

THE TOOL COMPANY

BENCH MORTICER

■ STOCK No.51399

■ PART No.BM13A

• INSTRUCTIONS •

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



GENERAL INFORMATION

This manual has been compiled by Draper Tools and is an integrated part of the power tool equipment, which should be kept with the machine.

This manual describes the purpose for which this tool has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation of the machine, before performing any kind of adjustment to the machine, and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both machine and operator safety, together with longer life of the tool itself.

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

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



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THE TOOL COMPANY

DECLARATION OF CONFORMITY

We
Draper Tools Ltd. Hursley Road, Chandler's Ford, Eastleigh, Hampshire.
SO53 1YF. England.

Declare under our sole responsibility that the product:

Stock Nos:- 51399.

Part Nos:- BM13A.

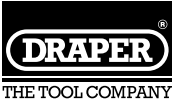
Description:- Bench Morticer.

To which this declaration relates is in conformity with the following directive(s)
73/23/EEC & 89/336/EEC.

With reference to: BS EN61029-1,EN50081-1 and EN55014

JOHN DRAPER
Managing Director

01/09/97



SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

| | |
|------------------------------|------------------|
| Part No. | BM13A |
| Stock No. | 51399 |
| Chisel capacity | 13mm |
| Chuck capacity..... | 10mm |
| Motor size | 350W (230V/50Hz) |
| Speed (no load) | 2850rpm |
| Fence to chisel centre | 85mm |
| Maximum chisel stroke | 110mm |
| Table size | 145 x 345mm |
| Base size | 190 x 310mm |
| Height | 768mm |
| Weight nett/gross | 22/23Kg |

ALWAYS WEAR EAR AND EYE PROTECTION



GUARANTEE

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

Should the machine develop any fault, please return the complete tool to your nearest authorized warranty repair agent or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England. Telephone (023) 8026 6355.

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 does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accident, or repairs attempted by any personnel other than the authorised Draper warranty repair agent..

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 12 month period.

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

Draper Tools Limited.

POWER SUPPLY

CONNECTING YOUR MACHINE TO THE POWER SUPPLY: (240V)

To eliminate the possibility of an electric shock your machine has been fitted with a BS approved, non re-wireable moulded plug and cable which incorporates a fuse, the value of which is indicated on the pin face of the plug. Should the fuse need to be replaced an  approved BS1362 fuse must be used of the same rating, marked thus .

The fuse cover is detachable, never use the plug with the cover omitted. If a replacement fuse cover is required, ensure it is of the same colour as that visible on the pin face of the plug (i.e. red). Fuse covers are available from your Draper Tools stockist.

If the fitted plug is not suitable, it should be cut off and destroyed. *The end of the cable should now be suitably prepared and the correct type of plug fitted. See below.

*WARNING:

A plug with bare flexible wires exposed is hazardous if engaged in a live power socket outlet.

WARNING: THIS APPLIANCE MUST BE EARTHED.

Green and Yellow - Earth, Blue - Neutral, Brown - Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured green and yellow must be connected to the terminal which is marked with the letter 'E' or by the earth symbol \perp or coloured green or yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter 'N' or coloured black or blue.

The wire which is coloured brown must be connected to the terminal which is marked with the letter 'L' or coloured red or brown.

N.B. Three phase machines must be connected by a qualified electrician.

EXTENSION LEAD CHART:

Extension lead sizes shown assure a voltage drop of not more than 5% at rated load of tool.

| Amp rating (on Name plate) | 3 | 6 | 10 | 13 |
|-------------------------------|---------------------------|------|------|------|
| Exstensionable length | Wire Size mm ² | | | |
| 25m | 0.75 | 0.75 | 1.0 | 1.25 |
| 25m | 0.75 | 0.75 | 1.0 | 1.5 |
| 25m | 0.75 | 0.75 | 1.0 | 1.5 |
| 25m | 0.75 | 0.75 | 1.25 | 1.5 |
| 25m | 0.75 | 1.25 | 1.0 | 2.5 |

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

WARNING

Please read the following instructions carefully, failure to do so could lead to serious personal injury.

IMPORTANT

Draper Tools Limited recommends that this machine should not be modified or used for any application other than that for which it was designed. If you are unsure of its relative applications do not hesitate to contact us in writing and we will advise you.

1. KNOW YOUR POWER TOOL

Read and understand the owner's manual and labels affixed to the tool. Learn its application and limitations as well as the specific potential hazards peculiar to this tool.

2. KEEP WORK AREA CLEAN

Cluttered areas and benches invite accidents. Floors must not be slippery due to oil or sawdust.

3. AVOID DANGEROUS ENVIRONMENTS

Do not use power tools in damp or wet locations, or expose them to rain. Keep work area well lit. Provide adequate space surrounding the work area. Do not use in environments with a potentially explosive atmosphere.

4. KEEP CHILDREN AWAY

All visitors should be kept a safe distance from work area.

5. STORED TOOLS

When not being used, all tools should be stored in a dry, locked cupboard or out of the reach of children.

6. WEAR PROPER CLOTHING

Do not wear loose clothing, neckties or jewellery (rings, wristwatches) to catch in moving parts. NONSLIP footwear is recommended. Wear protective hair covering to contain long hair. Roll long sleeves above the elbow.

7. USE SAFETY GOGGLES (Head Protection)

Wear CE approved safety goggles at all times. Normal spectacles only have impact resistant lenses, they are NOT safety glasses. Also, use face or dust mask if application is dusty and ear protectors (plugs or muffs) during extended periods of operation.

8. NOISE LEVELS

Some types of machines may have high noise levels when working. In such cases ear protection must be worn.

9. VIBRATION LEVELS

Hand held power tools produce different vibration levels. You should always refer to the specifications and relevant Health and Safety guide.

10. DUST EXTRACTION

If your tool is fitted with a dust extraction fitting, always ensure that it is connected and being used with a dust extractor. Vacuum cleaners can be used if suitable for the material being extracted.

11. PROTECT YOURSELF FROM ELECTRIC SHOCK

When working with power tools, avoid contact with any earthed items (e.g. pipes, radiators, hobs and refrigerators, etc.). If you are using a power tool in extreme conditions (e.g. high humidity or generating metal dust), always use an RCD (residual current device) at the power socket.

12. STAY ALERT

Always watch what you are doing and use common sense. Do not operate a power tool when you are tired or under the influence of alcohol or drugs.

13. WHEN WORKING OUT OF DOORS

Only use extension leads designed for that purpose.

14. ACCESS TO MAINS SOCKET

If a stationary machine is fitted with a moulded plug and cable, the machine should not be positioned so that access to the mains socket is restricted.

15. DISCONNECT POWER TO THE TOOL

When not in use, before servicing and when changing accessories such as cutters, etc.

16. AVOID ACCIDENTAL STARTING

Make sure the switch is in the OFF position before plugging the machine into the power supply.

17. NEVER LEAVE MACHINE RUNNING UNATTENDED

Turn power off. Do not leave machine until it comes to a complete stop.

18. DO NOT ABUSE THE CORD

Never carry the tool by the power cable or pull it from the socket. Keep the power cable away from heat, oil and sharp edges.

19. NEVER STAND ON TOOL

Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted. Do not store materials above or near the tool, so that it is necessary to stand on the tool to reach them.

20. CHECK DAMAGED PARTS

Check for damage to parts, breakage of parts, mountings and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.

21. KEEP GUARDS IN PLACE

And in working order.

22. MAINTAIN TOOLS WITH CARE

Keep tools sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories. All extension cables must be checked at regular intervals and replaced if damaged. Always keep the hand grips on the tool clean, dry and free of oil and grease.

23. USE RECOMMENDED ACCESSORIES

Consult the owners manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

24. REMOVE ADJUSTING KEYS AND WRENCHES

Form a habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

25. SECURE WORK

Use clamps or a vice to hold work. This frees both hands to operate the tool.

26. DO NOT OVERREACH

Keep proper footing and balance at all times.

27. USE RIGHT TOOL

Do not force the tool or attachment to do a job for which it was not designed.

28. DO NOT FORCE TOOL

It will do the job better and safer at the rate for which it was designed.

29. DIRECTION OF FEED

Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

30. WHEN DRILLING OR SCREWING INTO WALLS

Always make sure there is no danger of hitting any hidden power cables, water or gas pipes in the wall.

IMPORTANT NOTE

Residual Risk. Although the safety instructions and operating manuals for our tools contain extensive instructions on 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 !



ADDED SAFETY RULES FOR BENCH MORTICING MACHINES

IMPORTANT:

For your own safety read and understand the instruction manual before operating. Should you encounter any problems please telephone (023) 8049 4344 and ask for the Draper Helpline.

1. This bench morticer is designed for morticing and drilling wood only.
2. Before morticing or drilling always securely clamp the workpiece. Any movement of the workpiece will result in a rough hole and possible bit breakage.
3. Ensure the bench morticer is securely fixed to the workbench/stand.



UNPACKING

Carefully unpack the bench morticer and all other items from the carton. Fig. 12 illustrates the bench morticer removed from the carton. Fig.2. illustrates the loose items packed with the morticer.



Fig.1.

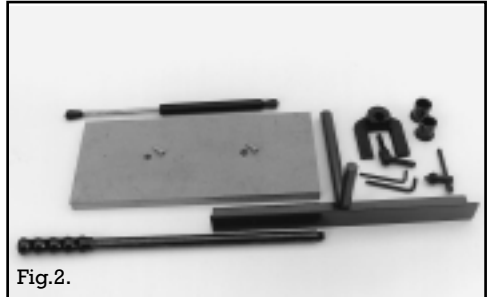


Fig.2.



FASTENING THE BENCH MORTICER TO A WORKTABLE/BENCH

The bench morticer should always be fastened to a supporting surface using the two holes (A) located in the cast iron base. See Fig.3. Locate the morticer on the bench/worktable and using the holes in the base, mark out where the holes are required. Drill the holes to size and fasten the morticer.



Fig.3.

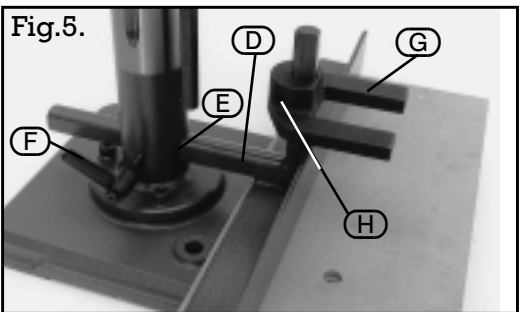
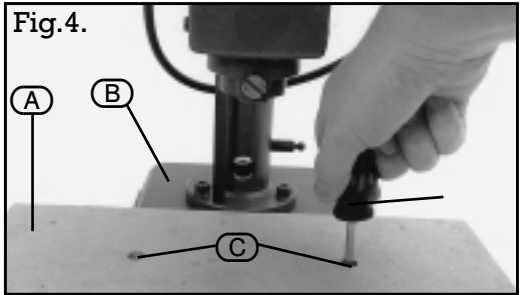
ASSEMBLY

To correctly assemble and adjust the bench mortar, please read the following instructions carefully.

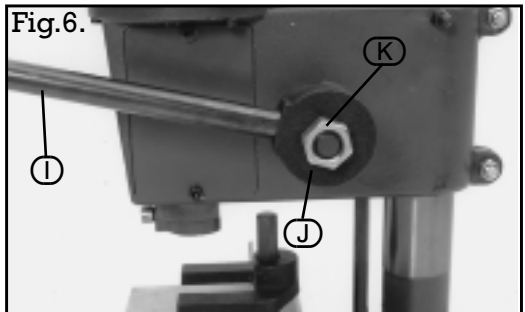
Attach the wooden worktable (A) Fig. 4. to the cast iron base (B). Secure this using the two counter sunk screws (C). Check that the screws fit flush or below the surface of the worktable.

IMPORTANT: Fasten the mortar to the bench/supporting surface before attaching the worktable, as the two locating holes (A) Fig.3. will not be accessible once the worktable is fitted. See page 5.

Insert the arm (D) of the worktable fence into the locating hole (E) in the column. Secure the fence in the required position by tightening lock knob (E). Now fit the wood clamp (F) onto the vertical arm on the table fence and secure by tightening hex screw (H) Fig.5.

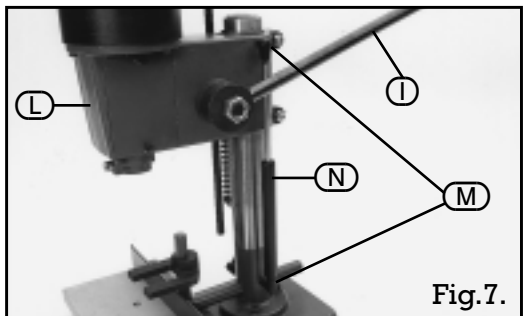


Screw the handle (I) into the hole in the pinion shaft (J), the position of the pinion shaft can be adjusted by unlocking nut (K) this will allow the pinion shaft to rotate to the required position Fig.6.



Use the handle (I) to raise the head (L) and hold in place. Fig.7.

Attach two sockets on the hydraulic cylinder (N) to the two ball joints (M) located on the column and the head Fig.7.

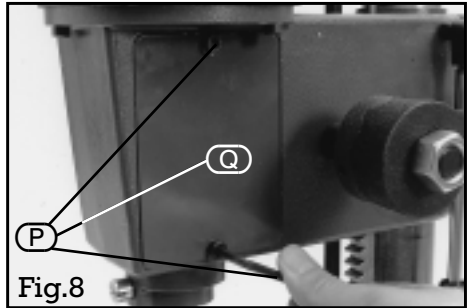


ASSEMBLY CONT'D

CHISEL & BIT

To expose the chuck, loosen the two hex bolts (P) and remove the cover plate (Q) Fig.8.

NOTE:- Remove the cover plate from both sides to make access easier.



Select the required mortice chisel and bit (see page 10 for complete range).

Slide the mortice chisel bush (T) into the head casting, making sure the locating hole in the side of the bush lines up with the screw (R) Fig.9.

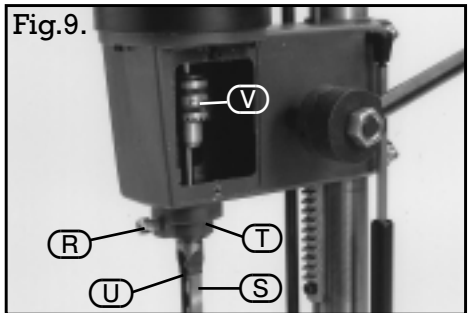
Now slide the mortice chisel (S) over the bit (U) and slide the shank of the bit through the chisel bush (T) and into the chuck (V) and secure into place using the chuck key.

Tighten the screw (R) to lock in position.

NOTE:- The chisel bit should protrude from the chisel by approximately 2-5mm, depending upon the type of wood being morticed.

IMPORTANT:

It may be necessary to shorten the shank of the drill bit to accomplish the correct position required.





OPERATING INSTRUCTIONS

NO VOLT SWITCH

The morticer is fitted with a no volt switch. In the event of a power supply failure, the bench morticer will have to be manually re-started.

To switch the bench morticer 'ON' push the button marked (I).

To switch the bench morticer 'OFF' push the button marked (O) see Fig.10.



PRE-OPERATIONAL CHECKS

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

1. That the chisel and bit are secure. See page 10 for full range. The chisel bit should protrude from the chisel by approximately 2-5mm depending upon the type of wood being morticed.
2. The chisel chip escape slot should be facing the first mortice cut.
3. The workpiece is securely clamped and against the work fence.
4. That the depth stop bar is set at the required level.



OPERATING TIPS

1. Always ensure that the chisel and bit being used are sharp and of good quality, (see page 10 for full range available). Otherwise your mortice cuts will be of poor quality.
2. When cutting deep mortice joints, we recommend you cut it in stages – a maximum of 25mm (1") per stroke.
3. 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.
4. If you are cutting through the workpiece, place an old piece of wood underneath it, so you do not cut into the wooden worktable when the chisel and bit break through the workpiece.



MAINTENANCE

IMPORTANT:

Before any maintenance work is carried out switch the machine 'OFF' and disconnect from the power supply.

1. Check the power cables for damage, if any damage is found they should be replaced immediately by a qualified person.
2. Keep the mortice clean, clear any accumulation of saw dust away from the switch/motor.
3. Lubrication: All bearings fitted to this machine are self-lubricating and do not require further lubrication.



TROUBLE SHOOTING

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 (a) feed handle. (b) Chisel bit is loose. | Apply less pressure. (b) Tighten chuck with key. |
| Chisel bit burns or smokes. | (a) Chips are not clearing (a) from the chisel. (b) Blunt chisel and bit. (c) Feed pressure too light. | Clean chisel and bit. (b) Sharpen chisel and bit or replace. (c) Apply more pressure. |

IMPORTANT:

PLEASE NOTE ALL REPAIRS/ADJUSTMENTS SHOULD BE CARRIED OUT BY A QUALIFIED PERSON.

DRAPER HELPLINE (023) 8049 4344.



OPTIONAL ACCESSORIES

Any of the following accessories may be purchased from your local Draper stockist:

245 HOLLOW SQUARE MORTICE CHISELS WITH BITS

Expert quality, manufactured from high carbon steel hardened and tempered. Chisels are finely ground and polished with honed cutting edges. Carton packed.

| Stock No. | Mortice Square | Mortice Depth | Shank Chisel | Shank Bit | Unit of Sale |
|-----------|----------------|---------------|--------------|-----------|--------------|
| 48014 | 1/4" | 1 1/2" | 13/16" | 1 1/64" | 1 |
| 48030 | 3/8" | 2" | 13/16" | 1/4" | 1 |
| 48056 | 1/2" | 2 3/4" | 13/16" | 3/8" | 1 |

245S

Expert quality, manufactured from high carbon steel hardened and tempered. Chisels are finely ground and polished with honed cutting edges. Sold loose.

| Stock No. | Mortice Square | Mortice Depth | Shank Ø | Unit of Sale |
|-----------|----------------|---------------|---------|--------------|
| 78996 | 1/4" | 1 1/2" | 13/16" | 1 |
| 79019 | 3/8" | 2 1/2" | 13/16" | 1 |
| 79035 | 1/2" | 2 3/4" | 13/16" | 1 |

245B

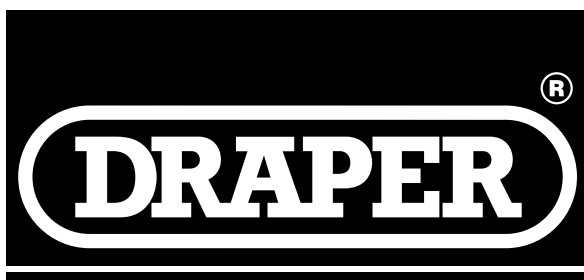
Expert quality, manufactured from high carbon steel hardened and tempered. Chisels are finely ground and polished with honed cutting edges. Sold loose.

| Stock No. | For Chisel | Shank Ø | Unit of Sale |
|-----------|------------|---------|--------------|
| 78897 | 1/4" | 3/16" | 1 |
| 78912 | 3/8" | 1/4" | 1 |
| 78920 | 1/2" | 3/8" | 1 |

AWM

Manufactured from high carbon steel hardened and tempered finely ground, polished with honed cutting edges sold loose.

| Stock No. | Part No. | Mortice Square | Chisel Shank | Unit of Sale |
|-----------|----------|----------------|--------------|--------------|
| 36586 | AWM1 | 1/4" | 19mm | 1 |
| 36587 | AWM2 | 3/8" | 19mm | 1 |
| 36588 | AWM3 | 1/2" | 19mm | 1 |
| 37122 | AWM4 | 1/4" | 13/16" | 1 |
| 37123 | AWM5 | 3/8" | 13/16" | 1 |
| 37124 | AWM6 | 1/2" | 13/16" | 1 |



THE TOOL COMPANY

DRAPER TOOLS LIMITED,

Hursley Road, Chandler's Ford, Eastleigh, Hants. SO53 1YF. U.K.

Helpline: (023) 8049 4344.

Sales Desk: (023) 8049 4333.

General Enquiries: (023) 8026 6355.

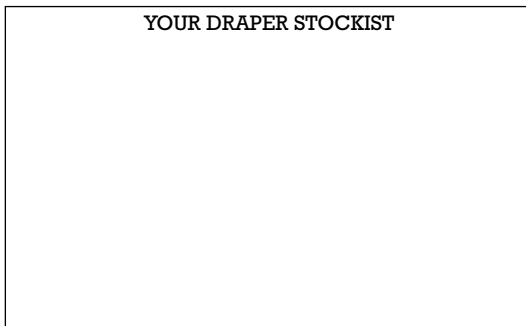
Fax: (023) 8026 0784.



www.draper.co.uk

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YOUR DRAPER STOCKIST



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