

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.

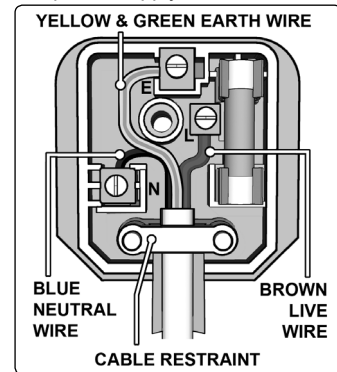


IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS, AND CAUTIONS. USE THIS PRODUCT CORRECTLY, AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY.

1. SAFETY INSTRUCTIONS

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.
- 1.1.7 **DO NOT** pull or carry the appliance by the power cable.
- 1.1.8 **DO NOT** pull the plug from the socket by the cable.
- 1.1.9 **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.
- 1.1.10 Products which require more than 13A 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

- ✓ Disconnect the grinder from the mains power before changing accessories, servicing or performing any maintenance.
- ✓ Maintain grinder and stones in good condition. Check moving parts and alignment. If necessary use an authorised service agent.
- ✓ Replace or repair damaged parts. *Use genuine parts only. Unapproved parts may be dangerous and will invalidate the warranty.*
- **WARNING!** Always work with the grinder safety guard in place.
- ✓ The grinding wheel or stone must only be changed by persons holding an appropriate grinding wheel certificate.
- ✓ Wear approved safety goggles, ear defenders, appropriate dust mask if grinder generates dust and safety gloves.
- ✓ Remove ill fitting clothing. Remove ties, watches, rings, and other loose jewellery, and contain long hair.
- ✓ Use grinder in a suitable work area, keep area clean, tidy and free from unrelated materials, and ensure adequate lighting.
- ✓ Maintain correct balance and footing. **DO NOT** over-reach and ensure the floor is not slippery. Wear non slip shoes.
- ✓ Use only approved grinding stones, and only use the normal grinding surface. Never use the side of the stone.
- ✓ Check grinding stones to ensure they are not split, cracked or damaged in anyway. See chapter 4. If in doubt **DO NOT** use the stone.
- ✓ Grinding stones must be securely attached before use, but not over tightened.
- ✓ Keep non essential persons away from the working area, use screens if necessary.
- x **DO NOT** operate the grinder if any parts are missing or the grinder is damaged.
- x **DO NOT** use the grinder for a task it was not designed to perform.
- x **DO NOT** operate grinder where there are flammable liquids or gasses.
- **WARNING! DO NOT** grind any materials containing asbestos.
- x **DO NOT** get the grinder wet or use in damp or wet locations.
- x **DO NOT** switch the grinder on whilst the stone is in contact with the workpiece.
- x **DO NOT** cover the grinder air vents situated beneath the motor. To do so will overheat the machine.
- x **DO NOT** touch the workpiece immediately after grinding as it will be very hot.
- x **DO NOT** try to cool the grinding stones with water or other lubricants.
- x **DO NOT** hold unsecured work in your hand, and **DO NOT** touch the grinding stone whilst operating, or whilst plugged into the mains power.
- x **DO NOT** leave the grinder running unattended.
- x **DO NOT** operate the grinder when you are tired or under the influence of alcohol, drugs or intoxicating medication.
- ✓ When not in use switch grinder off, remove plug from power supply.

DANGER OF FIRE/EXPLOSION HAZARD

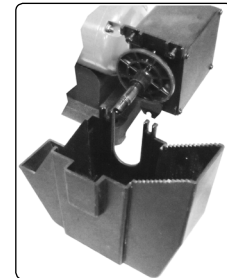
- WARNING!** The grinding process can produce streams of sparks which are a potential source of ignition.
- DO NOT** use the grinder where there are flammable liquids, solids or gases.
- DO NOT** allow grinder sparks to make contact with the operator's clothing or any other fabric such as cleaning rags. Fabrics contaminated with flammable materials such as petrol, oil, grease, paint and solvents are a particular fire hazard.
- To reduce the risk of clothing catching fire the operator should wear wool or cotton outer garments treated with a fire retardant in preference to man-made fibres.

2. INTRODUCTION & SPECIFICATIONS

Supplied with 230V Induction motor drive and fully guarded, suitable for workshop use. Suitable for sharpening fine blades. Supplied with Ø200mm wet stone and Ø150mm dry stone, ready to use with adjustable eyeshield and spark arrestor. Equipped with fully CE approved safety guards and wheel location flanges to meet current EU abrasive wheel regulations. Motor and switch gear meet CE low voltage and EMC directives, double insulated for extra operator safety. Fitted with a BS approved safety plug.

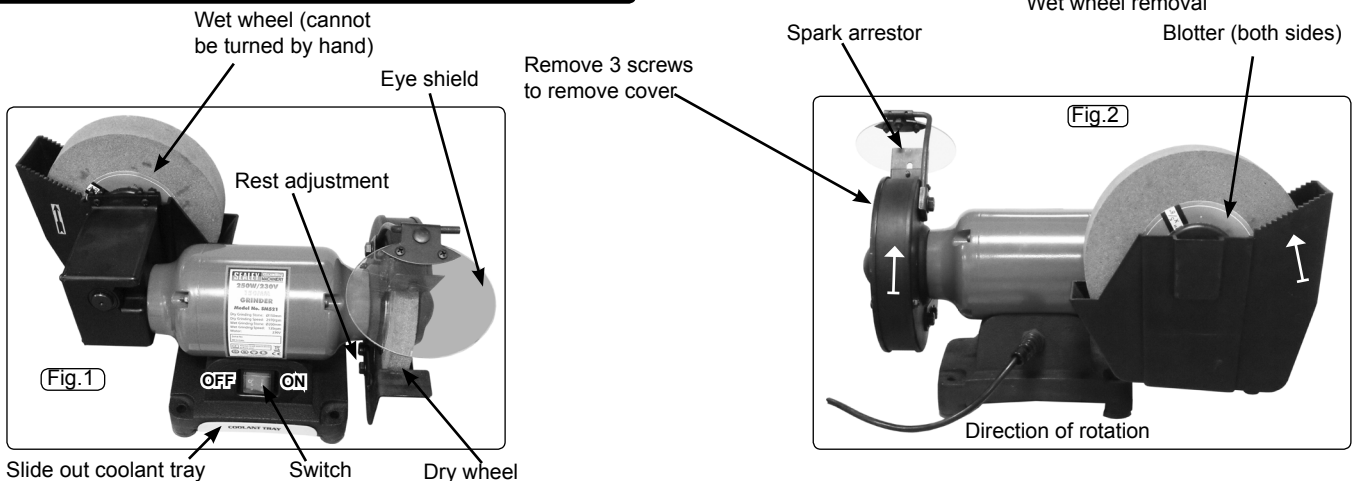
Model No:	SM521
Motor:	230V/250W
Fuse rating:	5A
Axle Diameter (Ø150 Wheel):	12.7mm
Axle Diameter (Ø200 Wheel):	20.0mm
Loaded With (Ø150 Dry Wheel Model Nos.):	BG 150/15 (Fine), BG150/16 (Coarse)
Loaded With (Ø200 Wet Wheel):	SM521GW200W
No Load Speed (Ø150 Wheel):	2970rpm
No Load Speed (Ø200 Wheel):	135rpm
Worm/Wheel ratio:	22:1 Reduction
Weight:	12.3kg

Fig.3



Wet wheel removal

3. ASSEMBLY & INSTALLATION



Unpack the product and check contents. If there are any damaged or missing parts contact your supplier immediately.

- WARNING! Before assembly check to ensure grinder is unplugged from mains.**

3.1 EYESHIELD

3.1.1 Adjust eyeshield so that the perspex shield provides maximum protection against debris being thrown from the wheel.

3.2 TOOL REST

3.2.1 Tool rest should be adjusted to provide no more than a 2mm gap between the wheel and rest.

3.2.2 Turn the dry wheel by hand to check that this distance remains true for the complete rotation.

3.3 SPARK ARRESTOR

3.3.1 Adjust spark arrestor to ensure that the lower edge is no more than 2mm from the surface of the wheel.

3.4 WHEEL DRESSING

3.4.1 The rotating toothed wheels of the wheel dresser should be placed in gentle contact with the grinding face of the wheel.

- WARNING: Wheel dressing should only be carried out by a suitably trained and qualified person.**

3.5 INSTALLATION

3.5.1 Bolt the grinder securely to a fireproof workbench using the base securing slots as a template. Check that all assembly nuts and bolts are secure then read section 4 (grinding stones) before use.

4. GRINDING STONES

4.1 **MANDATORY SAFETY INSTRUCTIONS** (The following instructions must be observed together with section 1 safety).

DANGER! Use of a damaged stone is dangerous and may cause damage and/or personal injury.

- WARNING! Ensure grinder is unplugged from the mains power supply before attempting to change grinding stones (or wheel).**
- Only persons qualified under the "Abrasive Wheels Regulations" and holding a current grinding wheel certificate are authorised to change and dress grinding stones (wheels).**
- Grinding stones (wheels) used with this machine must be of an adequate speed rating and suitable for the material to be ground.
- Ensure the grinding stone's maximum speed specification is higher than that indicated on the machine data plate.
- Check grinding stone is secure, the stone is not worn or damaged and that there are no splits or cracks. If damaged replace immediately.
- Ensure replacement stone is not damaged in any way such as cracks, deformations or splinters etc. Also check the mounting flanges to ensure they are not deformed, burred or chipped. Damaged items must **NOT** be used as they may cause irregular pressure on the stone which may cause a stone to break. **DO NOT** over tighten a stone. Never tamper with a stone in order to adapt it to a different size holder.
- Install a new stone as in 4.2. Once mounted on the grinder test the stone before use by facing the grinder in a safe direction (point away from yourself, others and vulnerable items) and run for a short time. Dress the stone if necessary.

4.2 DRY STONE CHANGING PROCEDURE

WARNING! *Unplug grinder from the mains power supply before changing stone.*

4.2.1 Remove three cross head machine screws and nuts from wheel cover and remove cover.

4.2.2 Hold grinding stone firmly. To protect your hands use cloth or wear gloves. Unscrew retaining nut (Fig.2).

Note: *The 19mm A/F nut on the wet and dry grinding wheels are standard right hand thread (undo anti-clockwise). It may be necessary to strike the wrench sharply in the loosening direction with the heel of your hand to loosen the nut.*

4.2.3 Remove the grinding stone (Fig.4), from main spindle (dry stone), or worm spindle (wet stone).

4.2.4 Carefully inspect the new stone before installing to ensure there are no fissures, chips, or cracks. Tap the grinding wheel gently with a rubber mallet and listen for a sustained high pitch (good) or dull short sound (flawed).

WARNING! DO NOT USE A DAMAGED STONE OR WITHOUT SUPPLIED BLOTTERS.

4.2.5 Inspect the blotters, if they are damaged replace them. The grinder must never be used without blotters. Use the blotters supplied by the wheel manufacturer only.

4.2.6 Install the new stone by reversing steps above. Ensure the domed washers are installed with the flange on the inside, (i.e. the concave side against the blotter).

4.2.7 Hold stone steady and secure locking nut. **DO NOT** over tighten as this may crack the stone.

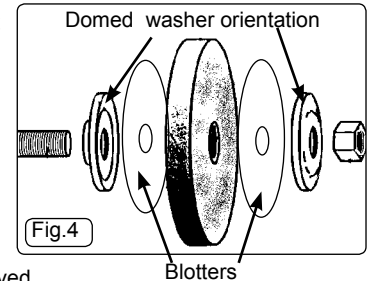
4.2.8 Replace stone cover, re-adjust tool rest to a maximum of 2mm from stone face and tighten securely.

4.3 WET STONE CHANGING PROCEDURE

4.3.1 Slacken two cross head machine screws and nuts on wheel cover top and one hexagon head screw and nut at the bottom of the cover.

4.3.2 Four tabs at the top of the plastic cover can be forced off the ledge and the cover can be removed vertically downward, see Fig.3. The bottom screw and nut will also now be removed.

4.3.3 Follow points 4.2.2 to 4.2.7 and finally refit the cover.



5. OPERATING INSTRUCTIONS

5.1 PRE-USE INSPECTION

WARNING! **INSPECT THE GRINDER BEFORE OPERATING THE MACHINE. ENSURE THE GRINDER IS UNPLUGGED FROM THE MAINS POWER BEFORE COMMENCING THE INSPECTION.**

5.1.1 Check the tool rest on the dry wheel is securely fixed and set at a maximum of 2mm from the grinding stone.

5.1.2 Check that eye shield is in good condition, secure and that you can see through it clearly.

5.1.3 Turn the dry grinding stone by hand and check for any damage. Check they do not touch the tool rest or guards and are correctly aligned.

If any of the above checks fail, replace, repair, or adjust as necessary before starting the grinder.

5.2 STONE USE

Depending on the model, grinders are supplied with one or two aluminous oxide stones. Stones have two grades, fine for hard materials and coarse for soft materials.

When grinding, should surface of the stone become "loaded" (coated with particles of the material being ground) it is probably the wrong grade of stone for the job.

IMPORTANT: *Grinding stones MUST ONLY be assembled by a person holding a grinding wheel certificate. See section 4.*

5.3 USING THE GRINDER

WARNING! **Before commencing work, ensure you have read, understood, and apply the chapter 1. Safety Instructions**

5.3.1 Plug the grinder into the mains power supply.

5.3.2 Place the eyeshield in its appropriate safety location.

5.3.3 Switch the grinder on and bring the workpiece slowly into contact with the spinning stone, or wire wheel.

5.3.4 When you have completed your task, unplug the grinder from the mains power supply, and clean the machine ready for next use.

6. MAINTENANCE

WARNING! Ensure the grinder is unplugged from the mains power supply before performing any maintenance or service.

6.1 As the grinding stone wears, adjust the position of the tool rest. The rest must be set at a maximum of 2mm from the stone surface.

6.2 Regularly remove the grinding stone covers and clean out any dust and dirt.

6.3 The machine motor and bearing are sealed units and require no regular maintenance. Should you require assistance, contact your local Sealey service agent.

6.4 For information relating to the handling and maintenance of grinding stones refer to section 4.



Environmental Protection.

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycle centre and disposed of in a manner which is compatible with the environment.



WEEE Regulations.

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment. When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

Parts support is available for this product. To obtain a parts listing and/or diagram, please log on to www.sealey.co.uk, email sales@sealey.co.uk or telephone 01284 757500.

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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