

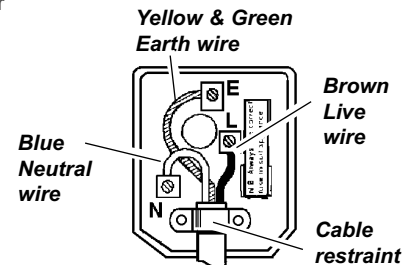
Thank you for purchasing a Sealey product. Manufactured to a high standard this product will, if used according to these instructions and properly maintained, give you years of trouble free performance.

⚠ IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE 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 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 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 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 any 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 all electrical 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 (*subject to 1.1.10. below*) 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 damaged 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).



- 1.1.10. (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'.**

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

After wiring, check 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 & blue wires as indicated above. DO NOT connect the brown or blue to the earth terminal.**
- 1.1.10. Some products require more than a 13 amp electrical supply. In such a case, NO plug will be fitted. **You must** contact a qualified electrician to ensure a 30 amp fused supply is available. We recommend you discuss the installation of a industrial round pin plug and socket with your electrician.
 - 1.1.11. **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 cores of the cable is important. We suggest 1.5mm² section cable as a minimum, 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!** Ensure Health & Safety, local authority and general workshop practice regulations are adhered to when using this equipment.
- ✓ Familiarise yourself with the application and limitations of the saw, as well as the specific potential hazards involved.
- ⚠ **WARNING!** Disconnect the saw from the mains power and ensure the cutting blade is at a complete standstill before attempting to change blades, service or perform any maintenance.
- ✓ Maintain the saw in good condition (use an authorised service agent).
- ✓ Replace or repair damaged parts. Use genuine parts only. Non-authorized parts may be dangerous and will invalidate the warranty.
- ⚠ **WARNING!** Keep all guards and holding screws in place, tight and in good working order. Check regularly for damaged parts. A guard or any other part that is damaged should be repaired or replaced before the machine is used. The safety guard is a mandatory fitting where the saw is used in premises covered by the Health & Safety at Work Act.
- ✓ Locate saw in a suitable working area, keep area clean and tidy and free from unrelated materials. Ensure there is adequate lighting.
- ✓ Keep the saw clean and blades sharp for best and safest performance.
- ✓ Ensure there are no flammable or combustible materials near the work area.
- ⚠ **WARNING!** Always wear approved eye or face protection when operating the saw. Use a face or dust mask if dust is generated.
- ✓ Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.
- ✓ Remove ill fitting clothing. Remove ties, watches, rings, and other loose jewellery and contain and/or tie back long hair.
- ✓ If possible connect saw to a vacuum cleaner to remove dust at source.

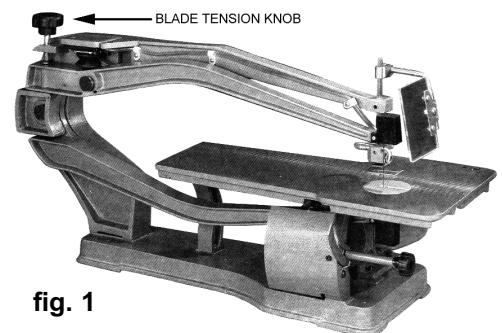


fig. 1

- ✓ Keep children and unauthorised persons away from the working area.
- ✓ Check moving parts alignment on a regular basis.
- ✓ Remove adjusting keys and wrenches from the machine and its vicinity before turning it on.
- ✓ Avoid unintentional starting.
- ✗ **DO NOT** use the saw for any purpose other than that for which it is designed.
- ✗ **DO NOT** operate the saw if any parts are damaged or missing as this may cause failure or possible personal injury.
- **WARNING! DO NOT** cut any materials containing asbestos.
- ✗ **DO NOT** switch the saw on whilst the blade is in contact with the workpiece.
- ✗ **DO NOT** attempt to cut a workpiece so small that you have to remove the finger guard.
- ✓ Always provide additional support, at table height, for large workpieces.
- ✗ **DO NOT** use the saw out of doors.
- ✗ **DO NOT** get the saw wet or use in damp or wet locations or areas where there is condensation.
- ✗ **DO NOT** allow untrained persons to operate the saw.
- ✗ **DO NOT** allow children to operate the saw.
- ✗ **DO NOT** operate the saw when you are tired, under the influence of alcohol, drugs or intoxicating medication.
- ✗ **DO NOT** leave the saw operating whilst unattended.
- ✗ **DO NOT** pull the cable from the power supply.
- ✓ Use a qualified person to lubricate and maintain the saw.
- ✓ When not in use switch off the saw, remove plug from the power supply and ensure the machine is childproof.

2. INTRODUCTION & SPECIFICATION

2.1. Introduction The SM45 is a Scroll Saw for cutting intricate shapes in wood, plastic and thin metal sheet. It is supplied with a safety guard and an integral blower to keep the cut-line free of saw dust.

2.2. Specification	Throat Depth559mm	Table Size254 x 440mm
	Max. Cut50mm	Table Tilt0 - 30° left
	Stroke16mm	Motor Power100W
	Cuts per min.1420	Motor Input230V

3. ASSEMBLY

- **IMPORTANT! DO NOT** attempt to lift saw by holding the upper blade arm as this will cause damage. Lift by the base only.
- **WARNING! DO NOT** plug saw into mains until assembly is complete and saw has been firmly mounted to work surface. (See fig.6 for dimensions of mounting centres.)

3.1 Fitting / changing the blade.

- 3.1.1 Remove tension on blade arm by turning tension knob anticlockwise. (See fig.1).
- 3.1.2 Blade may be fitted either with teeth facing forward or to left hand side, see fig.3.
- 3.1.3 With blade teeth pointing downward, insert blade through table access hole and engage end of blade in lower blade holder, see fig.2. Keeping an upward tension on the blade locate upper end in the upper blade holder. Push blade holder down slightly to achieve this.
- 3.1.4 Tension blade by turning tension knob clockwise. Use only finger effort, **DO NOT** use tools.
- 3.1.5 Grasp upper blade holder and manually move blade up and down a couple of times to check that blade pins are correctly located in holders.

3.2 Fitting the blade guard.

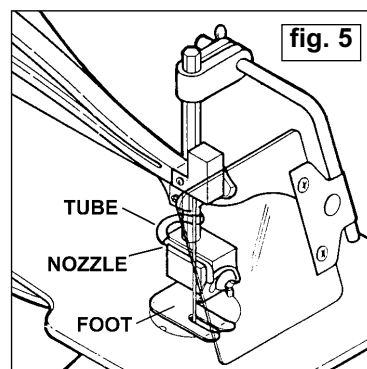
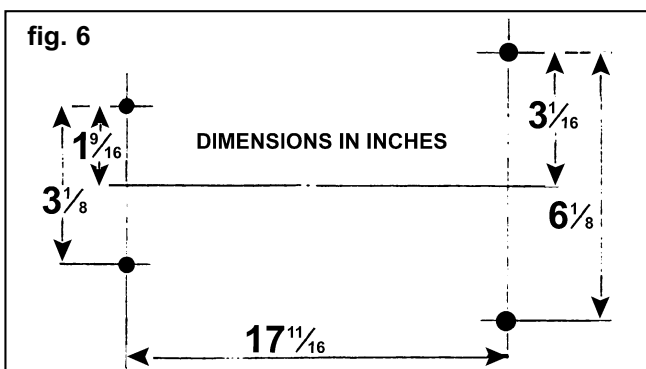
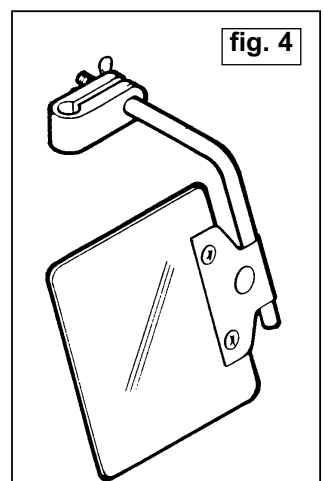
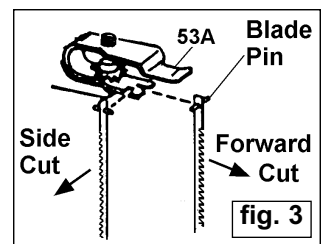
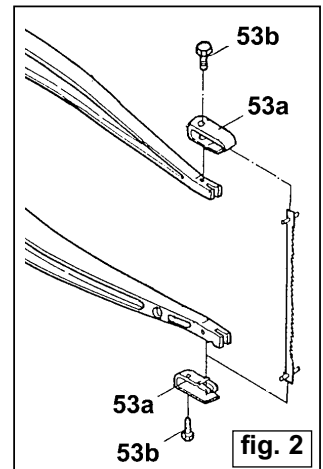
- 3.2.1 Fit blade guard (as shown in fig.4) to the upper end of the rod supporting the adjustable foot as seen in fig.5.

3.3 Bench mounting the saw.

- 3.3.1 Mount saw to a firm work surface utilising the four mounting holes in the base. Drill four 9mm holes through the work surface in accordance with the dimensions shown below in fig.6. If required, noise and vibration can be further reduced by mounting the saw on a dense foam or rubber pad (approx.12mm thick). If this is done, do not over-tighten the mounting bolts in order leave some 'cushioning' effect in the pad.

3.4 Connection of dust blower.

- 3.4.1 Ensure that the dust blower tube is connected to the nozzle on the adjustable foot as shown in fig.5.



4. OPERATION

❑ **WARNING!** Ensure you read, understand and apply the safety instructions in Section 1.

Should you have no experience of using a scroll saw, it is recommended that you practice until you have familiarised yourself with the applications and limitations of the saw, at the same time being fully aware of the potential hazards involved.

Keep alert. **DO NOT** allow familiarity (from frequent use) to cause a careless mistake. Remember, a careless second is sufficient to inflict serious damage or injury.

❑ **WARNING!** All necessary adjustments to the saw should be with the machine disconnected from the mains supply.

4.1 Normal flat cutting.

4.1.1 Set blade to front or side cutting as required. (Refer to fig.3)

4.1.2 When cutting with the table in the normal flat position the slot in the circular table insert (through which the blade passes) should be aligned with the cutting line of the blade. If you change the blade from front to side cutting you must rotate the insert through 90° so that the slot remains in line with the blade

4.1.3 Adjust foot (See fig.5) to just clear workpiece (so that fingers cannot touch blade) and align blower tube to keep cut line visible.

4.2 Cutting at an angle.

4.2.1 Set blade to front cutting only.

4.2.2 Cutting at an angle should always be done with the blade in the forward cutting position. In this instance rotate the circular table insert B so that the slot is sideways onto the blade so that there is clearance for the blade to move when the table is at its maximum tilt. (See fig.7).

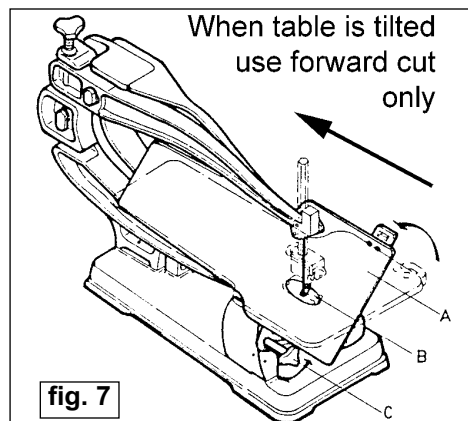
4.2.3 Loosen knob C and rotate cutting table A to the desired angle with reference to the scale provided (0 to 30°). Retighten knob C.

4.2.4 Adjust foot (See fig.5) to just clear workpiece (so that fingers cannot touch blade) and align blower tube to keep cut line visible.

4.3. Plug saw into mains and switch on.

4.3.1 Workpiece may now be guided **slowly** into the blade taking care to keep the workpiece pressed down firmly onto the table. Take care not to bend or twist the blade as this will cause it to break.

❑ **WARNING!** **DO NOT** attempt to saw with the table at an angle if the blade is in the side-cut position.



5. MAINTENANCE

5.1. Keep table clean to give easy and smooth movement of workpiece.

5.2. Every 50 hours of use oil the lower arm bearings with SAE20 oil. Access bearings from rear of machine.

6. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Breaking blades	1) Incorrect tension 2) Over-worked blade 3) Wrong blade 4) Twisting blade with workpiece	1) Adjust blade tension. 2) Feed workpiece more slowly. 3) Use narrow blades for thin, wide blades for thick workpieces. 4) Avoid side pressure, or twist, on blade.
Motor will not operate	1) Power supply fault 2) Motor fault	1) Check power supply and fuses. 2) Contact local authorised Service Agent.
Vibration	1) Mounting or mounting surface 2) Loose table 3) Loose motor	1) Ensure mount bolts are tight. The more solid the surface the less the vibration. 2) Tighten table lock knob and pivot screws. 3) Tighten motor mounting screws.
Blade run-out	1) Blade holder(s) misaligned	1) Loosen blade holder screw(s) and realign.

Scroll Saw Model: SM45

73/23/EEC Low Voltage Directive (S.I. 1994/3260)
89/336/EEC EMC Directive (S.I. 1992/2372 & Amendments).
98/37/EC Machinery Directive (S.I. 1992/3073)
93/68/EEC CE Marking Directive

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



Signed by Mark Sweetman

3rd January 2002

The construction file for this product is held by the Manufacturer and may be inspected on request by contacting Jack Sealey Ltd.

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 product. **WARRANTY:** Guarantee is 12 months from purchase date, proof of which will be required for any claim. **INFORMATION:** Call us for a copy of our latest catalogue on 01284 757525 and leave your full name and address including your postcode.



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