair tied back and jewellery and neck ties removed. Footwear must be fully enclosed and have a nonslip sole.

## 5. HEALTH & SAFETY INFORMATION

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**Wear personal protective equipment (PPE).** Dust, noise, vibration and **swarf** can all be dangerous if not suitably protected against. If the work involving the power tool creates dust or fumes; wear a dust mask. Vibration to the hand, caused by operating some tools for longer periods must be protected against. Wear vibration reducing gloves and allow long breaks between uses. Protect against dust and **swarf** by wearing approved safety goggles or a face shield. These are some of the more common hazards and preventions; however, always find out what hazards are associated with the machine/work process and wear the most suitable protective equipment available.

**Do not breathe contaminated air.** If the work creates dust or fumes; connect the machine (if possible) to an extraction system either locally or remotely. Working outdoors can also help if possible.

**Move the machine as instructed.** If the machine is hand held, do not carry it by the power supply cable. If the product is heavy; employ a second or third person to help move it safely or use a mechanical device. Always refer to the instructions for the correct method.

**Do not overreach.** Extending your body too far can result in a loss of balance and you falling. This could be from a height or onto a machine and will result in injury.

**Maintain your tools correctly.** A well maintained tool will do the job safely. Replace any damaged or missing parts immediately with original parts from the manufacturer. As applicable; keep blades sharp; moving parts clean, oiled or greased; handles clean; and emergency devices working.

**Wait for the machine to stop.** Unless the machine is fitted with a safety brake; some parts may continue to move due to momentum. Wait for all parts to stop; then unplug it from the power supply before making any adjustments, carrying out maintenance operations or just finishing using the tool.

**Remove and check setting tools.** Some machinery requires the use of additional tools or keys to set, load or adjust the power tool. Before starting the power tool always check to make certain they have been removed and are safely away from the machine.

**Prevent unintentional starting.** Before plugging any machine in to the power supply, make sure the switch is in the OFF position. If the machine is portable; do not hold the machine near the switch and take care when putting the machine down; that nothing can operate the switch.

**Carefully select an extension lead.** Some machines are not suitable for use with extension leads. If the tool is designed for use outdoors; use an extension lead also suitable for that environment. When using an extended lead, select one capable of handling the current (amps) drawn by the machine in use. Fully extend the lead regardless of the distance between the power supply and the tool. Excess current (amps) and a coiled extension lead will both cause the cable to heat up and can result in fire.

**Concentrate and stay alert.** Distractions are likely to cause an accident. Never operate a power tool if you are under the influence of drugs (prescription or otherwise), including alcohol or if you are feeling tired. Being disorientated will result in an accident.

## 5. HEALTH & SAFETY INFORMATION

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**Have this tool repaired by a qualified person.** This tool is designed to conform to the relevant international and local standards and as such should be maintained and repaired by someone qualified; using only original parts supplied by Draper Tools: This will ensure the tool remains safe to use.

### ***5.2 SPECIFIC SAFETY INSTRUCTION FOR MORTICER USE***

There are certain risks linked to using any morticer, large or small, that have to be guarded against. This manual will advise you on basic safety and how to operate your machine.

**Beware of contact hazards (cutting).** Take care when handling the work piece and parts of the morticer. Wear appropriate gloves to protect your hands and clear up after each operation.

**Beware of slip, trip and fall hazards.** The area closely surrounding the morticer, both on the bench and floor, must be kept clear, clean and tidy.

**Beware of fire and explosion.** Do not operate this morticer in or around flammable materials. This machine is not designed for use in hazardous environments.



## 5. HEALTH & SAFETY INFORMATION

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### 5.3 ADDITIONAL SAFETY INSTRUCTIONS

**Important:** For your own safety read and understand the instruction manual before operating this machine. Should you encounter any problems, please telephone (023) 8049 4344. For the Draper helpline.

This Bench Morticer is designed for mortising and drilling wood only.

Before mortising or drilling always securely clamp the workpiece. Any movement of the workpiece will result in a rough hole and possible bit breakage.

Ensure the bit is secure and the chuck key has been removed prior to use. Ensure all protective covers and guards are in place.

Ensure the bench morticer is securely fixed to the workbench.

Do not mortice materials that do not have a flat surface.

Make sure the chisel and bit are clear of the workpiece before starting the machine.

Form a habit of checking the following points before starting a job:

1. That the chisel and bit are secure (see page 14). The chisel bit should protrude from the chisel by approximately 2.5mm.
2. The workpiece is securely clamped and against the work fence.
3. The depth stop bar is set at the required level.
4. Always ensure that the chisel and bit being used are sharp and of good quality, (see page 17 for full range available). Otherwise your mortice cuts will be of poor quality.
5. When cutting deep mortice joints, we recommend you cut it in stages - a maximum of 25mm (1") per stroke.
6. The rate at which you cut into softwood will be different to that of hardwood. Feed the bit too quickly and you could overload the motor, too slowly and the bit tip could burn.
7. If you are cutting through the workpiece, place a waste piece of wood underneath it, so you do not cut into the wooden worktable when the chisel and bit break through the workpiece.

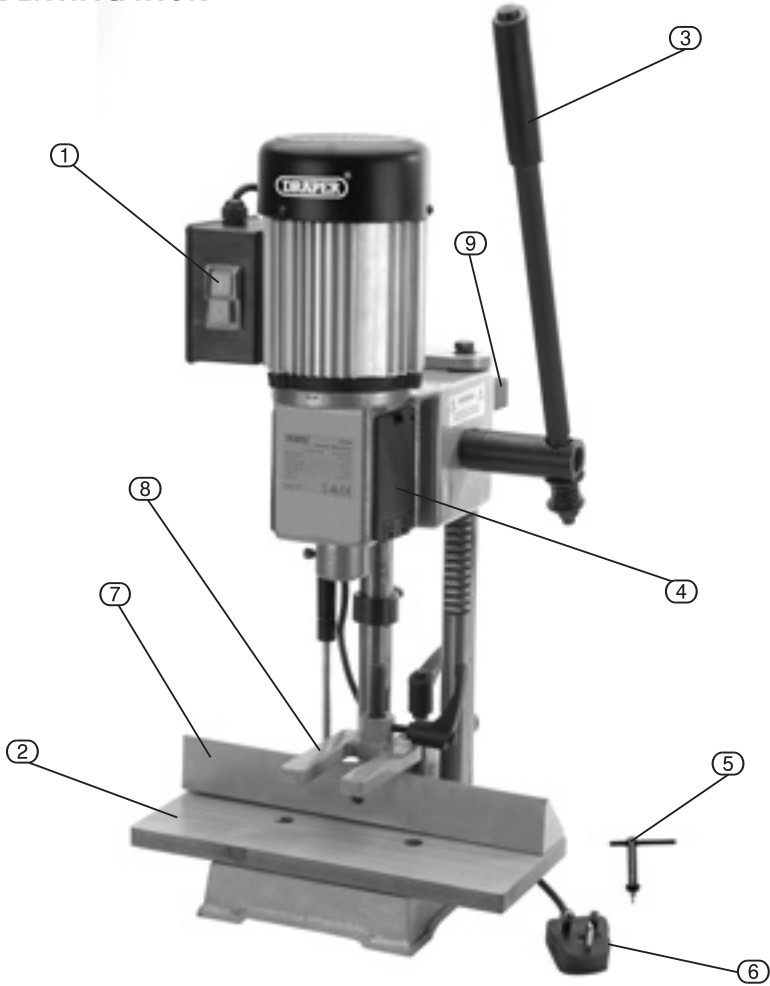
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# 6. TECHNICAL DESCRIPTION

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## 6.1 IDENTIFICATION



- ① No-volt ON/OFF switch.
- ② Table.
- ③ Plunge handle.
- ④ Chuck access covers.
- ⑤ Chuck key.

- ⑥ BS moulded plug & cable.
- ⑦ Fence.
- ⑧ Work piece clamp.
- ⑨ Hold down.

## 6. TECHNICAL DESCRIPTION

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### 6.2 MAIN COMPONENT DESCRIPTIONS

**1. No-volt ON/OFF Switch**

For the starting and stopping of the machine.

**2. Table**

For the work piece to be laid upon.

**3. Plunge handle**

Used to draw the chisel down onto the workpiece and removal from the workpiece.

**4. Chuck access cover**

To shield the chuck against dust and debris ingress. To protect the user from possible entanglement of the chuck.

**5. Chuck key**

To release and tighten the chuck so that chisels and drill bits can be changed.

**6. BS Moulded plug and cable**

To connect the machine to the mains power supply.

**7. Fence**

To ensure a parallel and sturdy frame for the workpiece.

**8. Hold down**

For securing the workpiece to the Table and Fence.

# 7. UNPACKING & CHECKING

## 7.1 PACKAGING

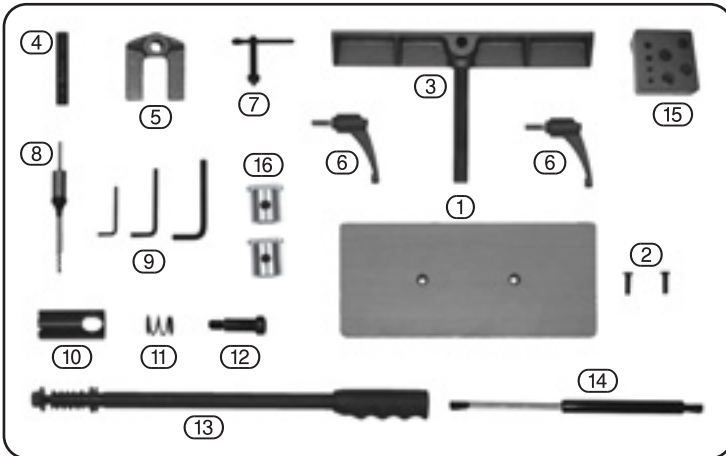
Carefully remove the morticer from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing; please contact the Draper Helpline (the telephone number appears on the Title page) and do not attempt to use the morticer.

The packaging material should be retained at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.

If any of the packaging is to be thrown away, make sure they are disposed of correctly; according to local regulations.

## 7.2 WHAT'S IN THE BOX?



- |                             |                               |
|-----------------------------|-------------------------------|
| ① Table.                    | ⑨ 3 x Hex. keys (4, 5 & 6mm). |
| ② Countersunk table screws. | ⑩ Dog clutch.                 |
| ③ Fence.                    | ⑪ Spring.                     |
| ④ Hold down post.           | ⑫ Securing pin.               |
| ⑤ Hold down.                | ⑬ Plunge lever.               |
| ⑥ 2 x locking levers.       | ⑭ Gas spring.                 |
| ⑦ Chuck key.                | ⑮ Tool rack.                  |
| ⑧ Chisel and drill bit x 3. | ⑯ Reducing bush.              |

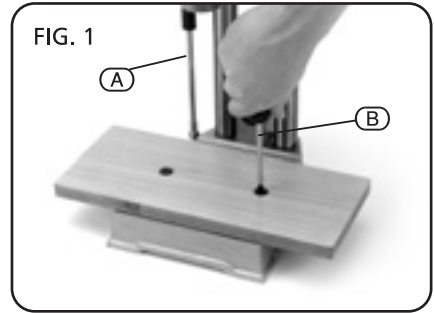
**NOTE:** You will need a cross head screwdriver and a flat head screwdriver.

## 8. ASSEMBLING THE MORTICER

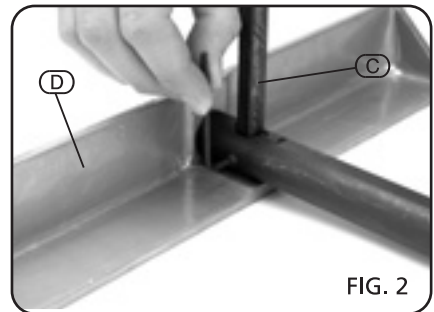
### 8.1 ASSEMBLY (FIGS. 1, 2 & 3)

Clip the gas spring onto side of machine body of connection points (A).

Use cross head screwdriver (B) to secure table with the screws provided.

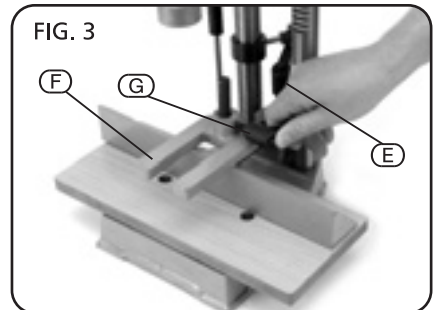


Fix down hold post (C) to fence (D) by tightening grub screw with hex. key provided. (Ensure the flat surface of the hold down post is facing the screw).



Slide the fence through the hole on the base and secure with locking lever (E).

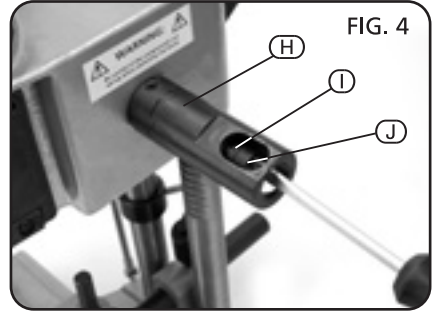
Fit hold down bracket (F) and use locking lever (G) to tighten.



## 8. ASSEMBLING THE MORTICER

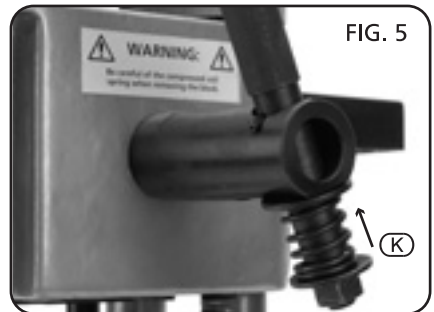
### 8.1 ASSEMBLY CONT'D. (FIGS.4, 5 & 6)

Using a flat head screwdriver, attach the dog chuck (H) and spring (I) to the body of the morticer with screw (J).

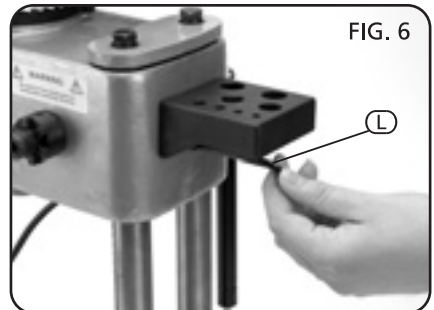


Remove the nut, 2 x washers and spring from the end of the plunge lever.

Fit the lever through the dog chuck and reassemble the washers, spring and nut.



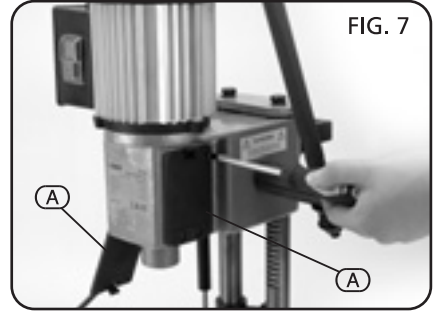
Finally, attach tool rack to the side with hex. key (L) provided.



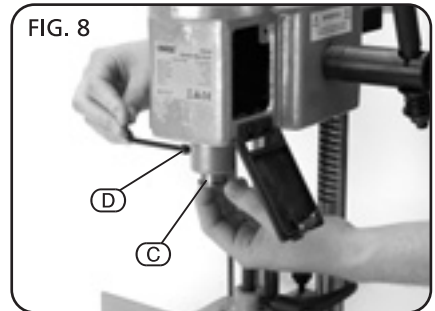
## 9. CHISEL AND BIT INSTALLATION

### 9.1 CHISEL AND BIT INSTALLATION (FIGS. 7, 8 & 9)

Undo the screws securing the chuck access covers (A).



Select the correct reducing bush for the diameter chisel you are using (C). The hole in the bush must line up with the hex. bolt (D).

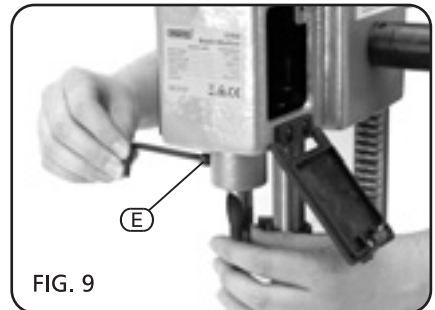


Insert the drill bit and chisel into the hole.

Push the chisel up as far as possible into the head, and tighten with hex. bolt (E).

Allow the drill bit to gently rest on the table whilst completing.

**NOTE:** Care must be taken when handling the mortice chisels as they are very sharp.

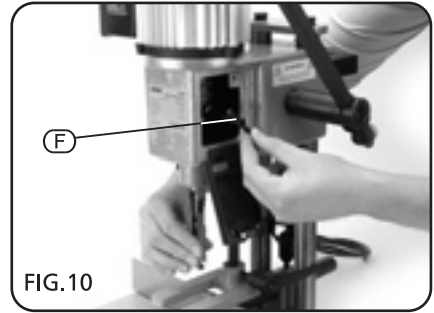




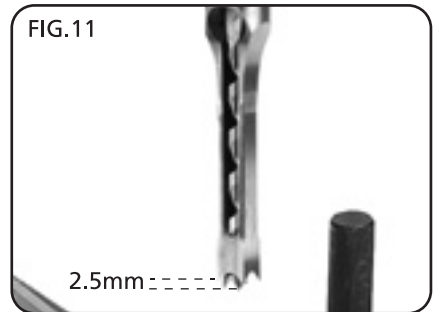
# 9. CHISEL AND BIT INSTALLATION

## 9.1 CHISEL AND BIT INSTALLATION cont'd (FIGS.10, 11 & 12.)

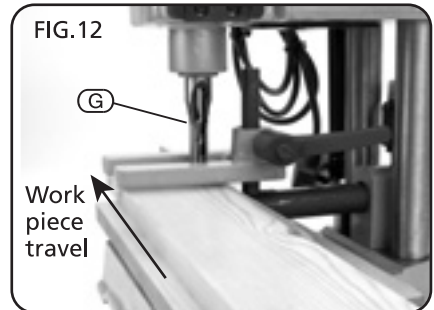
Tighten the chuck key (F).



**NOTE:** It is important the bottom point of the bit protrudes 2.5mm below the bottom edge of the chisel (Fig.11).



The chisel must be fitted (G) so that the open side is to the left or right. The workpiece must travel in the direction away from the open face.



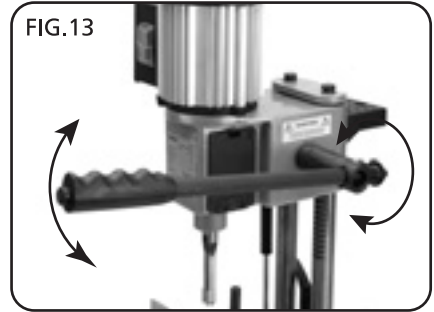
# 10. OPERATION AND USE

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## **10.1 OPERATION AND USE**

The dog chuck allows the plung lever to be repositioned relative to the user.

By pulling the lever to the right it disengages the chuck, the positional adjustment can be made for user comfort.



It is important to set the depth stop on the main column this will prevent morticing too deep and possibly damaging the work table.

Ensure the workpiece and chisel are square to each other. Finally secure the morticer to a stable worktable to avoid it toppling over.



## 11. OPTIONAL ACCESSORIES

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Stock No.	Mortice Sq.	Chisel Shank
48014	1/4"	13/16"
48030	3/8"	13/16"
48056	1/2"	13/16"
48072	5/8"	13/16"
43043	1/4"	19mm
43044	3/8"	19mm
43045	1/2"	19mm
43046	1/4"	13/16"
43047	3/8"	13/16"
43049	1/2"	13/16"

## 12. TROUBLESHOOTING

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**Warning!** For your own safety, turn switch off and remove plug from the power supply.

Problem	Probable Cause	Remedy Suggested
Excessive bit wobble.	(a) Loose chuck. (b) Chuck worn.	(a) Tighten chuck. (b) Replace chuck.
Morticer will not start.	(a) Power supply. (b) Faulty switch. (c) Faulty motor.	(a) Check fuse in plug. (b) Replace switch-return to repair agent. (c) Replace motor-return to repair agent.
Chisel bit binds in workpiece	(a) Excessive pressure on feed handle. (b) Chisel bit is loose.	(a) Apply less pressure. (b) Tighten chuck with key.
Chisel bit burns or smokes.	(a) Chips are not clearing from the chisel. (b) Blunt chisel and bit. (c) Feed pressure too light.	(a) Clean chisel and bit or replace. (b) Sharpen chisel and bit. (c) Apply more pressure.

**IMPORTANT:** Please note all repairs/adjustments should be carried out by a qualified person  
Draper helpline (023) 8049 4344.

## 13. MAINTENANCE

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### ***13.1 MAINTENANCE***

The mortar requires minor maintenance. This includes the light oiling of moving parts. Removing dust from the machine after use. Check fastening are secure before use. Sharpening of bit and chisel when required.

# 14. DISPOSAL

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## 14.1 DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE\* as unsorted municipal waste.



\* Waste Electrical & Electronic Equipment.









- **DRAPER TOOLS LIMITED,**  
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- **General Enquiries:** (023) 8026 6355
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For aftersales servicing or warranty repairs, please contact the Draper Tools Helpline for details of an agent in your local area.

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