

Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

⚠ IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS AND CAUTIONS. USE THIS PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY, AND WILL INVALIDATE THE WARRANTY. PLEASE KEEP INSTRUCTIONS SAFE FOR FUTURE USE.

1.1 ELECTRICAL SAFETY

⚠ WARNING! It is the responsibility of the owner and the operator to read, understand and comply with the following:


You must check all electrical products, before use, to ensure that they are safe. You must inspect power cables, plugs, sockets and any other connectors for wear or damage. You must ensure that the risk of electric shock is minimised by the installation of appropriate safety devices. A Residual Current Circuit Breaker (RCCB) should be incorporated in the main distribution board. We also recommend that a Residual Current Device (RCD) is used. It is particularly important to use an RCD with portable products that are plugged into a supply which is not protected by an RCCB. If in any doubt consult a qualified electrician. You may obtain a Residual Current Device by contacting your Sealey dealer.

You must also read and understand the following instructions concerning electrical safety.

- 1.1.1 The Electricity at Work Act 1989 requires that all portable electrical appliances, if used on business premises, are tested by a qualified electrician, using a Portable Appliance Tester (PAT), at least once a year.
- 1.1.2 The Health & Safety at Work Act 1974 makes owners of electrical appliances responsible for the safe condition of those appliances and the safety of the appliance operators. If in any doubt about electrical safety, contact a qualified electrician.
- 1.1.3 Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply. See 1.1.1. and 1.1.2. and use a Portable Appliance Tester.
- 1.1.4 Ensure that cables are always protected against short circuit and overload.
- 1.1.5 Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that none is loose.
- 1.1.6 Important: Ensure that the voltage marked on the appliance matches the power supply to be used and that the plug is fitted with the correct fuse - see fuse rating at right. **DO NOT** pull or carry the appliance by the power cable.
- 1.1.7 **DO NOT** pull the plug from the socket by the cable.
- 1.1.8 **DO NOT** use worn or damaged cables, plugs or connectors. Immediately have any faulty item repaired or replaced by a qualified electrician. When a BS 1363/A UK 3 pin plug is damaged, cut the cable just above the plug and dispose of the plug safely.

Fit a new plug according to the following instructions (UK only).

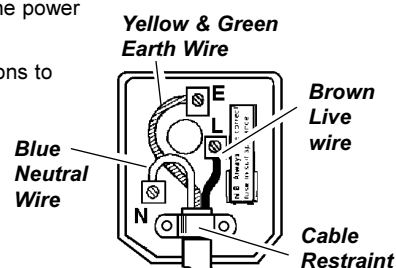
- a) Connect the **GREEN/YELLOW earth wire to the earth terminal 'E'.**
- b) Connect the **BROWN live wire to the live terminal 'L'.**
- c) Connect the **BLUE neutral wire to the neutral terminal 'N'.**
- d) After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable outer insulation extends beyond the cable restraint and that the restraint is tight.

Double insulated products, which are always marked with this symbol , are fitted with live (brown) and neutral (blue) wires only. To rewire, connect the wires as indicated above. **DO NOT** connect either wire to the earth terminal.

- 1.1.10 Products which require more than 13 amps are supplied without a plug. In this case you must contact a qualified electrician to ensure that a suitably rated supply is available. We recommend that you discuss the installation of an industrial round pin plug and socket with your electrician.
- 1.1.11 If an extension reel is used it should be fully unwound before connection. A reel with an RCD fitted is preferred since any appliance plugged into it will be protected. The cable core section is important and should be at least 1.5mm², but to be absolutely sure that the capacity of the reel is suitable for this product and for others which may be used in the other output sockets, we recommend the use of 2.5mm² section cable.

1.2 General Safety

- ⚠ **WARNING!** Disconnect the mortiser from the mains power before changing accessories, servicing or performing any maintenance.
- ✓ Locate the mortiser in a suitable working area. Fasten the mortiser to a strong flat working surface. Keep area clean and tidy and free from unrelated materials and ensure there is adequate lighting.
- ✓ Maintain the mortiser in good condition (use an authorised service agent).
- ✓ Replace or repair damaged parts. Use genuine parts only. Unauthorised parts may be dangerous and will invalidate the warranty.
- ✓ Keep the mortiser clean for best and safest performance and check moving parts alignment regularly.
- ✓ Keep mortiser tool bits clean and sharp and ensure bit is secured correctly in the mortiser chuck. If worn or damaged replace immediately.
- ✓ Remove adjusting keys and wrenches from the mortiser and its vicinity before turning it on.
- ✓ Wear approved eye safety protection.
- ✓ Handle loose chisels and drill bits with gloves or cloth as they are very sharp, but **DO** remove gloves and/or cloth before operating the mortiser. Keep your hands and fingers away from the mortiser tool bit and chisel when operating.
- ✓ Remove ill fitting clothing. Remove ties, watches, rings and other loose jewellery, and contain long hair.
- ✓ Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.
- ✓ Secure work piece by resting against the back stop and top holding clamp.
- ✓ Ensure there are no foreign objects in the workpiece i.e. nails or screws.
- ✓ Use the depth stop for accuracy and to avoid drilling into the work table, and avoid unintentional starting.
- x **DO NOT** start the mortiser with the tool bit resting against the workpiece. Always bring the operating chisel to the workpiece.
- x **DO NOT** attempt to place a workpiece on the mortiser table whilst the cutting tool is working.
- x **DO NOT** use the mortiser for a task it is not designed to perform.
- x **DO NOT** allow untrained persons to operate the mortiser and keep children and unauthorised persons away from the working area.
- x **DO NOT** get the mortiser wet or use in damp or wet locations or areas where there is condensation.
- x **DO NOT** use mortiser where there are flammable liquids, solids or gases such as paint solvents, waste wiping or cleaning rags etc.
- x **DO NOT** operate the mortiser if any parts are damaged or missing as this may cause failure and/or possible personal injury.
- x **DO NOT** leave the mortiser operating unattended.
- x **DO NOT** operate the mortiser when you are tired or under the influence of alcohol, drugs or intoxicating medication.
- ✓ When not in use switch off the mortiser and remove plug from the power supply.



FUSE RATING

THIS PRODUCT MUST BE FITTED
 WITH A **5 AMP FUSE**

2. APPLICATION & SPECIFICATION

Bench mounted mortising machine suitable for cutting mortises for joints, locks and dead-bolts. Twin uprights with hydraulic damper carry head assembly and adjustable depth stop for repetitive work. Integral drill chuck is easily accessible from both sides of the head. Powered by heavy-duty induction motor with no-volt release switch to prevent accidental restart after power failure or jam. Supplied with arbor extension and spare 13mm drill chuck for occasional drilling operations. Includes table and workpiece clamp assembly.

Motor	370W, 230V.
Chisel Size	.1/4", 3/8", 1/2"
Chuck Sizes	.2 x 13mm
Head Stroke	.115mm
Chisel to Table	.120mm
Throat Depth	.135mm
Hold Down Capacity	.75mm
Table Size	.150 x 340mm
Dimensions H (less handle) x W x L	.650 x 335 x 340mm
Weight	.25kg

3. ASSEMBLY

- | | |
|-----------------------|-------------------------|
| 1. Wood Working Table | 6. Screw |
| 2. Table Screws | 7. Locking Adjust Screw |
| 3. Hold-Down Clamp | 8. Adjustment Lever |
| 4. Washer | 9. Clamp Post |
| 5. Hold-Down Knob | 10. Clamp Base |
- (Fig. 1)

NOT ILLUSTRATED

- 2 x Drill chuck
- 1/4" Mortising Chisel + Drill Bit
- 3/8" Mortising Chisel + Drill Bit
- 1/2" Mortising Chisel + Drill Bit
- S5 & S6 Hex Spanner
- Arbor Extension.

3.1 ASSEMBLY

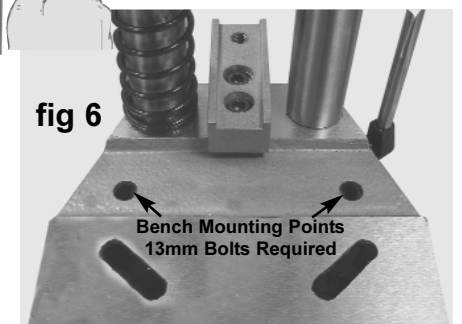
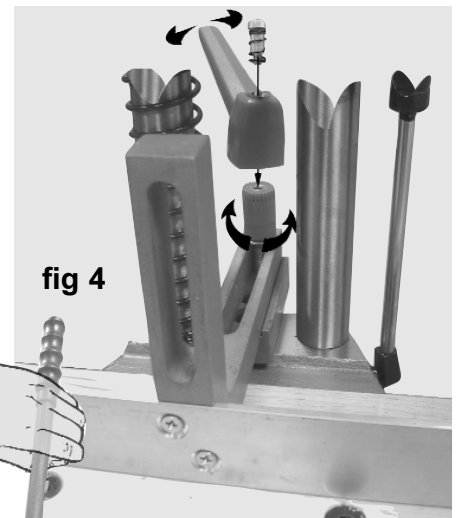
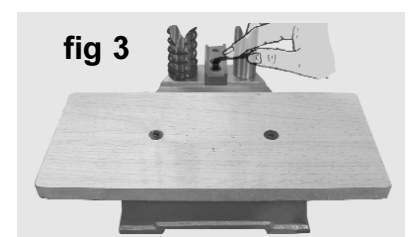
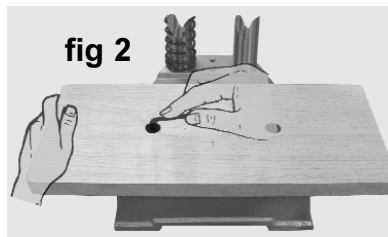
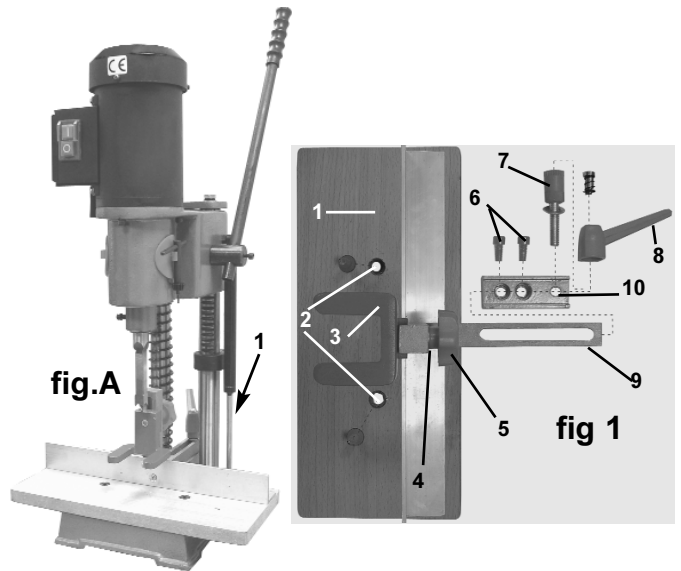
WARNING! DO NOT plug the mortiser into the mains power supply until completely assembled and these instructions tell you to do so.

DO NOT allow brake fluids, petroleum, penetrating oils etc. to come into contact with plastic parts of mortiser as damage may result.

NOTE: Remove the plastic support block from the top of uprights.

Care must be taken as the coil spring is under compression and will force the body upwards when plastic block removed.

- 3.1.1 Press fit damper strut ends to ball ended screws on base and head (fig.A-1). To do this, support the weight of the gear casing and undo the depth stop clamp (fig.9) which is supporting it. Raise the casing on the guide pillars to the maximum height. Slide the clamp up the pillar to support the casing and tighten the clamp. Take the damper strut with the cylinder uppermost and lightly tap the strut ends so that they snap onto the ball ended screws situated on the right hand side of the head and the base of the right hand pillar.
 - 3.1.2 Fix wooden table to base with supplied screws (fig.2).
 - 3.1.3 Attach clamp base to table base using 2 x allen bolts (fig.3).
 - 3.1.4 Attach clamp post to clamp base (fig.4) using locking adjust screw (fig.1.7).
 - 3.1.5 Adjust locking adjust screw so the clamp post is held but free enough to be moved backwards and forwards. Fit the adjustment lever (fig.1.8) onto the adjusting screw (fig.4) pushing it into the splines and fitting spring and screw (Fig.1). Ensure that the adjustment lever will lock the clamp post when tightened clockwise. If it does not, remove the locking lever and replace it having turned it anticlockwise. Check again to ensure it locks the post.
 - 3.1.6 Fit the hold-down clamp, hold-down knob and washer as in fig.1 parts 3, 4 & 5.
 - 3.1.7 Fit the pull-down handle in the upright position, with 13mm protruding from the receiver and lock in place with the set screw as in fig.5.
 - 3.1.8 Before use, attach the mortiser using the mounting points situated behind the wood working table (fig.6) and 13mm bolts, of the appropriate length to a stable work bench which is strong enough to take the weight of the unit and the workpiece.
- WARNING!** Failure to adequately mount the mortiser could result in damage and/or severe personal injury.
- 3.1.9 Finally fix the tool holder to the rear of the mortiser using the fixings provided.

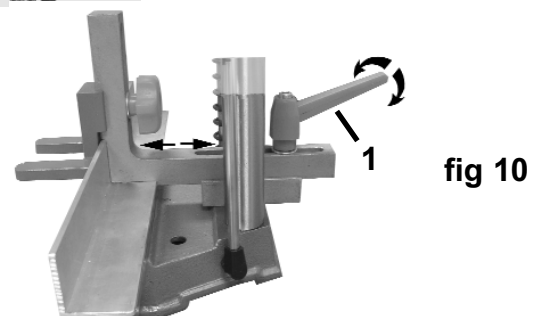
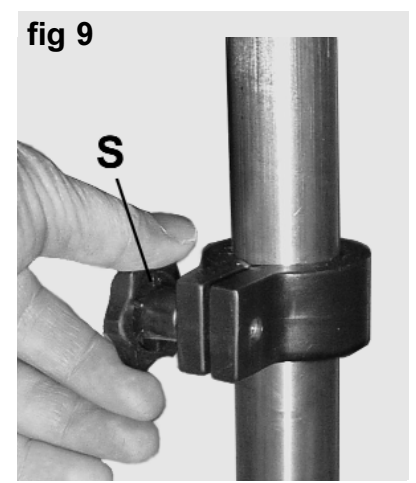
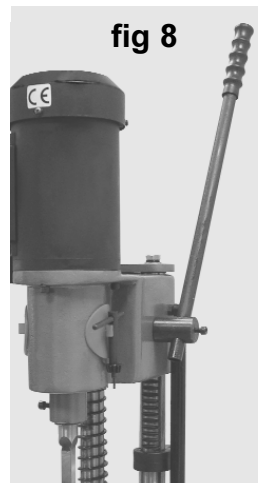
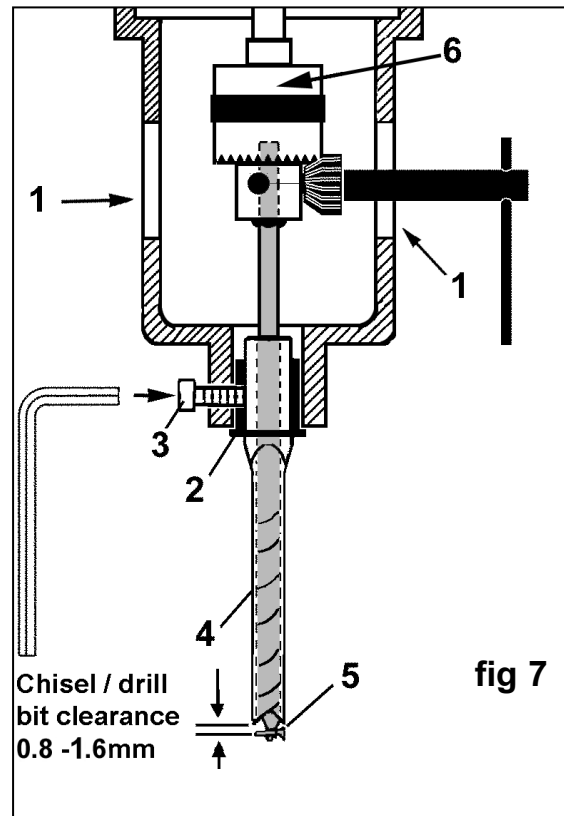


4. INSERTING CHISEL & DRILL BIT

WARNING! Ensure the mortiser is switched off and is unplugged from the mains power supply.

Note: The chuck clamp spindle (fig 14.2) may be locked in chuck and should be removed before attempting to perform the following.

- 4.1 Insert the bush (fig7-2) into the collar at the base of the main head ensuring that the hole in the side of the bushing is aligned with the socket cap screw (fig7-3) in the left hand side of the collar. Retain the bush by turning the screw inwards but do not let it protrude inside the bush as this will impede the insertion of the chisel.
- WARNING!** Use gloves or cloth when handling drill and chisel bits, as the ends are very sharp. Remember to remove gloves and/or cloth before starting the mortiser.
- 4.2 When the chisel/drill bit is correctly set up there should be a clearance of between 0.8 and 1.6mm between the end of the chisel and the drill cutting spur. To do this use the following procedure.
- 4.3 Open head side covers (fig 7.1) to expose the chuck (fig 7.6). Ensure that the jaws in the chuck are fully retracted to allow the drill to fully enter the chuck.
- 4.4 Remove the protective cover from the end of the chisel/drill set and hold a protective pad or small piece of wood on the drill tip. Push the chisel/drill set up into the chisel bush until it stops.
- 4.5 Now rotate the chisel portion so that the opening in the side faces to the left or right. (If the workpiece is to be moved progressively to the right the opening in the side of the chisel should face to the right. If moving the workpiece to the left then face the opening to the left. Do not face the slot to the front or rear because wood chips produced during the cutting process will not be able to escape from the chisel.)
- 4.6 Tighten the chisel retaining screw (fig.7-3) using the hex key provided.
- 4.7 Keeping the protective pad on the drill tip, push the drill up into the chisel until the drill spur has a clearance of 0.8 - 1.6mm from the chisel (Fig.7.5) then tighten the chuck using the chuck key provided (fig.7-6).
- 4.8 Close the side covers and remove any protection from the chisel/drill tips.



5. CONTROLS AND ADJUSTMENTS

WARNING! Ensure the mortiser is switched off and is unplugged from the mains power supply.

5.1 Raising and lowering the mortiser.

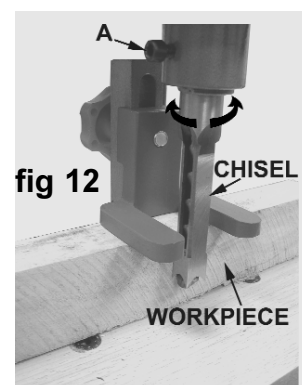
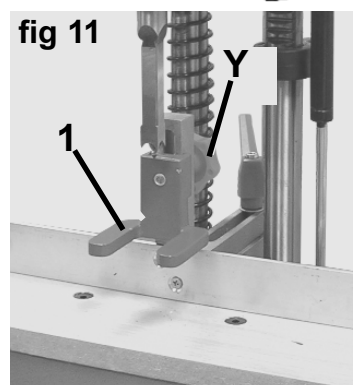
- 5.1.1 **Handle.** Use the handle (fig 8.) to raise and lower the head.
- 5.1.2 Pull the handle towards you to lower the head.
- 5.1.3 Allow the handle to return to raise the head.

5.1.4 **Depth stop adjustment.** The depth stop limits the depth of chisel cut. To adjust the depth stop, loosen lock knob (fig 9.S) and lower the head until the bottom of the chisel is at desired depth. Raise the depth stop until it makes contact with the underside of the head and re-tighten knob (S).

5.2 **Back rest.** To position back rest, loosen locking handle (fig.10.1). Position rest by moving it in or out, when correctly positioned re-tighten locking handle.

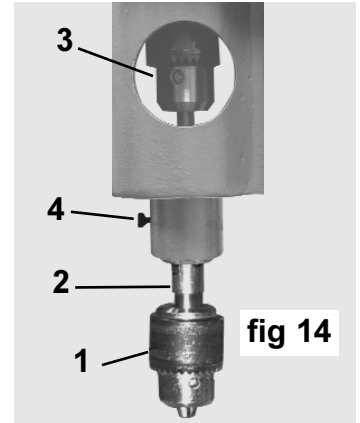
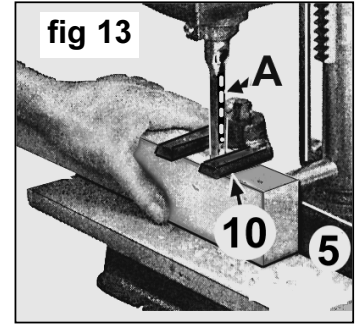
5.3 **Clamp adjustment.** The clamp (fig 11.1) prevents the workpiece from lifting as the chisel is raised up from the cutting hole. Adjust the clamp so that it rests on the top of the workpiece but will allow the workpiece to slide to the left or right. The clamp may be turned upside down to accommodate thicker workpieces. To adjust the clamp loosen the set screw "Y" and move the clamp up or down accordingly and re-tighten set screw.

5.4 **Parallel chisel adjustment.** Adjust the position of the workpiece until it is almost touching the back of the chisel. Loosen the chisel retaining screw (fig 12.A) to allow it to rotate and edge the workpiece up to the back of the chisel to ensure that the chisel is parallel to the surface of the workpiece. Re-tighten the locking screw and reposition the workpiece for cutting.



6. OPERATING INSTRUCTIONS

- WARNING!** Ensure you read, understand and apply chapter 1 safety instructions before use.
- 6.1 Ensure you have installed the correct chisel and that it is sharp.
View fig 13 and note that the chisel opening is to the right (A). This means that after the first incision is made, the workpiece should be moved to the right for subsequent cuts. This will allow waste chips to freely pass through the opening in the chisel.
- 6.2 Set the depth gauge.
- 6.3 Place your workpiece in the mortise machine adjusting the back stop (5), and clamp (10) and depth stop as necessary.
- 6.4 Plug the mortiser into the mains power supply. Hold the workpiece firmly against the back stop and switch the mortiser on, keeping hands and fingers away from the cutting tools.
- 6.5 Bring the handle down to commence mortise cutting. We recommend that you practice on scrap wood before moving onto an actual workpiece. The rate of chisel penetration must be fast enough to prevent burning the drill and chisel tip, but not too fast as to stall the motor. You may notice smoke coming from the bit or the wood once the chisel has engaged in the workpiece. This is a normal occurrence of hollow chisel mortising caused by chipping friction whereby the wood resins in the stock are burned off. Should this become excessive however, refer to troubleshooting chapter 9.
The chisel may also become blue in colour, this is also a normal attribute associated with friction and resin build up on the cutting face of the tool bit. A dull (blunt) chisel may be detected when the amount of pressure required to complete a cut becomes excessive.
- 6.6 When performing a through mortise, a thin piece of wood must be placed between the workpiece and the table to prevent the underside of the cut from splintering, and to protect the work table. In such a case re-set depth stop accordingly.
- 6.7 **Using the mortiser as a standard pillar drill**
Loosen bushing screw and remove the chisel and drill bit from the chuck.
Attach the chuck clamp spindle (fig 14.2) to the neck of spare drill chuck (1).
Pass the spindle up through, **BUT DO NOT** tighten the screw on the drill spindle which must remain free to turn in the bush. A standard drill bit may be used with chuck (1) for drilling. All locks and guides are used in the same way as for mortiseing.



7. MAINTENANCE

- WARNING!** Ensure the mortiser is switched off and is unplugged from the mains power supply before carrying out any maintenance.
- 7.1 Clean and dust the mortiser, removing all waste materials.
- 7.2 Periodically apply a light coat of wax to base work surface which will help keep it clean and rust free.
- 7.3 Open shaft cover and apply a thin coat of light machine oil to drill bit shaft where it passes through the chisel, but not on the cutting edge. Also lightly oil rack and pinion gear teeth upon which the main column moves up and down.

8. TROUBLESHOOTING

THE PROBLEM	THE CAUSE	THE SOLUTION
Noisy operation	Dry drill bit shaft	Lubricate drill bit shaft
Bit burns or smokes	1. Chips not coming out of hole 2. Dull bit 3. Feed rate too slow	1. Retract bit frequently to clear chips 2. Sharpen or replace bit 3. Feed faster
Excessive drill bit run out, or wobble	1. Bent bit 2. Chuck not correctly installed 3. Bit not correctly installed 4. Worn or loose chuck 5. Worn spindle bearings	1. Replace bit 2. Remove chuck and install correctly 3. Remove bit and install correctly 4. Replace chuck 5. Replace bearings
Drill binds in workpiece	1. Workpiece twisting or moving 2. Excessive feed pressure	1. Support or clamp workpiece 2. Reduce pressure and clamp workpiece

Declaration of Conformity We, the sole importer into the UK, declare that the product listed below is in conformity with the following standards and directives.

Hollow Chisel Mortiser Model SM94.V3

EN55014 Limits & Measurements
73/23/EEC Low Voltage Directive
89/336/EEC EMC Directive
98/37/EC Machinery Directive
93/68/EEC CE Marking Directive



The construction file for this product is held by the Manufacturer and may be inspected, by a national authority, upon request to Jack Sealey Ltd.

Signed by Mark Sweetman

1st January 2006

For Jack Sealey Ltd. Sole importer into the UK of Sealey Quality Machinery.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which will be required for any claim.

INFORMATION: For a copy of our catalogue and latest promotions call us on 01284 757525 and leave your full name, address and postcode.



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