ARBORTECH™

MIN.PK.BOOK300

MINI GRINDER
OWNER'S INSTRUCTION MANUAL

Original instructions provided by Arbortech Industries

Thank you for purchasing an Arbortech Product.

Your Arbortech Mini Grinder has been designed & manufactured to provide you with the highest satisfaction in performance, durability and safe operation.

Double Insulated

FOR SAFETY READ THE MANUAL BEFORE USING THIS TOOL

REV101117

Please read this manual carefully to ensure your safety and correct operation and care of the machine. If you are using the Power Chisel correctly, it will provide you with years of reliable service and save you time and money.

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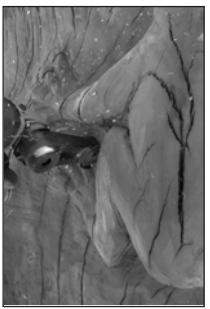


⚠ WARNING - READ ALL INSTRUCTIONS

Failure to follow all instructions listed below, may result in electric shock, fire and/or personal injury. The term “power tool” in all the warnings listed below refers to your mains operated (corded) power tool or battery-operated (cordless) power tool.

GENERAL POWER TOOL SAFETY WARNINGS

WARNING - READ ALL SAFETY WARNINGS, INSTRUCTIONS, ILLUSTRATIONS AND SPECIFICATIONS PROVIDED WITH THIS POWER TOOL.

Failure to follow all instructions listed below, may result in electric shock, fire and/or personal injury.

Save all warnings and instructions for future reference.

The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

1) WORK AREA SAFETY

• **Keep work area well ventilated, clean and well lit.** Cluttered or dark areas invite accidents.

• **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.

• **Keep children and bystanders away while operating a power tool.** Distractions can cause you to loose control.

2) ELECTRICAL SAFETY

• **Power tool plugs must match the outlet.** Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

• **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.

• **Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.**

• **Do not abuse the cord. Never use the cord for carrying, pulling, or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.

• **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

IF OPERATING A POWER TOOL IN A DAMP LOCATION IS UNAVOIDABLE, USE A RESIDUAL CURRENT DEVICE (RCD) PROTECTED SUPPLY. USE OF AN RCD REDUCES THE RISK OF ELECTRIC SHOCK.

3) PERSONAL SAFETY

• **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.

• **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.

• **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to a power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

• **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

• **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations

• **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.

• **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

• **Always follow tool safety principles when operating power tools.** Careless action can cause severe injuries within a fraction of a second.

4) POWER TOOL USE AND CARE

• **Do not force the power tool. Use the correct tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.

• **Do not use the tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

• **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventative safety measures reduce the risk of starting the power tool accidentally.

• **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.

• **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.

• **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp edges are less likely to bind and are easier to control.

• **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

• **Keep handles and grasping surfaces dry, clean and free from oil and grease.** Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected siuations.

5) SERVICE

• **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

⚠ SAFETY WARNINGS SPECIFIC FOR MINI GRINDER

SAFETY WARNINGS COMMON FOR GRINDING, SANDING, WOOD CARVING, OR ABRASIVE CUTTING-OFF OPERATIONS:

1. This power tool is intended to function as a grinder, sander. Read all safety warnings, instructions, illustrations and specifications provided with this power tool. Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

2. Operations such as polishing are not recommended to be performed with this power tool. Operations for which the power tool was not designed may create a hazard and cause personal injury.

3. Do not use accessories which are not specifically designed and recommended bythe tool manufacturer. Just because the accessory can be attached to your power tool, it does not assure safe operation.

4. The rated speed of the accessory must be at least equal to the maximum speed marked on the power tool. Accessories running faster than their rated speed can break and fly apart.

5. The outside diameter and the thickness of your accessory must be within the capacity rating of your power tool. Incorrectly sized accessories cannot be adequately guarded or controlled.

6. Threaded mounting of accessories must match the grinder spindle thread. For accessories mounted by flanges, the arbour hole of the accessory must fit the locating diameter of the flange. Accessories that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.

7. Do not use a damaged accessory. Before each use inspect the accessory such as abrasive wheels for chips and cracks, backing pad for cracks, tear or excess wear, wire brush for loose or cracked wires. If power tool or accessory is dropped, inspect for damage or install an undamaged accessory. After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.

8. Wear personal protective equipment. Depending on application, use face shield, safety goggles or safety glasses. As appropriate, wear dust mask, hearing protectors, gloves and workshop apron capable of stopping small abrasive or workpiece fragments. The eye protection must be capable of stopping flying debris generated by various operations. The dust mask or respirator must be capable of filtrating particles generated by your operation. Prolonged exposure to high intensity noise may cause hearing loss.

9. Keep bystanders a safe distance away from work area. Anyone entering the work area must wear personal protective equipment. Fragments of workpiece or of a broken accessory may fly away and cause injury beyond immediate area of operation.

10. Hold the power tool by insulated gripping surfaces only, when performing an operation where the cutting accessory may contact hidden wiring or its own cord. Cutting accessory contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.

11. Position the cord clear of the spinning accessory. If you lose control, the cord may be cut or snagged and your hand or arm may be pulled into the spinning accessory.

12. Never lay the power tool down until the accessory has come to a complete stop. The spinning accessory may grab the surface and pull the power tool out of your control.

13. Do not run the power tool while carrying it at your side. Accidental contact with the spinning accessory could snag your clothing, pulling the accessory into your body.

14. Regularly clean the power tool's air vents. The motor's fan will draw the dust inside the housing and excessive accumulation of powdered metal may cause electrical hazards.

15. Do not operate the power tool near flammable materials. Sparks could ignite these materials.

16. Do not use accessories that require liquid coolants. Using water or other liquid coolants may result in electrocution or shock.

KICKBACK AND RELATED WARNINGS

Kickback is a sudden reaction to a pinched or snagged rotating wheel, backing pad, brush or any other accessory.

Pinching or snagging causes rapid stalling of the rotating accessory which in turn causes the uncontrolled power tool to be forced in the direction opposite of the accessory's rotation at the point of the binding. For example, if an abrasive wheel is snagged or pinched by the workpiece, the edge of the wheel that is entering into the pinch point can dig into the surface of the material causing the wheel to climb out or kick out. The wheel may either jump toward or away from the operator, depending on direction of the wheel's movement at the point of pinching. Abrasive wheels may also break under these conditions. Kickback is the result of power tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below.

a) Maintain a firm grip on the power tool and position your body and arm to allow you to resist kickback forces. Always use auxiliary handle, if provided, for maximum control over kickback or torque reaction during start-up. The operator can control torque reactions or kickback forces, if proper precautions are taken.

b) Never place your hand near the rotating accessory. Accessory may kickback over your hand.

c) Do not position your body in the area where power tool will move if kickback occurs. Kickback will propel the tool in direction opposite to the wheel's movement at the point of snagging.

d) Use special care when working corners, sharp edges etc. Avoid bouncing and snagging the accessory. Corners, sharp edges or bouncing have a tendency to snag the rotating accessory and cause loss of control or kickback.

e) Do not attach a saw chain woodcarving blade or toothed saw blade. Such blades create frequent kickback and loss of control.

f) Do not attach reinforced abrasive cut-off wheel. Such tools can brake-off and cause injuries.

SAFETY WARNINGS SPECIFIC FOR GRINDING AND ABRASIVE CUTTING-OFF OPERATIONS:

a) Use only wheel types that are recommended for your power tool and the specific guard designed for the selected wheel. Wheels for which the power tool was not designed cannot be adequately guarded and are unsafe.

b) The grinding surface of centre depressed wheels must be mounted below the plane of the guard lip. An improperly mounted wheel that projects through the plane of the guard lip cannot be adequately protected.

c) The guard must be securely attached to the power tool and positioned for maximum safety, so the least amount of wheel is exposed towards the operator. The guard helps to protect the operator from broken wheel fragments, accidental contact with wheel and sparks that could ignite clothing.

d) Wheels must be used only for recommended applications. For example: do not grind with the side of cut-off wheel. Abrasive cut-off wheels are intended for peripheral grinding, side forces applied to these wheels may cause them to shatter.

e) Always use undamaged wheel flanges that are of correct size and shape for your selected wheel. Proper wheel flanges support the wheel thus reducing the possibility of wheel breakage.Flanges for cut-off wheels may be different from grinding wheel flanges.

f) Do not use worn down wheels from larger power tools. Wheel intended for larger power tool is not suitable for the higher speed of a smaller tool and may burst.

g) Do not "jam" the cut-off wheel or apply excessive pressure. Do not attempt to make an excessive depth of cut. Overstressing the wheel increases the loading and susceptibility to twisting or binding of the wheel in the cut and the possibility of kickback or wheel breakage.

h) Do not position your body in line with and behind the rotating wheel. When the wheel, at the point of operation, is moving away from your body, the possible kickback may propel the spinning wheel and the power tool directly at you.

i) When wheel is binding or when interrupting a cut for any reason, switch off the power tool and hold the power tool motionless until the wheel comes to a complete stop. Never attempt to remove the cut-off wheel from the cut while the wheel is in motion otherwise kickback may occur. Investigate and take corrective action to eliminate the cause of wheel binding.

j) Do not restart the cutting operation in the workpiece. Let the wheel reach full speed and carefully re-enter the cut. The wheel may bind, walk up or kickback if the power tool is restarted in the workpiece.

k) Support panels or any oversized workpiece to minimize the risk of wheel pinching and kickback. Large workpieces tend to sag under their own weight. Supports must be placed under the workpiece near the line of cut and near the edge of the workpiece on both sides of the wheel.

l) Use extra caution when making a "pocket cut" into existing walls or other blind areas. The protruding wheel may cut gas or water pipes, electrical wiring or objects that can cause kickback.

m) Do not use excessively oversized sanding disc paper. Follow manufacturers recommendations, when selecting sanding paper. Larger sanding paper extending beyond the sanding pad presents a laceration hazard and may cause snagging, tearing of the disc or kickback.

ADDITIONAL SAFETY WARNINGS

Wear hearing protection; Wear eye protection; Wear dust mask; Wear protective gloves.

Use suitable detectors to determine if utility lines are hidden in the work area or call the local utility company for assistance. Contact with electric lines can lead to fire and electric shock. Damaging a gas line can lead to explosion. Penetrating a water line causes property damage or may cause an electric shock.

- **Release the On/Off switch and set it to the off position when the power supply is interrupted, e. g., in case of a power failure or when the mains plug is pulled.**
- **Do not touch grinding and cutting discs before they have cooled down. The discs can become very hot while working.**
- **Secure the workpiece. A workpiece clamped with clamping devices or in a vice is held more secure than by hand.**

Knowing your tool

TECHNICAL SPECIFICATIONS:

Max. Blade diameter: 50 mm

Max. RPM: 18,000 rpm @ extension spindle

Power: 5.8A ~ 700 Watt

Rating: 230-240V, AC, 50-60Hz

120V, AC, 60Hz

Disc Bore Size:	9.5mm
Max. cutting depth:	10 mm
Weight:	1.83 Kg
Overall Length:	350mm
Vibration emission:	1.233 m/s2
Noise emission:	100.7 dB(A)

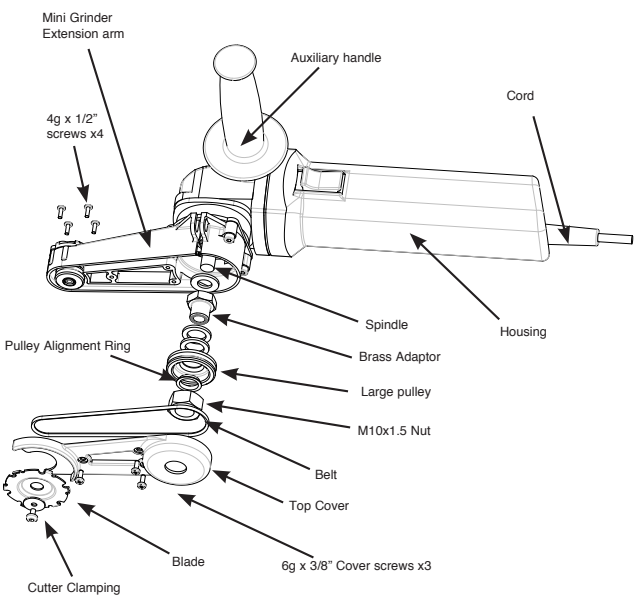
Model: MIN.FG.300.00 AU I MIN.FG.300.00.20 US I MIN.FG.300.00.40 UK I MIN.FG.300.00.20 EU

AUST. APPROVAL SGSEA/120903

CE-Declaration of Conformity:

We declare under our sole responsibility that this product is in conformity in the CE Standards.

Note: text, diagrams and data are correct at time of printing. In the interests of continuous improvement of our products, technical specifications are subject to alteration without prior notice.



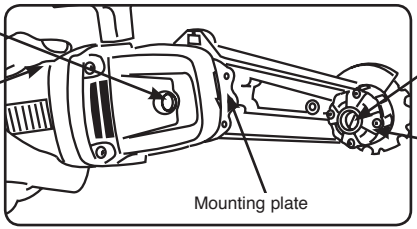


Fig.4

UNPACKING AND ASSEMBLY

1. Remove the Mini Grinder from its box. Inspect to ensure that no damage has occurred during shipping. If damaged, report to the retailer immediately.

2. Remove the auxiliary handle from the box and attach to the tool. (as shown in fig.1)

3.Ensure that the Mini Grinder extension arm is always fitted securely to the mounting plate. If loose, tighten the 3 screws that hold the Mini Grinder to the mounting plate on the tool body.
as seen in fig.2.

4. The Mini Grinder is packaged with a Mini Woodcarver Blade fitted, ready for use. Ensure that the cutter clamping bolt is tightened fully. (as shown in fig.3)

5. Before plugging in, ensure that the on/off switch is in the OFF position.

6. WARNING: Do not run machine before attaching blade to avoid damage to belt.

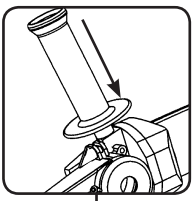


Fig.1

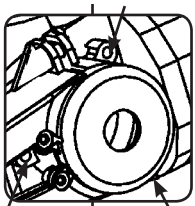


Fig.2

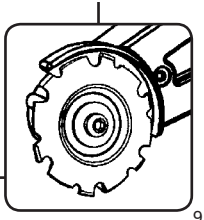


Fig.3

BLADES

1. To change blades place a flat head screwdriver into the Mini Grinder spindle lock and hold (seen in fig .5) then unscrew the cutter clamping bolt by using the Allen key provided and remove blade (as shown in fig 6)

2. Place new blade securely on the small pulley. Ensuring that the blade is sitting flat against the pulley.

3. Place top washer over blade and secure using the cutter clamping bolt (as shown in fig 6) then tighten

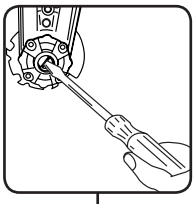


Fig.5

SANDERS

To replace the blade with sanders follow step 1 to remove blade.

Insert HEXAGONAL BOLT into the mini sander keyway and wind into the Mini Grinder spindle in place of the cutter (as shown in fig 7) using the screwdriver for securing.

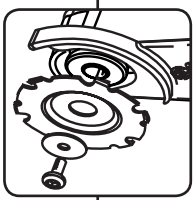


Fig.6

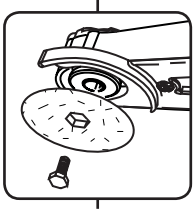


Fig.7

DIAMOND BLADE & MINI INDUSTRIAL BLADE

Required Step washer

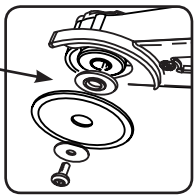


Fig.8

To change blades with Diamond or Mini Industrial Blade follow step 1 as for BLADES on OPERATION (page 7) to remove blade (seen in fig .5) then unscrew the cutter clamping bolt by using the Allen key provided and remove blade

(as shown in fig 6)

Fitting Instruction as below

(These instructions are identical for fitting the diamond blade)

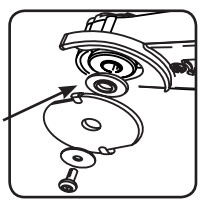


Fig.9

There is a brass seating washer loosely fixed to the underside of this cutter. It positions the cutter forward to prevent collision with the inside face of the guard. Please ensure it is fitted on the correct side of the cutter as shown in the diagram.

(as shown in fig 10)

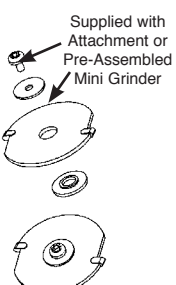


Fig.10

⚠ **WARNING:** Always wear correct safety clothing, including ear, eye and lung protection.

• The Mini Grinder should always be used with two hands, placing the left hand on the auxiliary handle and the right on the tool body.(as shown in fig.11)

CUTTING GRIP

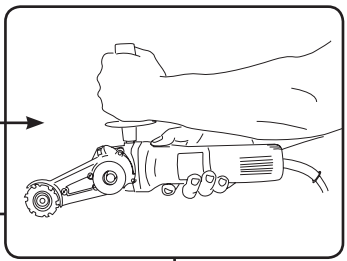


Fig.11

• Ensure the machine is running BEFORE contacting the material, to be worked on.

• To sand, polish or scrub, hold the Mini Grinder horizontally.

(as shown in fig.12).

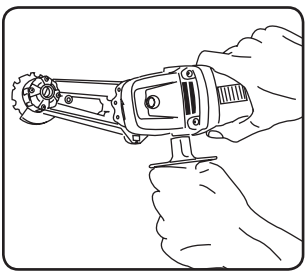


Fig.12

• Use the Mini Woodcarver Blade to cut or remove wood and plastics. The Mini Sanding Pads are for cleaning and sanding wood, plastics, metal, paint and much more. Use the diamond blade for cutting and recessing any masonry based material.

To trench cut, hold the Mini Grinder vertically and simultaneously lower into the wood and pull towards you. (as shown in fig.13)

SHOWING ANGLE & DIRECTION OF CUT

25-30° is a comfortable working angle.

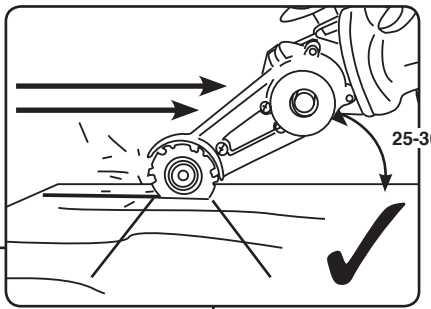


Fig.13

• Use the bottom edge of the blade (as shown in fig.13)

And **not** as in fig.14.

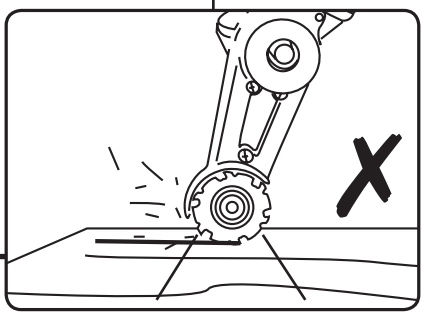


Fig.14

BLADE SHARPENING - MINI WOODCARVER BLADE:

1. Unplug the Mini Grinder.

2. Use a (5/32") or 4 mm round metal file (MIN. FG.002). When sharpening hold the file at 900 to the blade, keeping the file level.

(as shown in fig.15)

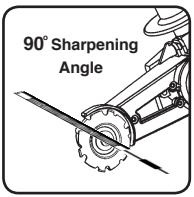


Fig.15

CHECKING ADAPTOR PLATE

Ensure that the Mini Grinder adaptor plate is always mounted securely. If loose, tighten the three adaptor plate screws as shown in fig.16.

Note: The arm must be removed to be able to tighten the adaptor plate screws to the casting of the grinder

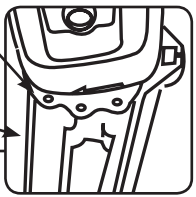


Fig.16

CLEANING THE GRILLS AND SWITCH

Regularly check to see if any dust or foreign matter has entered the grills positioned on the front and back of the motor or under the switch (as shown in fig.17).

If so use a soft brush to remove any accumulated dust. To clean grills and switch

Fig.17

WARNING

ALWAYS USE EYE PROTECTION

ALWAYS UNPLUG FROM THE WALL WHEN CLEANING

TENSIONING OR REPLACING THE BELT

• Unplug the Mini Grinder

• Remove the 4 belt tensioning cap screws (shown in fig. 18).

• To remove top cover , remove the 3 cover screws (see knowing your tool page 5) then slide cover back away from blade and lift off.

• Rotate tensioning cap Fig 18 to remove slack from the belt fig 19. The blade can be seen moving slightly when rotating the Belt tensioning cap.

• When tensioned secure with top cover screws.

DO NOT OVER TENSION THE BELT

If replacing the belt ensure that the "V" shape sides of the belt are on the inside (as shown in fig.20). Replacement belts (MIN.FG.003) are available through Arbortech Pty Ltd

(see address on back).

Note: clean surroundings with a soft cloth or small brush.

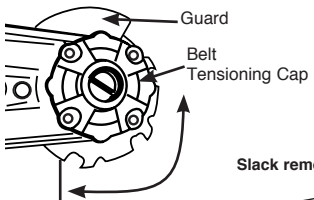


Fig.18

Fig.20

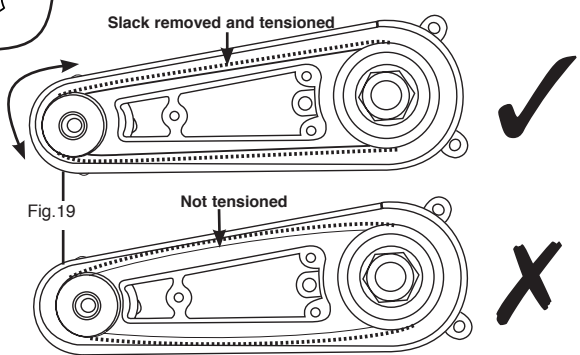


Fig.19

Accessories & Spare Parts

Accessories Available for the Mini Grinder

MIN.FG.001 Mini-Woodcarver Blades x 2

MIN.FG.002 4mm Sharpening File

MIN.FG.003 Replacement Pulley Belt

MIN.FG.004 Bearing & Spindle Assembly

MIN.FG.006 Mini-Sanders 4x assorted sanders

MIN.FG.008 4 x 40 Grit Mini-Sanders

MIN.FG.009 4 x 60 Grit Mini-Sanders

MIN.FG.010 4 x 80 Grit Mini-Sanders

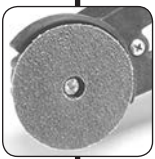
MIN.FG.011 4 x 120 Grit Mini-Sanders

MIN.FG.012 Mini Industrial Cutter

MIN.FG.016 Mini Diamond Blade

Mini Wood Carver Blade

Sanding Disk



Mini-Industrial Blade

Diamond Blade

	Product	Features
	TURBO Plane™	The Arbortech TURBO Plane™ is a universal wood shaping blade that can be used to create different shapes, profiles and finishes. It can be used flat to create large level surfaces, or used at angles to provide shallow cuts for fine shaping, planing and sculpting.
	Mini TURBO™ Kit	The Arbortech Mini TURBO™ Kit is a revolution in wood sculpting. This is an ideal tool to be used freehand or with guides and templates for accuracy. Previously impossible cuts and shapes are now possible. This is the perfect kit for medium size sculpting projects from go to finish.
	TURBO Shaft™	The TURBO Shaft™ provides detailed freehand carving to perfectly combine efficiency and exceptional control. The unique new TURBO Shaft™ technology is a versatile addition to any woodworkers arsenal. Perfect for deep and narrow profiles, detailed sculpting, letterwork, template work and more.
	Ball Gouge	The Ball Gouge can rapidly hollow small concave surfaces in woodworking projects. This 30mm diameter ball-shaped cutter is ideal for crafting smooth hollows in wooden spoons, small bowls and is useful for small to medium sculpting.

Other Products

	Product	Features
	Contour Sander	The Arbortech Contour Sander is a revolutionary tool for sanding deep profiles, contours and detail work. Areas that previously could only be sanded by hand can now be finished rapidly. The random orbital sanding action combined with the patented flexible backing pad creates a perfect finish without scars, scratches or blemishes.
	Power Chisel	The Power Chisel is the ultimate woodworker's sidekick. You simply let the motor do the work and guide the chisel in whichever direction you prefer. The Power Chisel does everything that a traditional hammer and chisel will, only easier and faster. The Power Chisel is so safe and easy to use that it is suitable for anyone to use, from kids to the professional woodworker.
	Industrial Woodcarver	The Industrial Woodcarver is our best rotary carving blade. It is the smoothest woodcarving blade available, and you will never have to replace the blade due to interchangeable and rotatable tungsten teeth. It is recommended that the blade is always used in conjunction with the Arbortech Pro Guard.
	Trade Blade (Known as TUFF CUT in Europe and USA)	The Trade Blade is the trades person and DIY dream. Its resharpenable tungsten carbide teeth promise long life and unrivalled cutting performance. It is designed for straight cuts and carving through the toughest of materials, from dirty wood with embedded nails to aluminium.

*Manufacturer reserves the right to change specifications without notice.

**Note: Specifications may differ from country to country.

NOTE: Motor may differ from that shown on box depending on specifications required for your country.

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