

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.**

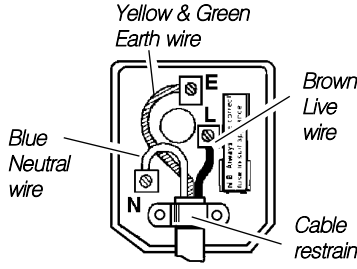
**1. SAFETY INSTRUCTIONS**

**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).



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

- 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'.**
- 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 an 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 1.5mm<sup>2</sup> 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 2.5mm<sup>2</sup> 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.

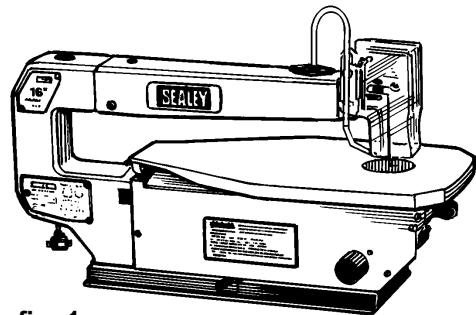


fig. 1

- ✓ 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.
- x **DO NOT** use the saw for any purpose other than that for which it is designed.
- x **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.
- x **DO NOT** switch the saw on whilst the blade is in contact with the workpiece.
- x **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.
- x **DO NOT** use the saw out of doors.
- x **DO NOT** get the saw wet or use in damp or wet locations or areas where there is condensation.
- x **DO NOT** allow untrained persons to operate the saw.
- x **DO NOT** allow children to operate the saw.
- x **DO NOT** operate the saw when you are tired, under the influence of alcohol, drugs or intoxicating medication.
- x **DO NOT** leave the saw operating whilst unattended.
- x **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 SM43 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 Depth . . . . .	.400mm	Table Size . . . . .	.374 x 200mm
Max. Cut . . . . .	.50mm	Table Tilt . . . . .	.0 - 45° left
Stroke . . . . .	.19mm	Motor . . . . .	.90W/230V
Cuts per min. . . . .	1440	Weight . . . . .	.20kg
Dust Extraction Port . . . . .	∅32mm		

## 3. CONTENT & 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.**

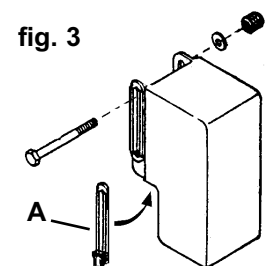
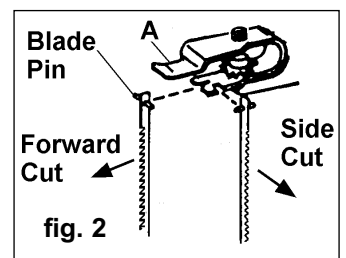
### 3.1. Content

3.1.1. Check the package content against the list below. If any items are missing or damaged contact your supplier immediately.

- Scroll Saw
- Blade Guard
- Bolt, Washer & Knurled Nut, guard retaining
- Blower Tube, Pipe & Support Bracket
- Blade
- Blade Holders, plain-ended blades
- Hex. Key

### 3.2. Assembly

- 3.2.1. Blade may be fitted either with teeth facing forward or to right hand side, see fig.2.
- 3.2.2. Remove tension on blade arm by turning tension knob anticlockwise.
- 3.2.3. With blade teeth pointing downward, insert blade through table access hole and engage end of blade in lower blade holder. Keeping an upward tension on the blade locate upper end in the upper blade holder. Push blade holder down slightly to achieve this.
- 3.2.4. Tension blade by turning tension knob clockwise. Use only finger effort, **DO NOT** use tools.
- 3.2.5. 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.
- 3.2.6. Fit blade guard to end of upper blade arm with blower tube support bracket (fig.3.A) between guard and arm. Retain with bolt, washer and knurled nut. Bolt must be fitted from left side, as shown in fig.3.
- 3.2.7. Push plastic blower tube onto one end of copper pipe as far as the bend.
- 3.2.8. Insert free end of tube up through support bracket and draw through until section with pipe inside can be pushed firmly into the bracket.
- 3.2.9. Push free end of tube onto stub mounted on blade arm (see fig.1).
- 3.2.10. Mount saw to work surface utilising the three mounting holes in the base. In order to reduce noise and vibration saw may be mounted on a foam pad (approx. 12mm thick). If this is done, do not over-tighten the mounting bolts but leave some vibration absorbing 'cushion' in the pad.
- 3.2.11. Adjust table scale pointer as follows:
  - Set table at 90° to blade using a set square.
  - Tighten table lock knob.
  - Adjust pointer so that it lines up with the zero mark on the scale.



**Note:** The scale is intended as a guide only. If a cut angle is critical then make test cuts and fine adjustments to table before cutting workpiece.

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

3.2.12. If dust extraction is available connect to the extraction port on the left hand side below the table.

## 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.

- 4.1. Set blade to front or side cutting as required, set table angle, adjust guard to just clear workpiece (so that fingers cannot touch blade) and align blower tube to keep cut line visible.
- 4.2. Plug saw into mains and switch on.
- 4.3. 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.

## 5. ACCESSORIES

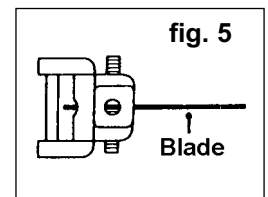
### Blade holders, plain-end blades

- 5.1. The blade holders provided must be used for blades which do not have cross-pins in each end.
- 5.2. Adjust one set screw in each holder until inner end is approximately at the centre of the holder (see fig. 4).
- 5.3. Loosen second set screw, if necessary, and slide one holder onto end of blade. Tighten second set screw with hex. key to clamp blade (see fig.5).
- 5.4. Repeat with second holder on other end of blade.
- 5.5. If blade is to be used for side-cutting remove set screws from holders, refit in holes 'A' (fig.4) and then proceed as steps 5.2. to 5.4.
- 5.6. Blade is fitted by locating holder attachment pin over tags 'A' (fig.2) on machine-mounted blade holders. Ensure blade teeth are pointing down and either forward or to the right hand side (for side-cut).

fig. 4



fig. 5



## 6. MAINTENANCE

- 6.1. Keep table clean to give easy and smooth movement of workpiece.
- 6.2. Every 50 hours of use oil the lower arm bearings with SAE20 oil. Access bearings from rear of machine.

## 7. TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Breaking blades	<ol style="list-style-type: none"> <li>1) Incorrect tension</li> <li>2) Over-worked blade</li> <li>3) Wrong blade</li> <li>4) Twisting blade with workpiece</li> </ol>	<ol style="list-style-type: none"> <li>1) Adjust blade tension.</li> <li>2) Feed workpiece more slowly.</li> <li>3) Use narrow blades for thin, wide blades for thick workpieces.</li> <li>4) Avoid side pressure, or twist, on blade.</li> </ol>
Motor will not operate	<ol style="list-style-type: none"> <li>1) Power supply fault</li> <li>2) Motor fault</li> </ol>	<ol style="list-style-type: none"> <li>1) Check power supply and fuses.</li> <li>2) Contact local authorised Service Agent.</li> </ol>
Vibration	<ol style="list-style-type: none"> <li>1) Mounting or mounting surface</li> <li>2) Loose table</li> <li>3) Loose motor</li> </ol>	<ol style="list-style-type: none"> <li>1) Ensure mount bolts are tight. The more solid the surface the less the vibration.</li> <li>2) Tighten table lock knob and pivot screws.</li> <li>3) Tighten motor mounting screws.</li> </ol>
Blade run-out	<ol style="list-style-type: none"> <li>1) Blade holder(s) misaligned</li> </ol>	<ol style="list-style-type: none"> <li>1) Loosen blade holder screw(s) and realign.</li> </ol>

### Scroll Saw Model: SM43/C

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

8th December 1999

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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