

# **GMC**<sup>®</sup>

**GLOBAL MACHINERY COMPANY**

**INSTRUCTION MANUAL**

# **MasterGrind**

**150mm (6") 1/2HP / 200mm (8") 3/4HP**

**Bench Grinders**



**2** YEAR  
REPLACEMENT  
WARRANTY

**30** DAY  
SATISFACTION  
GUARANTEE

• Melbourne • Perth • Auckland • Hong Kong • Shanghai  
• Taipei • New York • Verona • London • Paris

**BG612HPL**  
**BG834HPL**  
031222 ED7 DR

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## Full 2 Years Home Use Warranty

Whilst every effort is made to ensure your complete satisfaction with this tool, occasionally, due to the mass manufacturing techniques, a tool may not live up to our required level of performance and you may need the assistance of our service department.

This product is warranted for a 2-year period for home domestic use from the date of the original purchase. If found to be defective in materials or workmanship, the tool or the offending faulty component will be replaced free of charge with another of the same item. A small freight charge may apply.

The warranty replacement unit is only made available by returning the tool to the place of purchase with a confirmed register receipt. Proof of purchase is essential. We reserve the right to reject any claim where the purchase cannot be verified.

This warranty does not include damage or defects to the tool caused by or resulting from abuse, accidents, alterations or commercial or business use.

It also does not cover any bonus accessories unless the tool is a GMC Platinum Professional model.

Please ensure that you store your receipt in a safe place.

Conditions apply to the above warranty.

If you need direction of what constitutes a free of charge warranty claim, please review the guide given on the rear of the Receipt Holder. An indication is given as to the types of claim that are permissible, and those that are not.



## Dear Customer

If you require any help with your product, whether it is a Warranty claim, spare part or user information, please phone our Help Line for an immediate response. Phone 1300 880 001 in Australia or 0800 445 721 in New Zealand.

## Introduction

Your new GMC power tool will more than satisfy your expectations. It has been manufactured under stringent GMC Quality Standards to meet superior performance criteria.

You will find your new tool easy and safe to operate, and, with proper care, it will give you many years of dependable service.

**Caution.** Carefully read through this entire Instruction Manual before using your new GMC Power Tool. Take special care to heed the Cautions and Warnings.

Your GMC power tool has many features that will make your job faster and easier. Safety, performance, and dependability have been given top priority in the development of this tool, making it easy to maintain and operate.

## Environmental protection



Recycle unwanted materials instead of disposing of them as waste. All tools, hoses and packaging should be sorted, taken to the local recycling centre and disposed of in an environmentally safe way.

## Description of symbols

The rating plate on your tool may show symbols. These represent important information about the product or instructions on its use.



Wear hearing protection.

Wear eye protection.

Wear breathing protection.



N380

Conforms to relevant standards for electromagnetic compatibility.

## Specifications

Nominal voltage: 230 – 240Vac ~ 50Hz

	<b>BG612HPL</b>	<b>BG834HPL</b>
HP	1/2HP	3/4HP
Watts	375W	550W
Spindle Speed	2850RPM	2850RPM
Diameter	Wheel 1 150mm Wheel 2 150mm	200mm 200mm
Width	Wheel 1 25mm Wheel 2 25mm	25mm 25mm
Grit	Wheel 1 36 Wheel 2 60	36 60
Bore Size	Wheel 1 12.7mm Wheel 2 12.7mm	16mm 16mm
Work Light	Yes	Yes
Spindle Lock	Yes	Yes

## Safety instructions

The tool must be used only for the prescribed purpose.

Any uses other than those mentioned in this manual will be considered a case of misuse. The user and not the manufacturer shall be liable for any damage or injury resulting from such cases of misuse.

To use this tool properly, you must observe the safety regulations, the assembly instructions and the operating instructions to be found in this Manual. All persons who use and service the machine have to be acquainted with this Manual and must be informed about its potential hazards. Children and infirm people must not use this tool. Children should be supervised at all times if they are in the area in which the tool is being used. It is also imperative that you observe the accident prevention regulations in force in your area. The same applies for general rules of occupational health and safety.

The manufacturer shall not be liable for any changes made to the tool nor for any damage resulting from such changes.

**Warning.** Before connecting a tool to a power source (mains power point receptacle, outlet, etc.), be sure that the voltage supply is the same as that specified on the nameplate on the tool. A power source with a voltage greater than that specified for the tool can result in serious injury to the user, as well as damage to the tool.

If in doubt, do not plug in the tool. Using a power source with a voltage less than the nameplate rating is harmful to the motor.

Even when the tool is used as prescribed it is not possible to eliminate all residual risk factors. The following hazards may arise in connection with the tool's construction and design:

- Contact with the wheel.
- Kickback of work piece and parts of work piece.
- Wheel fracture.
- Catapulting of wheel pieces.

- Damage to hearing if effective earmuffs are not worn.
- Damage to eyes if eye protection is not worn
- Damage to lungs if breathing protection is not worn
- Always remove the plug from the mains socket before making any adjustments or maintenance, including changing the wheel.

**Warning.** When using power tools, basic safety precautions should always be taken to reduce the risk of fire, electric shock and personal injury. Also, please read and heed the advice given in the additional important safety instructions.

- 1. Keep the work area clean and tidy.** Cluttered work areas and benches invite accidents and injury.
- 2. Consider the environment in which you are working.** Do not use power tools in damp or wet locations. Keep the work area well lit. Do not expose power tools to rain and high humidity. Do not use power tools in the presence of flammable liquids or gases.
- 3. Keep visitors away from the work area.** All visitors and onlookers, especially children and infirm persons should be kept well away from where you are working. Do not let others in the vicinity make contact with the tool or extension cord.
- 4. Store tools safely.** When not in use, tools should be stored in a dry, high place or locked up out of reach.
- 5. Do not force the tool.** The tool will do the job better and safer working at the rate for which it was designed.
- 6. Use the correct tool for the job.** Do not force small tools or attachments to do the job best handled by a heavier duty tool. Never use a tool for a purpose other than that for which it was intended.
- 7. Dress correctly.** Do not wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-slip footwear are recommended when working outdoors. If you have long hair, wear a protective hair covering.

- 8. Use safety accessories.** Safety glasses and earmuffs should always be worn. A face or dust mask is also required.
- 9. Do not abuse the power cord.** Never pull the cord to disconnect the tool from the power point. Keep the cord away from heat, oil and sharp edges.
- 10. Secure the work piece.** Use clamps or a vice to hold the work piece. It is safer than using your hand and frees both hands to operate the tool.
- 11. Do not overreach.** Keep your footing secure and balanced at all times.
- 12. Look after your tools.** Keep tools clean and sharp for better and safer performance. Follow the instructions regarding lubrication and accessory changes. Inspect tool cords periodically and, if damaged, have them repaired by an authorised service facility. Inspect extension cords periodically and replace them if damaged. Keep tool handles dry, clean and free from oil and grease.
- 13. Disconnect idle tools.** Switch off the power and disconnect the plug from the power point before servicing, when changing accessories and when the tool is not in use.
- 14. Remove adjusting keys and wrenches.** Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before switching it on.
- 15. Avoid unintentional starting.** Always check that the switch is in the OFF position before plugging in the tool to the power supply. Do not carry a plugged in tool with your finger on the switch.
- 16. Use outdoor rated extension cords.** When a tool is used outdoors, use only extension cords that are intended for outdoor use and are so marked.
- 17. Stay alert.** Watch what you are doing. Use common sense. Do not operate a power tool when you are tired.
- 18. Check for damaged parts.** Before using a tool, check that there are no damaged parts. If a part is slightly damaged, carefully determine if it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, proper mounting and any other conditions that may affect the operation of the tool. A part that is damaged should be properly repaired or replaced by an authorised service facility, unless otherwise indicated in this Instruction Manual. Defective switches must be replaced by an authorised service facility. Do not use a tool if the switch does not turn the tool on and off correctly.
- 19. Guard against electric shock.** Prevent body contact with grounded objects such as water pipes, radiators, ranges and refrigerator enclosures.
- 20. Use only approved parts.** When servicing, use only identical replacement parts. Use an authorised service facility to fit replacement parts.  
**Warning.** The use of an accessory or attachment, other than those recommended in this Instruction Manual, may present a risk of personal injury.

## **Additional safety rules for bench grinders**

- Always remove the plug from the mains socket before making any adjustments or maintenance, including changing the wheel.
- Always wear eye protection and check that the eye shields on the grinder are properly adjusted.
- Always turn the grinder off when it is not in use and never leave it unattended without first switching off and removing the power plug. Never leave the grinder until the grinding wheels have come to a complete stop.
- Make sure that any replacement wheel is rated at 3000RPM or higher.
- Do not let anyone under 18 years operate this tool.
- Rags, cloths, cord, string and the like should never be left around the work area.
- If you are interrupted when operating the tool, complete the process and switch off before looking up.
- Periodically check that all nuts, bolts and other fixings are properly tightened.
- Do not use a wheel that has received a blow, especially to the side of the wheel.
- Replace a cracked or suspect wheel.
- Always allow a new wheel to run for a few minutes at full speed before using it. Stand to one side at start up.
- Check that the wheel rotates freely each time before start up.
- Do not use the grinder unless all the guards are properly fitted and secure.
- Check that the tool rests are properly adjusted before commencing use.
- Do not overload the grinder. Allow the grinder to run at full speed, or close to full speed during use.
- Never apply excessive pressure to the wheel. It might shatter causing personal injury.
- Make sure that the wheel is not in contact with the work when you start the grinder.

- When using the grinder, use safety equipment including safety goggles or shield, ear protection, dust mask and protective clothing including safety gloves.

Wear goggles

Wear ear protection

Wear a breathing mask

## **Unpacking**

Due to modern mass production techniques, it is unlikely that your GMC Power Tool is faulty or that a part is missing. If you find anything wrong, do not operate the tool until the parts have been replaced or the fault has been rectified. Failure to do so could result in serious personal injury.

## **Connecting to the power supply**

The GMC Bench Grinders covered in this manual are designed to operate from a standard household supply of 230-240V AC. Prior to plugging in the tool, check the rating label on the rear of the grinder and ensure that it states the tool's operating voltage is 240V.

All the grinders are of Class 1 Category (earthed) and are fitted with a 3-core cable and plug. Should the cable or plug be damaged, the product should be serviced by an authorised Service Centre to avoid a hazard.

## Know your product

Before using the bench grinder, familiarise yourself with all the operating features and safety requirements.

The GMC Bench Grinders are designed for light to moderate duty applications in a home environment. They are not intended for use by trade persons. They are ideal for sharpening tools such as drill bits and chisels. The larger tools can be applied to heavier grinding applications on steel sections.

All the bench grinders can be fitted with a wire wheel provided that the wheel is rated for use at 3000RPM or higher.

1. MagniVision eye shield
2. Eye shield
3. Grinding wheel
4. Outer guard
5. Spindle lock button
6. Rubber Mounts
7. Base
8. On/Off switch
9. Light On/Off switch
10. Adjustable tool rest
11. Wheel guard
12. Spark deflector
13. Work light
14. Tool storage drawer



**Caution.** During use it is important not to overload the grinder. The grinder should run at close to full speed. If you are applying too much pressure the grinder will start to slow down. Under these conditions, remove the part being ground and allow the grinder to return to full speed. Re-apply the part to the grinder, but with a little less force.

All of the grinders are supplied with grinding wheels designed for metal use only. The grinding of Copper, Brass, Aluminium, Wood or other similar materials will “clog” the grinding wheel.

**Warning.** Never attempt to grind Magnesium.

### Fitting and adjusting the eye shields

**Important.** Prior to fitting the eye shields, ensure the grinder is turned off and the power plug is removed from the socket.

**Note.** Always check to ensure the eye shields are correctly fitted each time the grinder is used. Eye shields must be fitted over each grinding wheel on all bench grinders in the range.

1. The MagniVision eye shield (1) features a magnifying glass incorporated into the design to provide greater visibility and improved accuracy.
2. Take the MagniVision eye shield and fit it to the top of the right hand side light assembly. The other eye shield (2) should be installed on the left hand side.
3. Fit a plastic coated screw through each side of the eye shield into the pivot points on the light assembly and tighten firmly to the point where the shield is secure, but still able to be adjusted up and down.



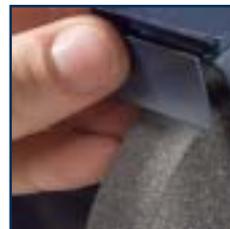
The securing screws are plastic coated so they can be adjusted at any time without the use of tools.

### Fitting and adjusting the spark deflectors

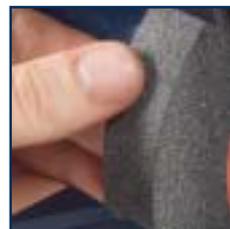
1. The spark deflectors (12) are already fitted to the bench grinder but will need to be adjusted prior to use, and then over time to compensate for wheel wear.
2. To adjust the spark deflectors loosen the screw using the allen key supplied.



3. Slide the spark deflector up or down so that the bottom edge is less than 6mm from the surface of the wheel, but not touching the wheel.



4. Rotate the wheel by hand one full rotation to ensure the wheel can rotate without contacting the spark deflector. Firmly tighten the screw retaining the spark deflector.



### Fitting the tool rests

The tool rests (10) are required for each high speed grinding wheel to assist in the grinding operation.

**Caution.** Never use a Bench Grinder on which the tool rest has not been fitted or where the tool rest has not been correctly adjusted.

The right hand side tool rest features an indentation that helps you rest your work piece for more accurate grinding.

**Note.** The tool rests are right and left handed. Follow the diagrams to ensure the correct tool rest is fitted to the correct side.

**Important.** Prior to fitting the tool rests, ensure the grinder is turned off and the power plug is removed from the socket.

1. Remove the lower screw on the wheel guard (11).



2. Hold the tool rest (10) in the correct position against the inner surface of the wheel guard. Fit the screw through both sides of the guard and then through the tool rest.



3. Fit the star washer first, followed by the flat washer and then the plastic coated nut to the screw and tighten the nut sufficiently to support the tool rest but still allowing the tool rest to slide inwards and outwards.



4. Slide the tool rest to within a maximum of 1.5mm from the wheel. Rotate the wheel one full revolution by hand to ensure the wheel does not contact the tool rest.

5. Tighten the thumb nut firmly to retain the assembly. Repeat the assembly operation for the second tool rest.

## Bench mounting the grinder

The GMC Bench Grinders are supplied with 4 rubber mounts (6) which assist in reducing the transmission of vibration.

It is strongly recommended that the grinder be firmly mounted to a bench or stand for safe operation.

The base of the grinder has a 12mm hole in each corner. These holes accept bolts up to 10mm in diameter. Mounting bolts are not supplied with the unit.

Where the grinder is to be mounted to a steel work bench, it is advisable to place a piece of timber between the bench and grinder then bolt through the grinder and timber into the bench. This further assists to reduce vibration.

**Important.** When directly mounting the grinder ensure:

- The surface under the grinder is flat and clean.
- The 4 mount bolts are applied evenly and not over tightened.

**Note.** The four rubber mounts should remain in place if mounting bolts are used.

## Using the On/Off switch

1. To turn the grinder on, press the right hand side of the On/Off switch (8) to the position marked "ON"
2. To turn the grinder off, press the left hand side of the On/Off switch (8) to the position marked "OFF".

## Using the work light

1. The work light (13) can be used to illuminate the work area and provide greater visibility.
2. To turn the work light on press the light On/Off switch (9) to the position marked "■ ON".
3. To turn the work light off press the light On/Off switch (9) to the position marked "■ OFF".

## Operation

**Important.** Prior to using the grinder, check that the eye shields, spark deflectors, and tool rests are fitted and correctly adjusted and that you are wearing safety gear including eye, hearing and breathing protection.

1. Turn the wheel by hand to make sure it does not touch the guard, eye shields, spark deflectors or tool rests and runs freely.
2. Stand to one side, turn the switch (8) on and allow the motor to reach full speed.
3. Support the work piece on the tool rest (10) and gradually feed the work piece onto the wheel. Use pliers to hold small work pieces.

**Note.** Traverse the work piece across the full width of the wheel to prolong its flat surface.

4. If the grinding operation causes the motor speed to noticeably decrease, pull back the work piece, allow the motor to regain full speed and restart the grinding operation, but apply less force.

**Warnings.** Only use the front face of the grinding wheel, not the sides. Note that the work piece can get very warm. It may be necessary to cool a work piece by dipping it in a coolant or in water. Do not apply coolant or water to the grinding wheel.

## Changing a grinding wheel

**Important.** Prior to changing a wheel, ensure the grinder is turned off and the power plug is removed from the socket. Make sure that the replacement wheel is rated at 3000RPM or higher.

1. Remove the retaining screw and take off the tool rest (10).
2. Remove the retaining screw and take off the spark deflector (12).
3. Take off the third retaining screw and remove the outer guard (4).



4. Depress and hold the spindle lock button and turn the wheel by hand until it locks in place. Remove the retaining nut (see note below for correct direction of rotation), outer flange and the wheel.



**Note.** The wheel on the left-hand side of the grinder has a left-hand thread and is unscrewed in a clockwise direction. The wheel on the right-hand side of the grinder has a right-hand thread and is unscrewed in an anti-clockwise direction.

5. Fit the replacement wheel on the shaft ensuring that there is a blotter between the wheel and clamp washers on each side of the wheel, and ensure the wheel is a slide fit (not loose) on the spindle.



6. Replace the outer flange and retaining nut (see the Note above regarding the direction of rotation of the nut).
7. Depress and hold the spindle lock button and tighten the nut. Do not over tighten.
8. Replace the outer guard.
9. Replace the retaining screw, spark deflector and tool rest.
10. Re-adjust the tool rest and spark deflector.
11. Rotate the wheel by hand to check for free movement and proper adjustments.
12. Plug in the grinder, put on eye protection, stand to one side and run the grinder at full speed for several minutes.

## **Fitting a wire wheel**

Your bench grinder is capable of fitting a wire wheel instead of a grinding wheel.

When fitting a wire wheel ensure the wire wheel is the correct size for the grinder and also ensure the bore size of the wheel is correct for the spindle of the grinder.

Refer to the specification section of this manual for grinding wheel and bore sizes.

When fitting the wire wheel, follow the details as described in the section 'Changing a grinding wheel' on how to remove the grinding wheel. Ensure to leave the inner flange on the spindle of the grinder. Supplied with the grinder are 2 small rubber washers. Fit one rubber washer on to the spindle and push all the way until it makes contact with the inner flange. Slide the wire wheel onto the spindle, ensuring the wheel is a slide fit onto the shaft, all the way to the rear flange. Then fit the second rubber washer onto the spindle and push it against the wire wheel. Fit the outer flange and securing nut and tighten the nut as described in the section 'Changing a grinding wheel'. Assemble the grinder and test as per the details in 'Changing a grinding wheel'.

**Warning.** Ensure to wear safety glasses.

## **How to true and dress the wheels**

Dressing a wheel cleans and levels the front surface to increase efficiency of operation and prevent vibration.

1. Dressing a wheel involves the use of a wheel dresser which is not supplied with the grinder. Follow the manufacturers instructions of the wheel dresser.
2. Adjust the tool rest to allow the front part of the wheel dresser to fit between the tool rest and wheel.
3. Start the motor and move the dresser across the front of the wheel a sufficient number of times until the surface is level. It is not necessary to apply excessive force in an attempt to dress the wheel in one pass of the wheel dresser.

4. Adjust the tool rest so that it is no more than 1-1.5mm from the wheel.

5. Adjust the spark deflector to ensure the gap between the bracket and wheels is less than 6mm.

## **Grinder adjustments**

During the life of the grinder some adjustments are required to maintain a safe working environment. Please ensure the following:

- Always adjust the eye shields to the most comfortable and most effective angle to suit the task being performed.
- As the wheels wear, the spark deflector must be adjusted to ensure the gap between the spark deflector and the wheel does not exceed 6mm.
- As the wheels wear the tool rests must also be adjusted so there is never a gap greater than 1.5mm between the wheel and the edge of the tool rest.

## **Maintenance**

Prior to any maintenance ensure the power has been turned off and the plug is removed so that the grinder is fully disconnected from the 240V supply.

## **Lubrication**

1. All models use pre-lubricated sealed ball bearings for the motor and do not require lubrication.
2. If the wheels do not rotate freely, the bearings should be replaced by an authorised service centre.

## **Cleaning**

1. *Keep the outside of the grinder clean by brushing grinding dust and dirt away from all areas where the dust tends to build up. Wear eye protection when brushing.*
2. *Wipe the guards and grinder with a soft damp cloth. A mild detergent can also be used.*
3. *Wipe the eye shields with a soft damp cloth, making sure not to scratch the surface. A mild detergent can also be used.*

**Caution.** *Never use caustic agents, petrol based cleaners, alcohol or any other cleaning agents. Do not wet down the grinder.*

## **General inspection**

1. *Regularly check that all the fixing screws are tight. They may vibrate loose over time.*

## **Repairs**

1. *If the supply cord needs replacing, the task must be carried out by the manufacturer, the manufacturer's agent, or an authorised service centre in order to avoid a safety hazard.*

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## Carefully read the entire *Instruction Manual* before using this product.

**Before returning this product for a Warranty Claim or any other reason**  
**Please Call 1300 880 001 (Australia)**  
**or 0800 445 721 (New Zealand)**

**When you make your call, please have the following information at hand:**

- **GMC Product Type**
- **GMC Product Code**

A GMC Service Engineer will take your call and, in most cases, will be able to solve your problem over the phone.

You are welcome to use this phone-in service to make suggestions or give comments about any GMC product.

With continuing product development changes may have occurred which render the product received slightly different to that shown in this instruction manual. The manufacturer reserves the right to change specifications without notice. Note: Specifications may differ from country to country.



**The GMC 777 Helpline operates from 7am to 7pm, 7 days a week (EST). This allows you to contact GMC directly with any queries and technical questions you have regarding our products.**



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**Save this Manual for future reference.**

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