

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 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 or 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 professional 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 those appliances, and the safety of appliance operators. **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 and plugs for wear or damage and connections to ensure that none are 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).

1.1.7. DO NOT pull or carry the powered appliance by its power supply lead. Products such as welders must not be pulled or carried by their output cables.

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. Where 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 the 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 past the cable restraint and that the cable 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 wires 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 cross section of the cores in the cable is important and should be at least 1.5mm², 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, the use of 2.5mm² section is recommended.

1.2 GENERAL SAFETY

WARNING! Disconnect drill from mains power before changing accessories, servicing or performing any maintenance.

3 Maintain the drill in good condition (use an authorised service agent).

3 Locate the drill in a suitable working area, keep area clean and tidy and free from unrelated materials. Ensure there is adequate lighting.

3 Replace or repair damaged parts. *Use recommended 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 order. Check regularly for damaged parts. A guard or any other part that is damaged should be replaced, before the drill is used, to ensure it will operate properly and perform its intended function. The safety guard is a mandatory fitting where drill is used in premises covered by the Health & Safety at Work Act.

3 Check alignment of moving parts and check for possible broken parts.

3 Ensure the set screws of the head frame are screwed tight before using the drill.

3 Secure drill to a bench to avoid the machine tipping, sliding or walking. Drill is designed for use with drill bits only.

3 Ensure the chuck is securely fastened to the spindle.

3 Remove adjusting keys and wrenches from the machine and working area before switching on.

3 Use clamps or a vice (not included) to secure the workpiece. Never hold the workpiece by hand.

3 Refer to speed chart for recommended drilling speeds. DO NOT exceed the rated capacity of the drill.

WARNING! Wear approved eye or face protection when operating this drill. Use a face or dust mask if dust is generated.

3 Others in the work place should keep a safe distance from the drill, especially when it is in operation.

3 Keep the work area as childproof as possible by using padlocks and master switches.

3 Keep drill bits sharp for best and safest performance. Follow instructions for lubrication and changing accessories.

3 Remove ill fitting clothing. Remove ties, watches, rings and other loose jewellery and contain long hair.

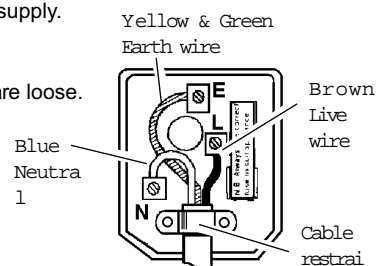
3 Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.

3 Secure non-stable work piece with a clamp, vice or other adequate holding device.

7 DO NOT force the drill to achieve a task it is not designed to perform and DO NOT allow untrained persons to operate the drill.

7 DO NOT use drill in an area where paint fumes, solvents or flammable liquids pose a potential hazard. Keep flammable material away from the drill when operating. Flammable waste, such as wiping or cleaning rags, must be placed in a closed metal container and disposed of correctly.

7 DO NOT get the drill wet or use in damp or wet locations or in areas where there is condensation.



REPLACEMENT FUSES MUST BE OF THE SAME TYPE AND RATING AS THE ORIGINAL

- 7 DO NOT operate the drill if any parts are damaged or missing as this may cause failure and/or possible personal injury.
- 7 DO NOT leave the drill operating unattended and avoid unintentional starting.
- 7 DO NOT operate the drill when you are tired, under the influence of alcohol, drugs or intoxicating medication.
- 3 When not in use switch the drill off, remove plug from the power supply and do not leave until the drill has come to a complete stop.

2. DESCRIPTION

The GDM120B/VS (bench mounted) variable speed drill allows stepless electronic control of drilling speed between minimum and maximum enabling finer control of finish and tolerance. The regular belt and pulley system is supplemented by a varistor which regulates power to the motor. Suitable for light industrial, agricultural and wood working applications. Safety devices fitted include a no load voltage release switch, which has insurance company approval for use in educational establishments.

3. TECHNICAL SPECIFICATIONS

Chuck size (mm) . . . . .	.16mm	Max distance Spindle to Base . . . . .	.610mm
Spindle Nose Taper . . . . .	.MT2	Working Table Diameter . . . . .	.290Ømm
Swing (mm) . . . . .	.410mm	Working Base surface size . . . . .	.205-205mm
Distance Chuck to Upright Face . . . . .	.169mm	Overall Base size . . . . .	.250x440mm
Spindle Travel . . . . .	.78mm	Column Diameter . . . . .	.73mm
Number of Speeds . . . . .	.Variable	Overall Height . . . . .	.1000mm
Speed Range (rpm) . . . . .	.450-2500rpm	Voltage . . . . .	.230V
Max distance Spindle to Table . . . . .	.440mm		

4. CONTENT & ASSEMBLY

4.1. Package content

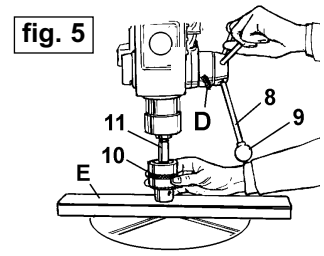
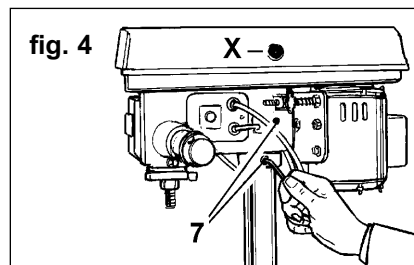
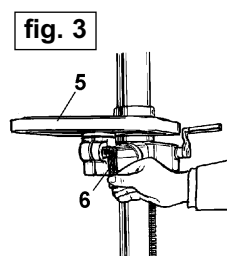
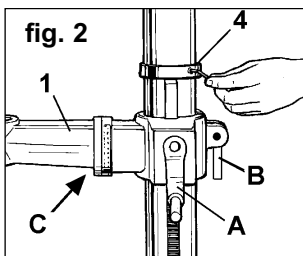
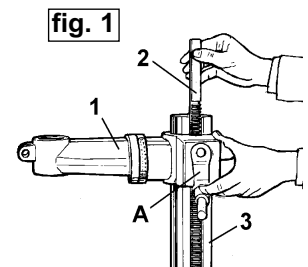
Unpack parts listed below and check to ensure they are in good condition. Any shortage or damage must be reported to your dealer immediately.

3 Head Assembly	3 Base	3 Chuck and Key
3 Feed Handles and Knobs (3)	3 Table Arm, Bracket	3 chuck Arbor
3 Rack and Rack collar	3 Safety Guard	3 Table
3 Height/speed adjusting handle (2)	3 Table bracket clamp bolt	3 Table arm clamp bolt
3 Knob and screw, upper pulley cover	3 Base screw and washers (4)	3 Hex key

Note: Figures are illustrative and may differ in detail from your drill.

4.2. Assembly

- 4.2.1. Place the column assembly on the base, align holes and secure with the bolts and washers provided.
- 4.2.2. Fit table adjustment handle (fig 1.A) to table arm (1) and install rack (2) so that it runs on the gear inside of table arm (1), install arm (1) onto column (3), together with rack engaged in the gear.
- 4.2.3. Install rack collar (fig 2.4) and tighten firmly holding the top of the rack in place.
- 4.2.4. Install pivoted clamp bolt (the longer of the two - fig.2.B).
- 4.2.5. Install the table (fig 3.5) and table pivoted clamp bolt (6).
- 4.2.6. Carefully place the head assembly over the column and slide it into position. Align head with base.
- 4.2.7. Lock the head by tightening the two grub screws (fig 4.7) with hex key provided.
- 4.2.8. Screw the three feed handles (fig 5.8) and knobs (9) to the hub of the pinion shaft.
- 4.2.9. To install chuck (fig 5.10) open the chuck jaws completely by turning the chuck key counter-clockwise. Place a piece of wood (E) on the drill table (to prevent the chuck from getting damaged). Insert long tapered end of arbor (fig 5.11) into drill spindle, fit chuck to protruding end of arbor and hold in place. Turn feed handles to bring nose of chuck down onto wood (E). Firmly pull on feed handle to seat arbor tapers in spindle and chuck.
- 4.2.10. Loosen clamp screw on safety guard mounting collar, pass guard up over chuck and fit collar round flange of quill shaft. Ensure guard pivot is central and tighten clamp screw.
- 4.2.11. Open head cover and place screw through the hole in the side and firmly fix the cover knob to the screw (fig 4. X).



5. OPERATING INSTRUCTIONS

WARNING! Ensure the drill is unplugged from the mains power supply before proceeding further.

5.1. Install drill bit

- 5.1.1. Insert drill bit into chuck jaws to 1" (25mm) deep (avoid inserting small bits too far) and centre bit in chuck before tightening.

5.2. Adjusting the table

- 5.2.1. To adjust table up or down, loosen the clamp bolt (fig.2.B) then turn the bracket handle (fig.2.A).
- 5.2.2. To adjust table tilt, loosen the work table bolt on the underside of arm (fig.2.C), adjust to the desired angle, then retighten.
- 5.2.3. To turn the table around the column, loosen the rack collar slightly (fig 2.4), then loosen the work table bolt (B). Turn the table to the desired position then secure the bolt and rack collar.

5.3. Adjusting the speed

- 5.3.1. To adjust the speed ensure the drill is running. Turn handle (fig.6.12), and view speed on dial (13).
- 5.3.2. Choose the speed for drilling operation (see drill speed chart - fig 8).

5.4. Belt tension

5.4.1. With the belt tension lock screw (fig.7.Z) loose and using hand pressure on the motor, set tension so that belt give is no more than 1/2" (13mm). Tighten lock screw.

5.5. Positioning the workpiece

5.5.1. Use a piece of wood to rest the workpiece on. The drill bit may break through the workpiece and damage the table otherwise. The wood should rest on the table so that one end of it is against the left side of the column. When the drill bit breaks through the workpiece, it will contact the wood and cause it to spin. Resting the wood against the column will help prevent this.

5.5.2. For small workpieces that cannot be clamped to the table, use a drill vice (not included). Vice must be clamped or bolted to table.

5.6. Setting the drill depth

5.6.1. Use the scale on the side of the drill head near the drill handle.

5.6.2. Loosen locking screw (fig.5.D) and set the scale to the depth desired by aligning against the arrow on head. Tighten locking screw.

5.6.3. Check the depth to ensure it is correct. When ready to drill, simply pull the feed handle. The drill will stop at the set depth.

fig. 6

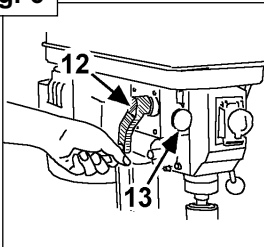
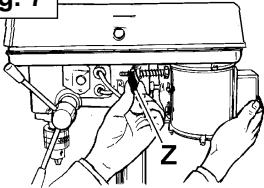


fig. 7



APPROXIMATE DRILL SPEED FOR A GIVEN DRILL BIT SIZE AS FOLLOWING TABLE:

Size Diameter		Cast steel		Tool steel		Cast iron		Mild steel		Alum & copper	
		m/min	ft/min	m/min	ft/min	m/min	ft/min	m/min	ft/min	m/min	ft/min
		12	40	18	60	24	80	30	100	60	20
mm		Drilling speed revolution per minute									
inch											
2	1/16	1910	2445								
3	1/8	1275	1220	1910	1835						
5	3/16	765	815	1145	1220	1530	1630	1910	2035		
6	1/4	610	610	955	915	1275	1220	1590	1530		
8	5/16	480	490	715	735	955	980	1195	1220	2390	2445
10	3/8	380	405	570	610	765	815	955	1020	1910	2035
11	7/16	350	350	520	525	700	700	870	870	1740	1745
13	1/2	300	305	440	460	590	610	735	765	1470	1530
16	5/8	240	245	360	365	480	490	600	610	1200	1220
19	3/4	190	205	285	305	380	405	480	510	955	1020

6. MAINTENANCE

WARNING! Ensure the drill is unplugged from the mains power supply.

- 6.1. Clean the drill after each use. A coat of automobile-type wax applied to the table and column will help to keep the surfaces clean.
- 6.2. Blow out any dust that may have accumulated in the motor.
- 6.3. Periodically lubricate the table elevation rack/gear/worm mechanism.

7. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive noise	1. Incorrect belt tension 2. Spindle is dry 3. Pulley is loose 4. Bearing damaged	1. Adjust tension 2. Disassemble spindle/quill and lubricate 3. Tighten pulley 4. Replace the bearing
Excessive drill wobble	1. Chuck is loose 2. Bearing or spindle shaft is worn 3. Chuck is worn	1. Tighten the chuck by pressing it against the table (see 5.2.12) 2. Replace worn part 3. Replace the chuck
Drill binds in the workpiece	1. Feed pressure is wrong 2. Belt is loose 3. Drill bit is loose 4. Speed is too fast	1. Apply less pressure 2. Adjust tension 3. Tighten the chuck jaws with the key 4. Change the speed
Drill burns or smokes	1. Speed is too fast 2. Chips are not discharging 3. Drill bit is dull 4. Lubrication needed 5. Feed pressure is wrong	1. Change the speed 2. Clean the drill bit 3. Use a new bit 4. Lubricate while drilling 5. Apply less pressure
Table is difficult to raise	1. Lubrication is needed 2. Rack is bent	1. Lubricate with light oil 2. Straighten the rack

Pillar Drill Model: GDM120B/VS

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.



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

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

Signed by Mark Sweetman

19th July 2000

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:** 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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