

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. SAFETY INSTRUCTIONS

1.1 Electrical Safety

☐ **WARNING! It is the user's responsibility to read, understand and comply with the following:** You must check all electrical equipment and appliances to ensure they are safe before using. You must inspect power supply leads, plugs and all electrical connections for wear and damage. You must ensure the risk of electric shock is minimised by the installation of appropriate safety devices. An RCCB (Residual Current Circuit Breaker) should be incorporated in the main distribution board. We also recommend that an RCD (Residual Current Device) is used with all electrical products. It is particularly important to use an RCD together with portable products that are plugged into an electrical supply not protected by an RCCB. If in doubt consult a qualified electrician. You may obtain a RCD 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 all portable electrical appliances, if used on business premises, to be 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 the appliance and the safety of the appliance operator. **If in doubt about electrical safety, contact a qualified electrician.**

1.1.3. Ensure the insulation on all cables and the product itself is safe before connecting to the mains power supply. See 1.1.1. & 1.1.2. above and use a Portable Appliance Tester (PAT).

1.1.4. Ensure that cables are always protected against short circuit and overload.

1.1.5. Regularly inspect power supply, leads, plugs for wear and damage, and power connections to ensure that none is loose.

1.1.6. **Important:** Ensure the voltage marked on the product is the same as the electrical power supply to be used, and check that plugs are fitted with the correct capacity fuse. A 13 amp plug may require a fuse smaller than 13 amps for certain products, see fuse rating at right.

1.1.7. **DO NOT** pull or carry the powered appliance by its power supply lead.

1.1.8. **DO NOT** pull power plugs from sockets by the power cable.


1.1.9. **DO NOT** use worn or damage leads, plugs or connections. Immediately replace or have repaired by a qualified electrician. A U.K. 3 pin plug with ASTA/BS approval is fitted. In case of damage, cut off and fit a new plug according to the following instructions (discard old plug safely). (UK only - see diagram at right). **Ensure the unit is correctly earthed via a three-pin plug.**

a) **Connect the GREEN/YELLOW earth wire to the earth terminal 'E'.**

b) **Connect the BROWN live wire to live terminal 'L'.**

c) **Connect the BLUE neutral wire to the neutral terminal 'N'.**

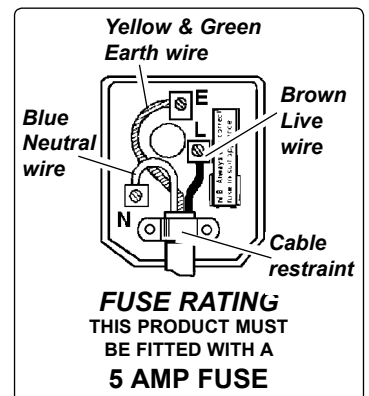
d) **After wiring, check that there are no bare wires, that all wires have been correctly connected, that the cable outer insulation extends beyond the cable restraint and that the restraint is tight.**

Double insulated products are often fitted with live (BROWN) and neutral (BLUE) wires only. Double insulated products are always marked with this symbol . To re-wire, connect the brown and blue wires as indicated above. **DO NOT connect the brown or blue to the earth terminal.**

1.1.10. **Cable extension reels.** When a cable extension reel is used it should be fully unwound before connection. A cable reel with an RCD fitted is recommended since any product which is plugged into the cable reel will be protected. The section of the cable on the reel is important. Use at least 1.5mm² section cable, but to be absolutely sure that the capacity of the cable reel is suitable for this product and for others that 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. 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 workpiece by resting against the back stop and use 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.
- x **DO NOT** start the mortiser with the tool bit resting against the workpiece. Always bring the chisel to the workpiece.
- x **DO NOT** assemble a workpiece on the mortiser 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.
- x **DO NOT** operate the mortiser if any parts are damaged or missing as this may cause failure and/or 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.



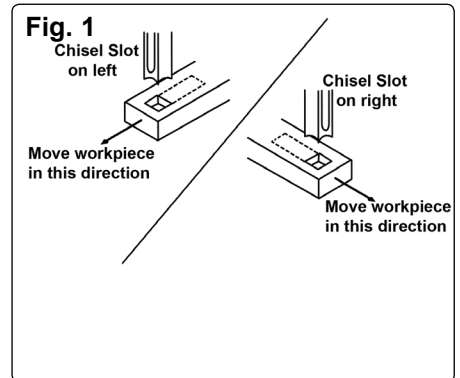
2. INTRODUCTION & SPECIFICATION

2.1 Introduction.

The SM96 is a heavy-duty mortising machine suitable for cutting mortises up to 25mm for joints, locks and dead-bolts. Vertical assembly with hydraulic damper, scale measure, adjustable depth and headstock stops. Horizontal assembly with scale measure, adjustable table and work stop for repetitive work. Table has a complete clamping system with vice and two clamps. Two hand wheels for table adjustment. The integral drill chuck is easily accessible from both sides of the head. Powered by a heavy-duty induction motor with no-volt release switch to prevent accidental restart after a power failure or a jam. The mortiser is supplied with 16mm drill chuck, $\frac{5}{8}$ " mortising chisel and bit, chuck key and hex keys. Mounted on a stand, which can be used as a parts cabinet.

2.2 Specification.

Model No	SM96
Chisel Capacity	$\frac{1}{4}$ " to 1"
Chuck Capacity	16mm
Spindle Travel	220mm
Chisel Centre-Fence	145mm
Table Size	400 x 150mm
Base Size	300 x 450mm
Spindle Speed	1400rpm
Motor	230V 50Hz 750W
Dimensions (H x L x W)	1530 x 550 x 820mm
Weight	99kg



3. CONTENT & ASSEMBLY

3.1. Contents

3.1.1 Unpack the product and check contents. Should there be any damaged or missing parts contact your supplier or shipping agent immediately.

3.2. Assembly

- WARNING! DO NOT** plug the mortiser into the mains power supply until completely assembled and these instruction tell you to do so.
- 3.2.1 Do not allow brake fluids, petroleum or penetrating oils to come into contact with plastic parts of the mortiser as damage may result.
- 3.2.2 Remove the mortiser and stand from the shipping containers. Before assembling, read the instructions thoroughly and familiarise yourself with the correct maintenance procedures and the safety precautions outlined in Section 1.
- 3.2.3 The mortiser should be secured to the stand with the four M12 x 120 hexagonal bolts provided using the holes in the base. Ensure that there is enough room on each side of the mortiser for the size of stock you intend using.
- WARNING!** The mortiser requires a 3-pin earthed mains socket. If you are not sure whether the mains socket is properly earthed, consult a qualified electrician.

4. ADJUSTMENTS

4.1 Installing Chisel and Bit (Refer to Fig. 1)

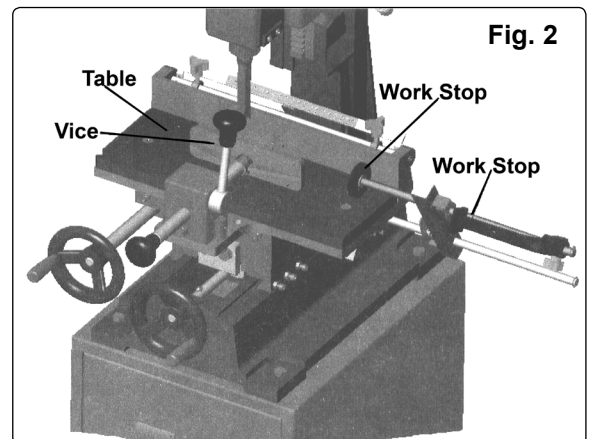
- 4.1.1 Loosen the lock screw.
- 4.1.2 Insert the chisel into the head. Tighten the screw sufficiently to hold the chisel in place.

NOTE: Set the slot in the side of chisel to the **Left or Right**, **NOT** to the back or front. This will allow chippings to escape when cutting mortises.

- 4.1.3 Push the chisel up into the head as far as possible. Then lower the chisel by between 0.8mm and 1.6mm. Tighten the lock screw to hold the chisel in place.
- 4.1.4 Push the bit up through the chisel opening until the end of the bit is level with the end of the chisel. Tighten the lock screw. Lock the drill bit in place with the chuck key.
- 4.1.5 Loosen the lock screw and push the chisel up against the bushing. This will give the required gap between the end of the bit and the end of the chisel.

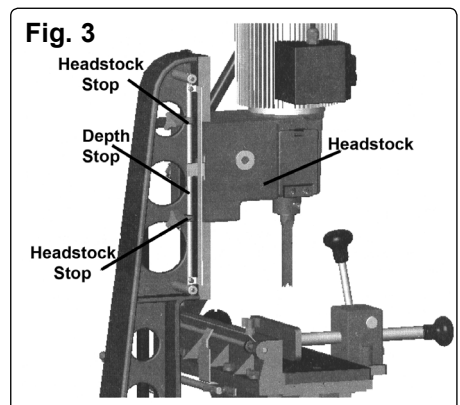
4.2 Mounting the Work Stop (Refer to Fig. 2)

- 4.2.1 The work stop is mounted to the table as shown in Fig. 2.

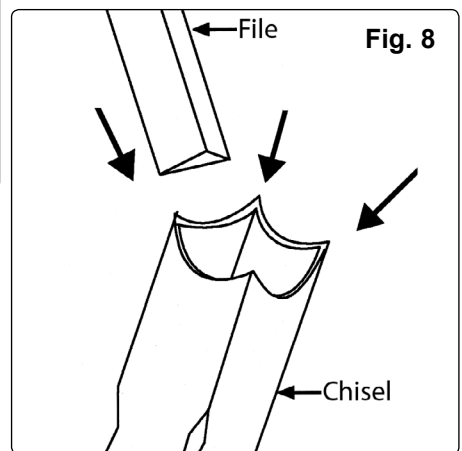
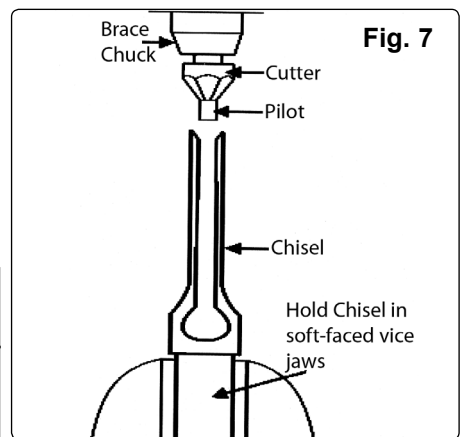
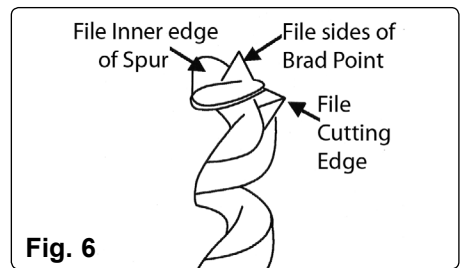
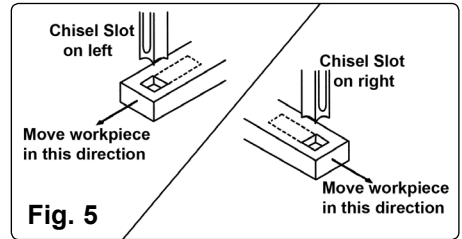
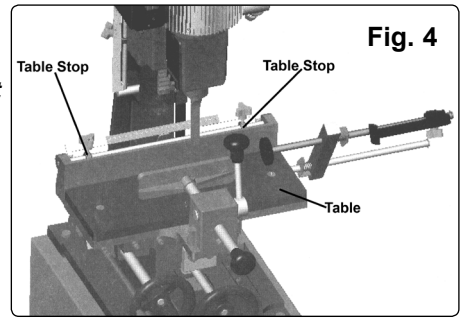


5. OPERATING INSTRUCTIONS

- WARNING!** Ensure you read, understand and apply Section 1 Safety Instructions before use.
 - 5.1. Set the depth stop to the required depth of cut. Refer to Fig. 3.
 - 5.2. Place the workpiece on the table and clamp it with the vice. Use the left hand wheel to move the table forwards or backwards to suit the position of the mortise on the workpiece.
 - 5.3. Adjust the table stops according to the length of cut required then tighten the thumb screws. Refer to Fig. 4.
 - 5.4. Switch on the mortiser and feed the chisel and bit steadily into the workpiece by pulling down the operating handle.
- NOTE:** The rate of feed must be fast enough to prevent burning at the tip of the bit, yet not so fast as to cause the machine to slow, or stall.



- 5.5 After the first cut the workpiece is moved along with the right handwheel for each successive cut. The direction of movement must allow the chippings to safely clear the mortiser.
- 5.6 Move the workpiece so that the slot in the chisel is releasing chips into the **already cut** part of the workpiece. Refer to Fig. 5.
- CAUTION: Do not locate the chisel slot against the blind end of the mortise, as the chippings will not be able to clear the chisel. This can cause overheating and possible damage to both the chisel and bit.**
- 5.7 When cutting deep mortises, make the cut in several stages of approximately 26mm each, to allow chippings to clear the machine.
- 5.8 To prevent breakout at the back of the workpiece when cutting through mortises, use a piece of scrap material under the workpiece as a support.



6. MAINTENANCE

6.1 Sharpening the Chisel and Bit

- 6.1.1 The chisel and bit should be kept sharp for optimum performance. Blunt edges will give inaccurate mortises and can lead to overheating and breakages to both chisel and bit. If the chisel and bit are badly worn and become difficult to sharpen, they are to be replaced.
- 6.1.2 Sharpen the bit by using a small, smooth file and **follow the original shape of the bit**. File the inside edge of the spur, the sides of the brad point and the cutting edge inwards, towards the flute of the bit. Refer to Fig. 6.
- 6.1.3 **DO NOT** file the outside edge of the spur, as this will affect the diameter of the bit.
- 6.1.4 Sharpen the chisel with a mortise chisel cutter with the correct size pilot.
- NOTE:** Pilot size will differ, depending on the size of chisel in use.
- 6.1.5 Two or three turns of the cutter in a carpenter's brace chuck should be sufficient to sharpen the chisel. Refer to Fig. 7.
- 6.1.6 Use a small, triangular, smooth file to relieve the inner of the chisel.
- 6.1.7 Remove any burrs from the outside of the chisel with a fine oilstone. Refer to Fig. 8.

6.2 General Maintenance

- 6.2.1 The mortiser requires only minor maintenance such as cleaning, lubrication and routine adjustment of the chisel and bit.
- 6.2.2 Dust the machine down after use and - as necessary - use a light application of oil or grease to linkages and other moving parts.

7. TROUBLESHOOTING

THE PROBLEM	THE CAUSE	THE SOLUTION
Noisy operation.	Dry drill bit shaft.	Lubricate drill bit shaft.
Bit burns or smokes.	1. Chippings not coming out of hole. 2. Dull bit. 3. Feed rate too slow.	1. Retract bit frequently to clear chippings. 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.

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 latest catalogue and promotions call us on 01284 757525 and leave your full name and address, including postcode.



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