

INSTRUCTIONS FOR

150mm Bench Grinder with Sanding Belt & Worklight

Stock No.05096 Part No.GD650A

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND FFFECTIVE USE OF THIS TOOL.





GENERAL INFORMATION

Read all these instructions before operating this product and save these instructions.

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself. All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product. Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF. England.

Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. The guarantee is extended to 24 months for parts only. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.



SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock no	
Part no	
Rated voltage	
Rated input	370W(S2)
Speed (no load)	2850r/min
Grinding wheel dimension	150 x 20mm
Bore dimension	12.7mm
Wheel supplied	
Sanding belt size	50 x 686mm
Belt supplied	
Weight (nett/gross)	
Sound pressure level	84db(A)
Sound power level	92db(A)

Note: The sanding belt is suitable for wood & plastic applications.

ALWAYS WEAR APPROVED EAR AND EYE PROTECTION



POWER SUPPLY

CAUTION: Risk of electric shock. Do not open.

This appliance is supplied with a moulded 3 pin mains plug for your safety. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure the substitute is of the correct rating, approved to BS1362 and ASTA or BS Kite marked.



The fuse cover is removable with a small plain slot screwdriver. Ensure the fuse cover is replaced before attempting to connect the plug to an electrical outlet. If the cover is missing, a replacement must be obtained or the plug replaced with a suitable type.

If a replacement plug is to be fitted this must be carried out by a qualified electrician.

The damaged or incomplete plug, when cut from the cable shall be disabled to prevent connection to a live electrical outlet.

This appliance is Class I^{\dagger} and is designed for connection to a power supply matching that detailed on the rating label and compatible with the plug fitted.

If an extension lead is required, use an approved and compatible lead rated for this appliance. Follow all the instruction supplied with the extension lead.

 † Earthed $\stackrel{L}{=}$: This product requires an earth connection to protect against electric shock from accessible conductive parts in the event of a failure of the basic insulation.



GENERAL SAFETY INSTRUCTIONS

General Power Tool Safety Warnings

⚠ WARNING: Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious 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 clean and well lit. Cluttered or dark areas invite accidents.
 - b) 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 lose control.
- 2) Electrical safety
 - a) 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.
 - c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
 - d) 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.
 - e) 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.
 - f) 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
 - a) 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.
 - b) 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 power source and/or battery pack, picking up or carrying the tool. Carrying power tools

- with your finger on the switch or energising power tools that have the switch on invites accidents.
- d) 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.
- e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f) 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.
- g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust-related hazards.
- 4) Power tool use and care
 - a) Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
 - b) Do not use the power 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.
 - c) Disconnect the plug from the power source and/or battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
 - d) 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.
 - e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
 - f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
 - g) 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.
- 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.



ADDITIONAL SAFETY INSTRUCTIONS

ADDITIONAL SAFETY INSTRUCTIONS

- Check that speed marked on the wheel is equal to or greater than the rated speed of the grinder;
- Ensure that the wheel dimensions are compatible with the grinder;
- Abrasive wheels shall be stored and handled with care in accordance with manufacturer's instructions;
- Inspect the grinding wheel before use, do not use chipped, cracked or otherwise defective products;
- Ensure that mounted wheels and points are fitted in accordance with the manufacturer's instructions;
- Ensure that blotters are used when they are provided with the bonded abrasive product and when they are required;
- Ensure that the abrasive product is correctly mounted and tightened before use and run the tool at no-load for 30 s in a safe position, stop immediately if there is considerable vibration or if other defects are detected.
 - If this condition occurs, check the machine to determine the cause;
- If a guard is supplied with the tool never use the tool without such a guard.
- Do not use separate reducing bushings or adapters to adapt large hole abrasive wheels;
- For tools intended to be fitted with threaded hole wheel, ensure that the thread in the wheel is long enough to accept the spindle length;
- Check that the work piece is properly supported;
- Do not use cutting wheel for side grinding;
- Ensure that sparks resulting from use do not create a hazard e.g. do not hit persons, to ignite flammable substances;
- Ensure that ventilation openings are kept clear when working in dusty conditions. If it should become necessary to clear dust, first disconnect the tool from the mains supply (use non metallic objects) and avoid damaging internal parts;
- Always use eye and ear protection;
- Personal protective equipment such as dust

mask, gloves, helmet and apron should be worn;

- The wheel continues to rotate after the tool is switched off.
- Warning. When using electric tools, basic safety precautions, including the following should always be followed to reduce the risk of fire, electric shock and personal injury.
- Use the right tool. Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example, do not use circular saws to cut tree limbs or logs.
- Secure work. Use clamps of a vice to hold the work. It is safer than using your hands and it frees both hands to operate the tool.
- **4. Stay alert.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
- 5. Wear proper clothing. Do not wear loose clothing, neckties or jewellery (ring, wristwatches etc.) to catch in moving parts. NONSLIP footwear is recommended. Wear protective covering to contain long hair. Roll long sleeves above the elbow.
- 6. Use safety goggles (Head protection). Wear goggles approved to the relevant standards at all times. Normal spectacles only have impact resistant lenses, they are NOT safety glasses. Also, use face or dust mask if application is dusty and ear protectors during all operations.
- Sound levels. Some types of machines may have high sound levels when working. In such cases ear protection must be worn.
- **8. Vibration levels.** Hand held power tools produce different vibration levels. You should always refer to the specifications and the relevant Health and Safety guidelines.
- Dust extraction. If your tool is fitted with a
 dust extraction facility, always ensure that it
 is connected and being used with a dust
 extractor. Vacuum cleaners can be used if
 suitable for the material being extracted.
- 10. Check damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of



ADDITIONAL SAFETY INSTRUCTIONS

- moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorised service centre unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorised service centre. Do not use the tool if the switch does not turn it on and off.
- 11. Have your tool repaired by a qualified person. This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

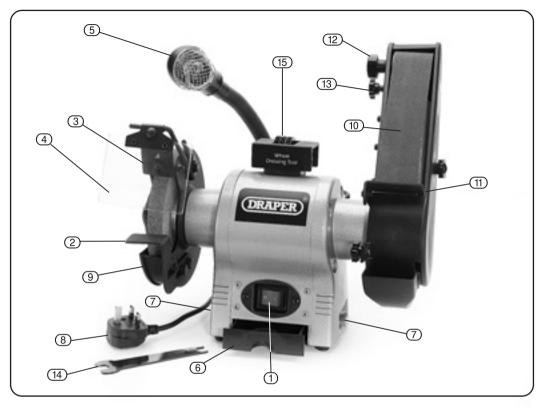
SAFETY RECOMMENDATIONS FOR THE CORRECT USE OF ABRASIVE PRODUCTS

- a. General. Bonded abrasive products are breakable and shall therefore be handled with utmost care. The use of damaged or improperly mounted or used abrasive products is dangerous and can cause serious injuries.
- Delivery, handling and storage. Abrasive products shall be handled and transported with care. Abrasive products shall be stored in such a manner that they are not subjected to mechanical damaged and harmful environmental influences.
- c. Selection of the abrasive product. Information on the label or the abrasive product as well as restrictions of use, safety indications or any other instructions shall be followed. In case of doubt concerning the selection of abrasive products, the user shall request information from the manufacturer or supplier.
- d. Visual inspection and ring test. Abrasive products shall be subjected to a visual inspection as received before mounting. In addition, a ring test shall be executed for vitrified wheels with D>80mm. Damaged abrasive products shall be destroyed.
- e. Mounting before starting and information for grinding. The mounting of abrasive products shall be carried out according to the instructions provided by both the wheel and the machine manufacturer. Mounting of abrasive products

- shall be carried out by a qualified trained person. Each time after mounting, the wheel shall be test run for a reasonable time the specified maximum operating speed of the wheel shall not be exceeded.
- f. **Further information.** The following instructions shall be observed, supplementary to the information contained in the instruction for use of the grinding machine:
- Observance of the user's information from the grinding machine manufacturer.
- Safety devices shall be mounted to the machine and shall be secured.
- No grinding operations without protection by safety devices (use guard when grinding).
- Use of personal protective equipment according to the type of machine and type of application, e.g. eye and face protection, ear protection, respiratory protective devices, protective footwear, protective gloves and other protective clothing.
- Only grinding operations for which the abrasive product is suitable shall be carried out (taking into account restrictions of use, safety indications or other information).
- Jamming of the hand-held grinding machine shall be prevented. In the case of cutting-off with hand-held grinding machines, the abrasive product shall be placed in the cutting gap in a straight position.
- Before placing the hand-held grinding machine on the workbench or on the floor it shall be turned off and it shall be ensured that the abrasive product has stopped.

DRAPER®

GETTING TO KNOW YOUR BENCH GRINDER



- ON/OFF switch.
- Adjustable tool rest.
- 3 Spark deflector.
- 4 Eyeshield.
- (5) Light.
- (6) Tool tray.
- (7) Mounting position.
- (8) Moulded plug and cable.

- Wheel guards.
- (10) Sanding belt.
- (11) Tool rest.
- (12) Locking knob.
- (13) Tracking knob.
- (14) Spanner.
- (15) Wheel Dressing Tool.

 UNPACKING: After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the product and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.



ASSEMBLY

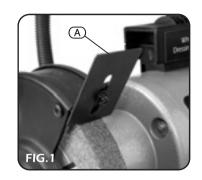
- NOTE:

Remove the plug from the socket before carrying out any adjustment, servicing or maintenance

- SPARK DEFLECTOR (Fig.1.):

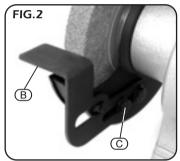
Fit the spark deflector (A) to the wheel guard using the screw provided.

Adjust it so there is approximately 1.5mm gap between the face of the grinding wheel and the edge of the spark deflector.



- TOOL REST (Fig.2.):

Fit the tool rest (B), with the wheel guard securing bolt (C) and secure in place with the bolt supplied. Adjust it so there is approximately 1.5mm between the grinding wheel face and the tool rest.

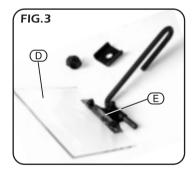


EYE SHIELD (Fig.3.):

Assemble the clear plastic shield ① to the metal plate ② using the locking nuts and screws provided. Clamp ② to the rod and fix the assembled shield to the wheel guard. Select the required position and tighten all the nuts and bolts.

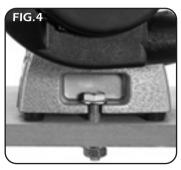
- NOTE:

Do not over tighten the nuts holding the shield to avoid cracking it.



- BENCH MOUNTING YOUR GRINDER (Fig.4.):

Securely bolt the bench grinder to a work bench or other secure surface through the two points in the base (Fixings are not supplied). Ensure there is enough clear space around the grinder to accommodate large items which may be ground, i.e. Garden Tools, etc.





GRINDING OPERATION AND USE

- REPLACING THE GRINDING WHEEL (Fig.5.):

Switch the grinder off and disconnect the power supply. Remove the screws and nuts holding the wheel guard, and remove the cover. Secure the wheel by hand, and using the wrench supplied remove the locking nut and flange. Slide off the old grinding wheel.

- NOTE:

The grinding wheel locking nut has a left handled thread. When fitting a new grinding wheel always check the stated max. RPM on the wheel exceeds the RPM of the bench grinder. Also inspect the new wheel for any damage, such as flaws or cracks. If the wheel appears satisfactory. Fit it to the grinder.



Replace the locking flange and nut and tighten. Do not over tighten to avoid damage to the wheel. Re-assemble the cover and when stood to one side, switch the grinder on, to run the wheel up.

A bench grinder is designed for hand grinding operations only, such as sharpening drill bits, chisels and screwdrivers or removing excess metal from workpieces.

A coarse grit grinding wheel could be used for grinding rough metals, to remove large amounts of metal, or where a smooth finish is not important.

A fine grit grinding wheel could be used for sharpening tools or grinding close to size. A fine grit wheel removes a metal more slowly and therefore gives the workpiece a smooth finish and does not generate enough heat to anneal the cutting edges.

- 1. Check that there is a 1.5mm (1/16") clearance between the tool rests and the surface of the grinding wheels. Adjust as necessary. Now check the gap between the spark deflectors and the surface of the grinding wheels. These should also be 1.5mm (1/16"). Adjust as necessary.
- 2. Check that the eye shields have been secured in the correct position and that the grinding wheel lock nuts are tight.

 NOTE: Before fitting a new grinding wheel to the bench grinder always carefully check the wheel for damage such as chips, flaws or cracks. Then if the new wheel appears to be satisfactory fit the wheel to the grinder. Stand to one side of the grinder
- and switch "ON". Let the grinder operate at full speed for approximately one minute so that any undetected cracks or flaws in the wheel will become apparent.
- 3. Stand to one side of the bench grinder, switch on and let it build up to full speed.
- 4. When grinding, always keep the workpiece moving across the face of the wheel. Grinding against the same part of the wheel will cause uneven wear of the wheel face.
- 5. When necessary redress the grinding wheels using the wheel dressing tool supplied. After redressing adjust the tool rests and spark deflectors as necessary to maintain a 1.5mm (1/16"") clearance from the wheel.



OPERATION AND USE

Ensure that the item to be ground is comfortably and securely held.

Present the workpiece smoothly on to the grinding wheel face with a light and even pressure.

Grind against the edge of the workpiece to avoid burrs.

Never grind on the sides of the wheels. Best results are achieved if the grinder is allowed to rotate at its maximum speed. Excess pressure from the workpiece can damage the wheel and overload the motor. Check grinding wheels regularly for wear or damage. Replace wheels that are worn more than 25%. Damaged wheels should be discarded immediately as they are dangerous and can cause the grinder to vibrate.

After grinding fine edge tools, they should be honed by hand on a fine slip stone.



SANDING OPERATION AND USE

- NOTE:

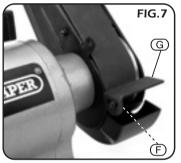
Remove the plug from the socket before carrying out any adjustment, servicing or maintenance

- ADJUSTING THE TOOL REST (Figs. 6. & 7.):

The belt sander is equipped with a multi position tool rest. The two positions enable sanding on the flat part of the belt and also on the rounded section.

Flat section: This is the upper position. Using the locking knob (F) with the bolt and washers provided fix the tool rest (G) to the upper mount. When the tool rest is set to approximately 1.5mm from the sanding face tighten (F). Rounded section: Remove tool rest (G) and refit to the lower position in the same manner. When the tool rest is set to approximately 1.5mm from the sanding face tighten (F).





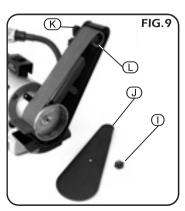
DUST EXTRACTION (Fig.8.):

The GHD155SB is supplied with a dust extraction port at the rear of the sanding belt housing. It is recommended that a suitable vacuum cleaner is connected when using the sanding belt (Draper Stock No.48499) and suitable protective equipment is worn.



- REPLACING THE SANDING BELT (Fig. 9.):

Undo the relevant fixing bolts ① and remove the protective cover ②. Loosen locking knob ⑥ and move the top adjustable pulley ② to release the belt tension. When loose, lock in place with knob ⑥ and remove the worn or damaged belt. Fit the new sanding belt, ensuring the arrow indicating the direction of rotation printed on the back of the sanding belt matches the arrow pressed into the protective cover. The belt rotates from top to bottom, when viewed from the front.





SANDING OPERATION AND USE

- TENSIONING THE BELT (Fig.10.):

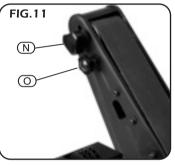
Loosen the locking knob (M) and the spring tensioner will automatically tension the sanding belt. Resecure locking knob (M) when the tension has been taken up.



- TRACKING THE BELT (Fig. 12.):

If, when the sanding belt is rotating the belt wanders across the rollers towards the housing or cover, the tracking requires adjustment.

Loosen the locking knob (N) slightly to allow the belt to be tracked. Slight adjustment on the tracking knob (O) will cause the belt to travel across the pulley. After each turn on the knob, rotate the belt by hand to check the effects of the adjustment. When the belt rotates over the pulley's centrally, the locking knob (N) must be tightened.





ACCESSORIES

The following accessories are available from your local Draper Stockist.

GRINDING WHEELS.

Stock No.: Part No.: Type Grit: Diameter: Bore size: Width (Face size):	AG150 Fine 60 150mm 12.7mm
Stock No.: Part No.: Type Grit: Diameter: Bore size: Width (Face size):	AG150 Coarse 36 150mm 12.7mm
Stock No.: Part No.: Type Grit: Diameter: Bore size: Width (Face size): Note: Suitable for grinding T	AG150 . (80 Grit) Green 150mm 12.7mm 19mm

GENERAL ACCESSORIES

Stock No.: 44351
Part No.:1180c
Description:
Drill Sharpening Attachment

SANDING BELIS	
80 Grit	
Stock No.:	68772
Part No.:	APT88
120 Grit	
Stock No.:	68773
Part No.:	APT88
240 Grit	
Stock No.:	68774
Part No.:	APT88



TROUBLESHOOTING

WARNING: for your own safety always turn the main switch on the machine "off" and remove the plug from the power supply before carrying out any maintenance or trouble shooting.

Problem	Cause	Remedy
Machine will not start	1. Fuse	amp time delay fuse or circuit breaker
	2. Other	2. Authorized service agent
	1. Wheel out of balance	1. Dress wheels
Machine vibrates	2. Wheel loose	Stop machine immediately. Tighten wheel
	3. Damaged wheel (consumable item)	3. Replace wheel†

[†] Replacement abrasive wheel and other accessories can be obtained from your local Draper stockist.



DISPOSAL

- At the end of the machine's working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE* as unsorted municipal waste.



* Waste Electrical & Electronic Equipment.



MAINTENANCE & PARTS REPLACEMENT

Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your tool in good working condition.

The motor must be correctly ventilated during tool operation. For this reason avoid blocking the air inlets with hands. After use disconnect the tool from the power supply and vacuum the ventilation slots.

If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.



EXPLANATION OF SYMBOLS/PICTOGRAMS



Wear safety glasses.



Do not dispose of WEEE* as unsorted municipal waste.

* Waste Electrical & Electronic Equipment.



DRAPER TOOLS LIMITED.

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- **Internet:** www.draper.co.uk

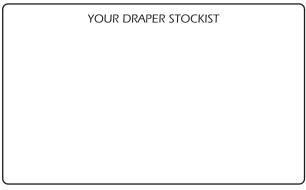
E-mail: sales@drapertools.com

- **Sales Fax:** (023) 8049 4209

- **General Enquiries:** (023) 8026 6355

Service/Warranty Repair Agent

For aftersales servicing or warranty repairs, please contact the Draper Tools Helpline for details of an agent in your local area.



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