



**DRAPER**®

230V 1/2"

# BENCH MORTICER

33651



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: 230V 1/2" Bench Morticer**

**Stock No: 33651**

**Part No: BM13**

## 1.2 REVISION HISTORY:

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**Date first published April 2020.**

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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://drapertools.com/manuals>

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## 1.3 UNDERSTANDING THIS MANUAL'S 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.

## 1.4 COPYRIGHT © NOTICE:

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## 3. WARRANTY

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### 3.1 WARRANTY

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 Help Line (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 warranty period covering labour is 12 months from the date of purchase except where tools are hired out when the warranty period is 90 days from the date of purchase. The warranty is extended to 24 months for parts only. This warranty does not apply to any consumable parts, any type of battery or 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 warranty applies in lieu of any other warranty expressed or implied and variations of its terms are not authorised.

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

Please note that this warranty 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 AND STORAGE

- Care must be taken when handling this product.
  - Dropping this power tool could have an effect on its accuracy and could also result in personal injury. This product is not a toy and must be respected.
- Environmental conditions can have a detrimental effect on this product if neglected.
  - Exposure to damp air can gradually corrode components.
  - If the product is unprotected from dust and debris, components will become clogged.
  - If not cleaned and maintained correctly or regularly, the machine will not perform at its best.

## 5. HEALTH AND 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.

**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.

**Disconnect and house all power tools that are not in use.** An air 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 non-slip sole.

**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 air line. 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.

## 5. HEALTH AND SAFETY INFORMATION

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**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 disconnect it from the air line 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 connecting any machine in to the air 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.

**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.

**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 the manufacturer. 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 AND SAFETY INFORMATION

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### 5.3 CONNECTION TO THE POWER SUPPLY

**Caution:** Risk of electric shock. Do not open.

This appliance is supplied with a moulded 3 pin mains plug for your safety. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure the substitute is of the correct rating, approved to BS1362 and ASTA or BS Kite marked.

ASTA 

BSI 


The fuse cover is removable with a small plain slot screwdriver. Ensure the fuse cover is replaced before attempting to connect the plug to an electrical outlet. If the cover is missing, a replacement must be obtained or the plug replaced with a suitable type.

If a replacement plug is to be fitted this must be carried out by a qualified electrician.

The damaged or incomplete plug, when cut from the cable should be disabled to prevent connection to a live electrical outlet.

This appliance is Class II† and is designed for connection to a power supply matching that detailed on the rating label and compatible with the plug fitted.

If an extension lead is required, use an approved and compatible lead rated for this appliance. Follow all the instructions supplied with the extension lead.

†Double insulated : This product requires no earth connection as supplementary insulation is applied to the basic insulation to protect against electric shock in the event of failure of the basic insulation.

**Important: If using an extension lead, follow the instructions that came with your lead regarding maximum load while cable is wound. If in doubt, ensure that the entire cable is unwound. Using a coiled extension lead will generate heat which could melt the lead and cause a fire.**

### 5.3 RESIDUAL RISK

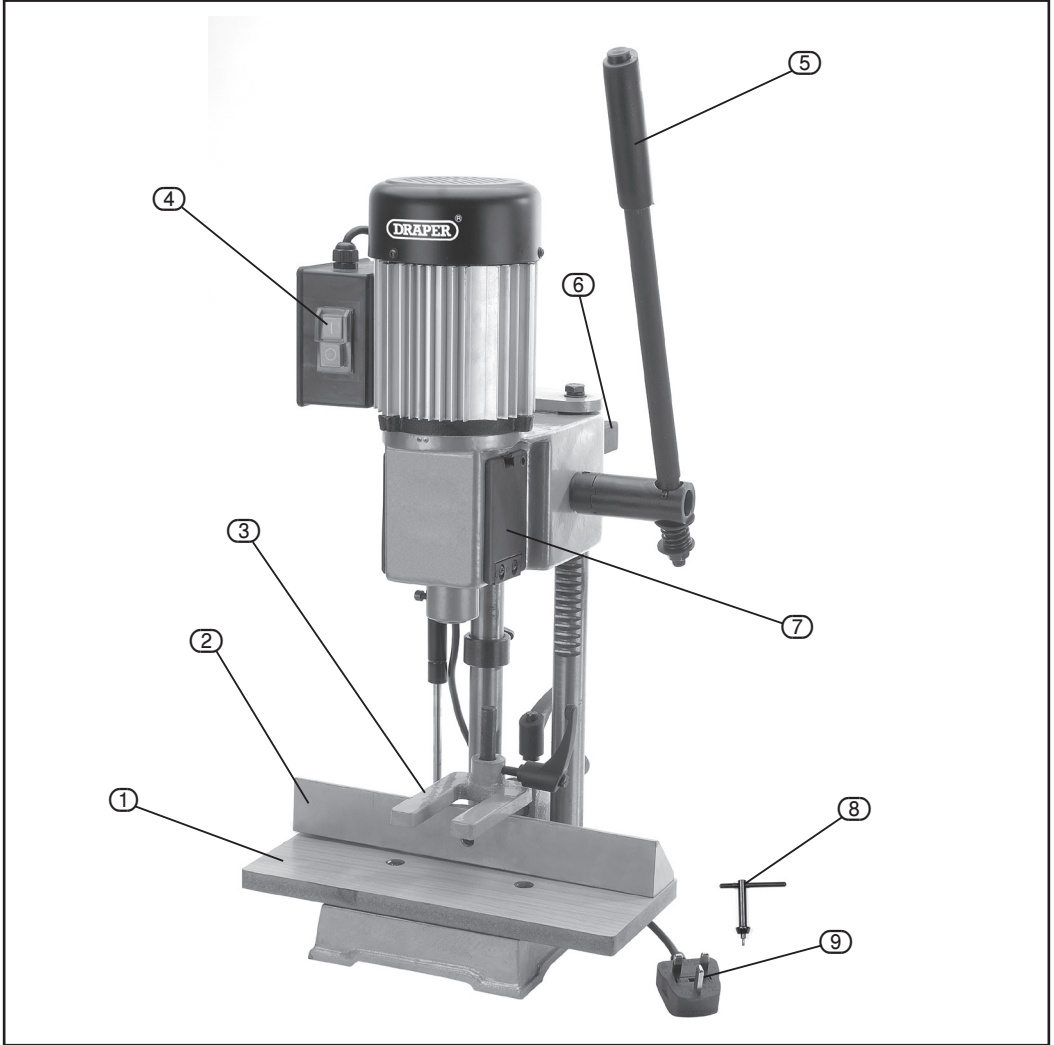
– **Warning!**

- Although the safety instructions and operating manuals for our tools contain extensive instructions of safe working with power tools, every power tool involves a certain residual risk which can not be completely excluded by safety mechanisms. Power tools must therefore always be operated with caution!



# 6. TECHNICAL DESCRIPTION

## 6.1 IDENTIFICATION



- ① Table
- ② Fence
- ③ Work piece clamp
- ④ ON/OFF switch
- ⑤ Plunge handle

- ⑥ Hold down
- ⑦ Chuck access covers
- ⑧ Chuck key
- ⑨ BS moulded plug & cable

# 7. UNPACKING AND CHECKING

## 7.1 PACKAGING

Carefully remove the product 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 help line (the telephone number appears on the Title page) and do not attempt to use the product.

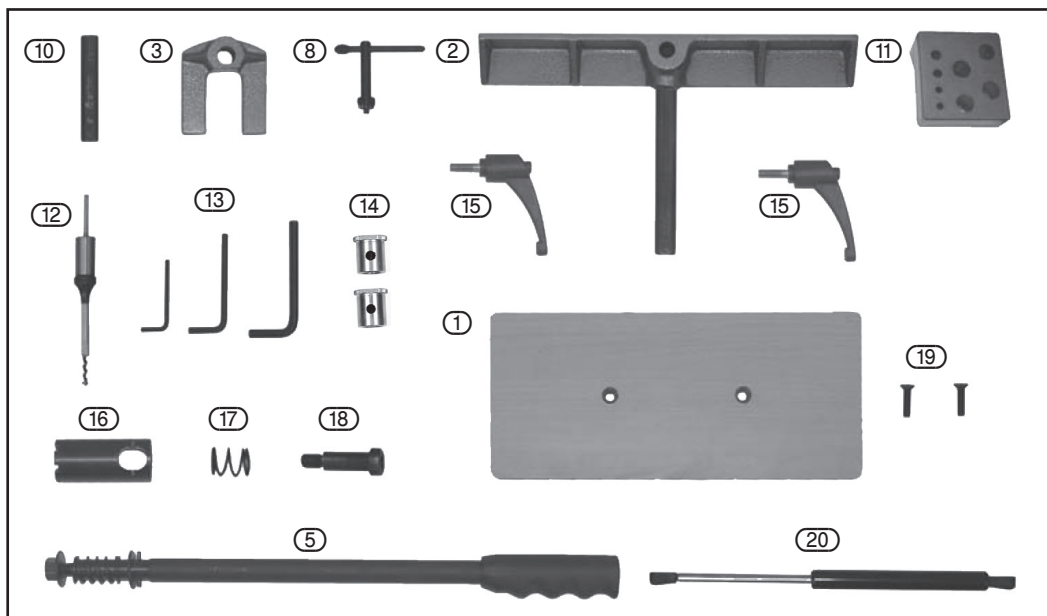
The packaging material should be retained at least during the warranty period in case the product needs to be returned for repair.

### 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?

As well as the bench morticer, there are parts not fitted or attached to it.



- |   |                          |   |                            |
|---|--------------------------|---|----------------------------|
| ① | Table                    | ⑬ | 3 x Hex. keys (4, 5 & 6mm) |
| ② | Fence                    | ⑭ | Reducing bush              |
| ③ | Work piece clamp         | ⑮ | 2 x locking levers         |
| ④ | Plunge handle            | ⑯ | Spring                     |
| ⑤ | Chuck key                | ⑰ | Securing pin               |
| ⑩ | Hold down post           | ⑱ | Countersunk table screws   |
| ⑪ | Tool rack                | ⑳ | Gas spring.                |
| ⑫ | Chisel and drill bit x 3 |   |                            |

## 8. PREPARING THE BENCH MORTISER

### 8.1 ASSEMBLY - FIGS.1 - 6

Clip the gas spring (20) onto side of machine body of connection points.

Use cross head screwdriver to secure table with the screws (19) provided.

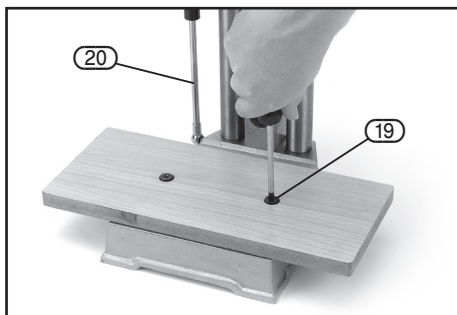


FIG. 1

Fix down hold down post (10) to fence (2) by tightening grub screw with hex. key provided. (Ensure the flat surface of the hold down post is facing the screw).

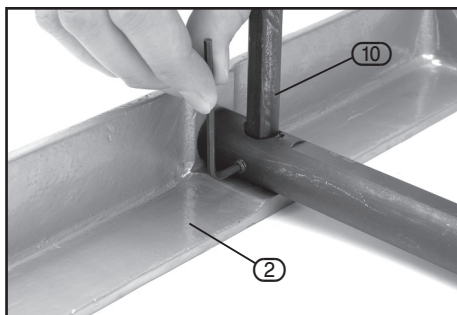


FIG. 2

Slide the fence through the hole on the base and secure with locking lever (15).

Fit work piece clamp (3) and use locking lever (15) to tighten.

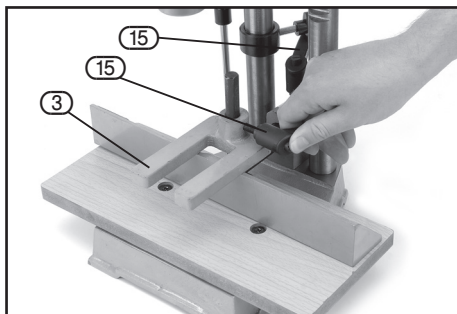


FIG. 3

Using a flat head screwdriver, attach the dog clutch (16) and spring (17) to the body of the morticer with securing pin (18).

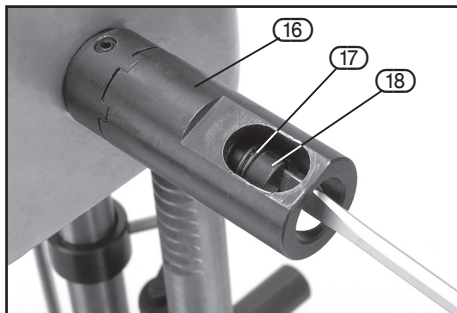


FIG. 4

## 8. PREPARING THE BENCH MORTISER

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

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

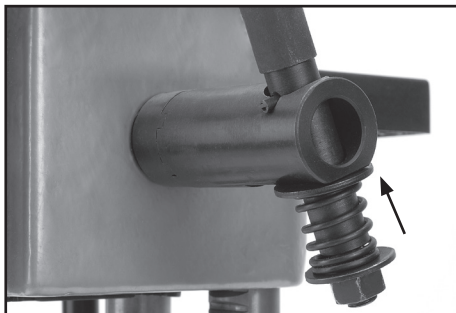


FIG. 5

Finally, attach tool rack to the side with hex. key (13) provided.

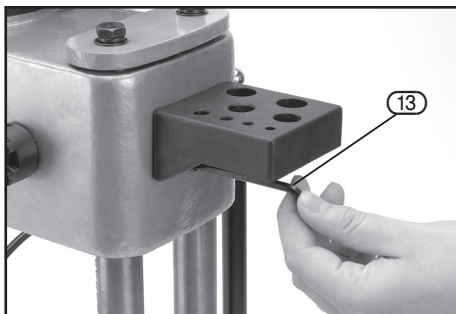


FIG. 6

## 9. SETTING THE BENCH MORTISER

**Warning!** Remove the plug before carrying out any adjustment, servicing or maintenance.

### 9.1 CHISEL AND BIT INSTALLATION - FIGS. 7 - 12

Undo the screws securing the chuck access covers (7).

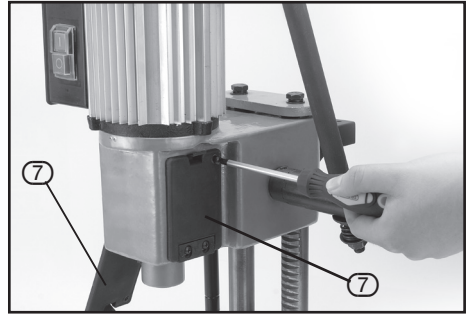


FIG. 7

Select the correct reducing bush (16) for the diameter chisel you are using. The hole in the bush must line up with the hex. bolt (13.1).

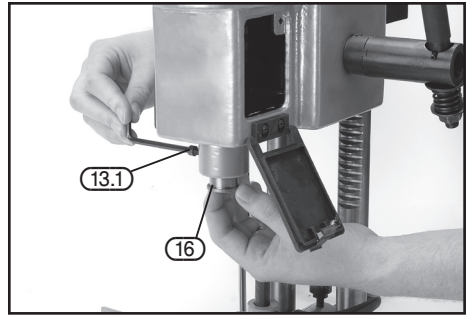


FIG. 8

Insert the drill bit and chisel into the hole.  
Push the chisel up as far as possible into the head, and tighten the hex. bolt (13.1).  
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.

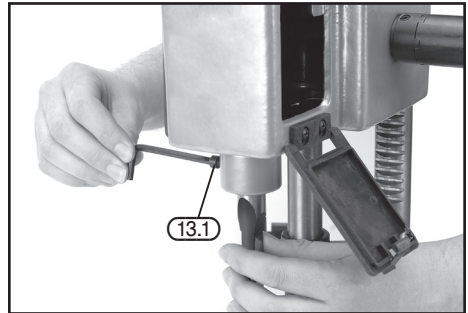


FIG. 9

Tighten the chuck key (7.1).

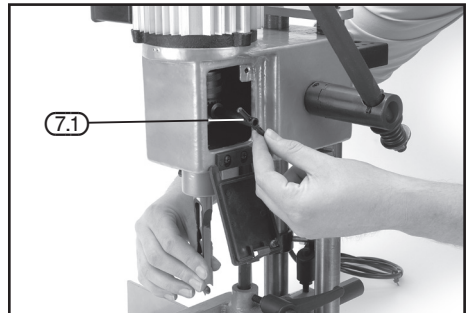


FIG. 10

## 9. SETTING THE BENCH MORTISER

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

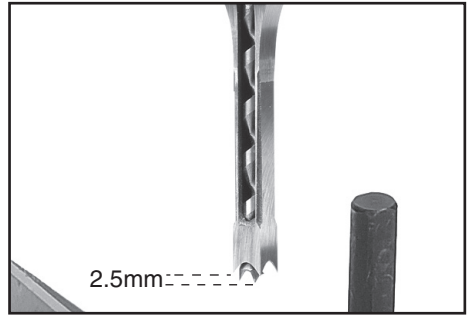


FIG. 11

The chisel and drill bit (12) must be fitted so that the open side is to the left or right. The workpiece must travel in the direction away from the open face.

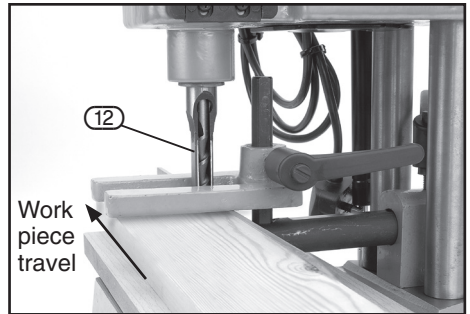


FIG. 12

# 10. BASIC WOOD TURNING

## 10.1 OPERATION AND USE

The dog clutch 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.

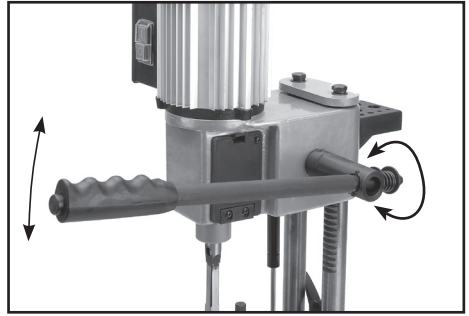


FIG. 13



FIG. 14

# 11. OPTIONAL ACCESSORIES

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## 11.1 OPTIONAL ACCESSORIES

A full range of accessories are available from Draper Tools.

Please visit our website for details: [www.drapertools.com](http://www.drapertools.com)



## 12. TROUBLESHOOTING

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**Note:** Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

<b>Problem</b>	<b>Possible Cause</b>	<b>Remedy</b>
Excessive bit wobble.	Loose chuck. Chuck worn.	Tighten chuck. Replace chuck.
Morticer will not start.	Power supply. Faulty switch.  Faulty motor.	Check fuse in plug. Replace switch-return to repair agent.  Replace motor-return to repair agent.
Chisel bit binds in workpiece.	Excessive pressure on feed handle. Chisel bit is loose.	Apply less pressure.  Tighten chuck with key.
Chisel bit burns or smokes.	Chips are not clearing from the chisel. Blunt chisel and bit. Feed pressure too light.	Clean chisel and bit or replace. Sharpen chisel and bit. 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 morticer 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 dispose of WEEE\* as unsorted municipal waste.



\* *Waste Electrical & Electronic Equipment.*

# 15. EXPLANATION OF SYMBOLS

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## 15.1 EXPLANATION OF SYMBOLS



Read the instruction manual.



Wear face mask and safety glasses.



Wear ear defenders.



Wear protective gloves.



Do not abandon into the environment.



Keep out of the reach of children.



**Warning!**



**WEEE – Waste Electrical & Electronic Equipment.**

Do not dispose of Waste Electrical & Electronic Equipment in with domestic rubbish.







## CONTACTS

Draper Tools Limited, Hursley Road,  
Chandler's Ford, Eastleigh, Hampshire. SO53 1YF. U.K.

Help line: (023) 8049 4344

Sales desk: (023) 8049 4333

Internet: [drapertools.com](http://drapertools.com)

E-mail: [sales@drapertools.com](mailto:sales@drapertools.com)

General enquiries: (023) 8026 6355

**Service/Warranty Repair Agent:**

For aftersales servicing or warranty repairs, please contact the Draper Tools help line for details of an agent in your local area.

YOUR DRAPER STOCKIST

RDCM0420

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