



*Woodworking machinery at its best!*

**3" BENCH GRINDER  
OWNERS MANUAL  
MODEL: BG3**



**CE**

**Charnwood Machinery Ltd, Cedar Court, Walker Road,  
Bardon Hill, Leicestershire, LE67 1TU  
Tel. 01530 516 926 Fax. 01530 516 929  
email: [sales@charnwood.net](mailto:sales@charnwood.net) website: [www.charnwood.net](http://www.charnwood.net)**

# GENERAL SAFETY RULES



**WARNING:** Do not attempt to operate the machine until you have read thoroughly and understood completely all instructions, rules, etc. contained in this manual. Failure to comply may result in accidents involving fire, electric shock, or serious personal injury. Keep this owner's manual and review frequently for continuous safe operation.

1. Know your machine. For your own safety, read the owner's manual carefully. Learn its application and limitations, as well as specific potential hazards pertinent to this machine.
2. Make sure all tools are properly earthed.
3. Keep guards in place and in working order. If a guard must be removed for maintenance or cleaning, make sure it is properly replaced before using the machine again.
4. Remove adjusting keys and spanners. Form a habit of checking to see that the keys and adjusting spanners are removed from the machine before switched it on.
5. Keep your work area clean. Cluttered areas and workbenches increase the chance of an accident.
6. Do not use in dangerous environments. Do not use power tools in damp or wet locations, or expose them to rain. Keep work areas well illuminated.
7. Keep children away. All visitors should be kept a safe distance
8. from the work area.
9. Make workshop childproof. Use padlocks, master switches and remove starter keys.
10. Do not force the machine. It will do the job better and be safer at the rate for which it is designed.
11. Use the right tools. Do not force the machine or attachments to do a job for which they are not designed. Contact the manufacturer or distributor if there is any question about the machine's suitability for a particular task.
12. Wear proper apparel. Avoid loose clothing, gloves, ties, rings, bracelets, and jewellery which could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
13. Always use safety glasses. Normal spectacles only have impact resistant lenses. They are not safety glasses.
14. Do not over-reach. Keep proper footing and balance at all times.
15. Maintain the machine in good condition. Keep the machine clean for best and safest performance. Follow instructions for lubrication and changing accessories.
16. Disconnect the machine from power source before servicing and when changing the blade.
17. Never leave the machine running unattended. Turn the power off. Do not leave the machine until it comes to a complete stop.
18. Do not use any power tools while under the effects of drugs, alcohol or medication.
19. Always wear a face or dust mask if operation creates a lot of dust and/or chips. Always operate the tool in a well ventilated area and provide for proper dust removal. Use a suitable dust extractor.



**Risk of Injury: Never Reach Into A moving Part**

**Always Wear Eye Protection**

**Always Wear A Dust Mask**

**Always Wear Ear Protection**

# Overview of BG3 3" Bench Grinder



## Specification

Motor (Induction) 220v-240v, 50Hz	50w (0.06hp)
Maximum Continuous Runtime S2	30 minutes
No Load Speed	2850rpm
Spindle Diameter	12.7mm (1/2")
Wheel Size (Grey)	75mm x 13mm (3" x 1/2")
Wheel Grit (Grey)	80
Polishing Wheel Size	75mm x 20mm (3" x 3/4")
Weight	2.2kg
Manufacturer's Warranty	1 year
Rating	Hobby

## Rating Description

**Hobby:** Suitable for Weekend DIY'ers and woodworking enthusiasts. Generally lighter weight machines with lower power ratings and smaller tooling capacities. Typically only ever used by one person for short periods of time or longer periods of time infrequently. Machinery should be well maintained in a clean, dry environment such as a home workshop, garage or timber shed. **Expected maximum use of 100 hours annually.**

**Please Note:** Using a product in excess of its rating will void the manufacturer's free warranty.

# Unpacking



All items are contained in one cardboard carton.



Carefully unpack and check that all items are included as in the photograph.

# Assembly



Attach the two Eye Guards using the small screws, washers and locking washers.

Leave a small gap between the spark guard and wheel, not more than 2mm.



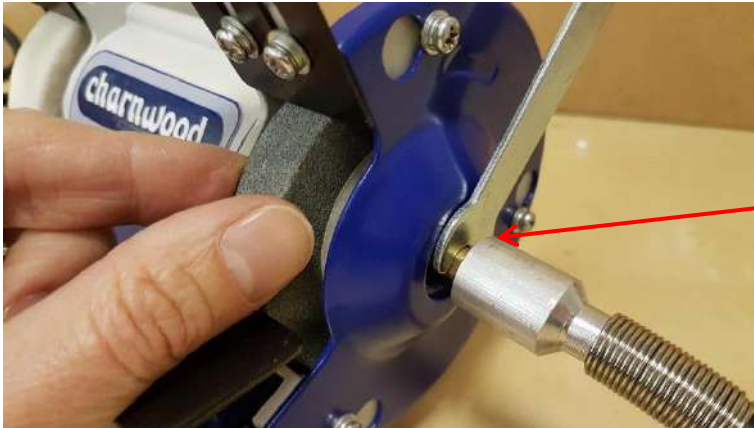
Attach the two work tables using the wingnuts and washers.

Leave a small gap between the work table and the wheel, not more than 2mm.



ONLY ATTACH THE FLEXIBLE SHAFT WHEN YOU INTEND TO USE IT.

WHEN NOT IN USE LEAVE THE PLASTIC THREADED COVER IN PLACE.



To fit the flexible drive:

Unscrew the plastic cover nut and keep in a safe place.

Hold the grey grinding wheel with one hand whilst using the spanner to attach the flexible shaft.  
Tip: once the thread is slightly on, hold the spanner and spin the grey wheel by hand.

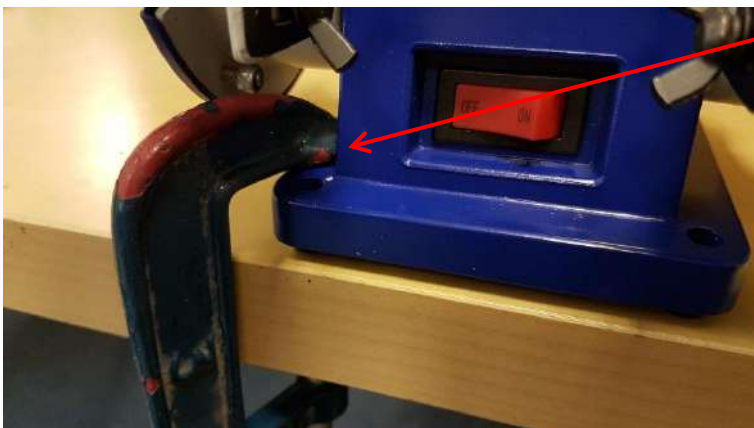
DO NOT OVERTIGHTEN

## Setting Up



Secure the Grinder to a bench.

Either screw through the four holes in the base.



Or use a clamp.

# Using The Grinder



To start the grinder, set the On/Off switch position to: On

Wait for the motor to reach its maximum speed of rotation. Only then should you begin grinding.

To stop the grinder, set the On/Off switch position to: Off

Be aware the motor will take some time to come to rest.

**CAUTION:** Do not touch moving parts.



Exert only moderate pressure on the workpiece so that it can be machined at constant speed.

Instead of accelerating your work, high pressure will cause the drive unit to slow down and even stop, thus overloading the motor.

For your own safety, it is essential to hold small pieces with a pair of locking pliers.



Place the workpiece onto the workpiece support and slowly guide the workpiece towards the grinding wheel at the desired angle, to the point where the workpiece and grinding wheel make contact.

Move the workpiece slightly back and forth to produce an optimal grinding result.

This way the grinding wheel will be evenly worn. Allow the workpiece to cool down occasionally.

Allow the workpiece to cool down occasionally.

## Using The Flexible Shaft



To fit a tool into the flexible shaft:

Insert the spindle lock tool into the hole in the outer case of the spindle to stop the spindle rotating.

Put the chosen tool into the collet.

Use the spanner to tighten the collet.

Caution: DO NOT OVERTIGHTEN

ALWAYS REMOVE THE FLEXIBLE SHAFT FROM THE GRINDER WHEN NOT IN USE

## Using The Polishing Mop



When using the polishing mop a suitable polishing compound should be used.

## Maintenance



TO REPLACE THE GREY STONE

Disconnect from the power source.

Using a Philips screwdriver loosen the three screws in the stone guard cover.

Twist and remove the side cover.



Grasp the stone using a cloth.

Using the spanner provided loosen the nut, remember undo the nut in the direction of the stones rotation as indicated by the arrow on the guard cover.



Remove the plate flange and carefully remove the stone.

Clean the interior of the stone guard.



Inspect the new stone for cracks and damage to either the front face or the edges before fitting.

Carefully slide the stone onto the shaft, replace the plate flange, the nut.

Tighten against the rotation of the stone.

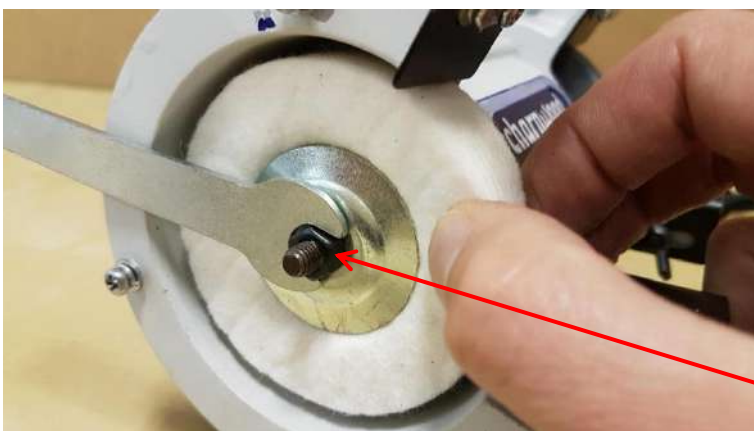
Caution: DO NOT OVERTIGHTEN

## TO REPLACE THE WHITE WHEEL

Disconnect from the power source.

Using a Philips screwdriver loosen the three screws in the stone guard cover.

Twist and remove the side cover. Grasp the wheel using a cloth.



Use the spanner provided to loosen the nut, remember undo the nut in the direction of the mop rotation as indicated by the arrow on the guard cover.



Remove the plate flange and carefully remove the mop.

Clean the interior mop guard.



Carefully slide the mop onto the shaft, replace the plate flange, the nut and tighten against the rotation of the mop.

Caution: DO NOT OVERTIGHTEN

# Troubleshooting

Problem	Cause	Remedy
Machine does not start	Blown Fuse in plug	Replace Fuse
	Loose switch terminal	Inspect back of switch
	Faulty switch	Replace switch
Ground Edge turns bluish black	Edge has overheated	Regularly dip the edge into water to cool it
Wheel not running true	Wheel not dressed	Use a dressing tool to true wheel
Machine slows when operating	Feed rate too great	Reduce the pressure against the wheel



Please dispose of packaging for the product in a responsible manner. It is suitable for recycling. Help to protect the environment, take the packaging to the local amenity tip and place into the appropriate recycling bin.



Only for EU countries

Do not dispose of electric tools together with household waste material!  
In observance of European Directive 2002/96/EC on waste electrical and electronic equipment (EEE) and its implementation in accordance with national law, electric tools that have reached the end of their life must be collected separately and returned to an environmentally compatible recycling facility.



Your local refuse amenity will have a separate collection area for EEE goods

## Declaration of Conformity for CE Marking

Charnwood Declare that Bench Grinder, Model BG3

Conforms with the following Directives: Machinery Directive 2006/42/EC  
EMC Directive 2014/30/EU

And further conforms to the machinery example for which the EC type examination Certificate No. AM50272456 and AE50367688 have been issued by TUV Rheinland LGA Products GmbH, Tillystrasse 2, 90431 Nurnberg, Germany.

I hereby declare that equipment named above has been tested and found to comply with the relevant sections of the above referenced specifications. The machinery complies with all essential requirements of the directive.

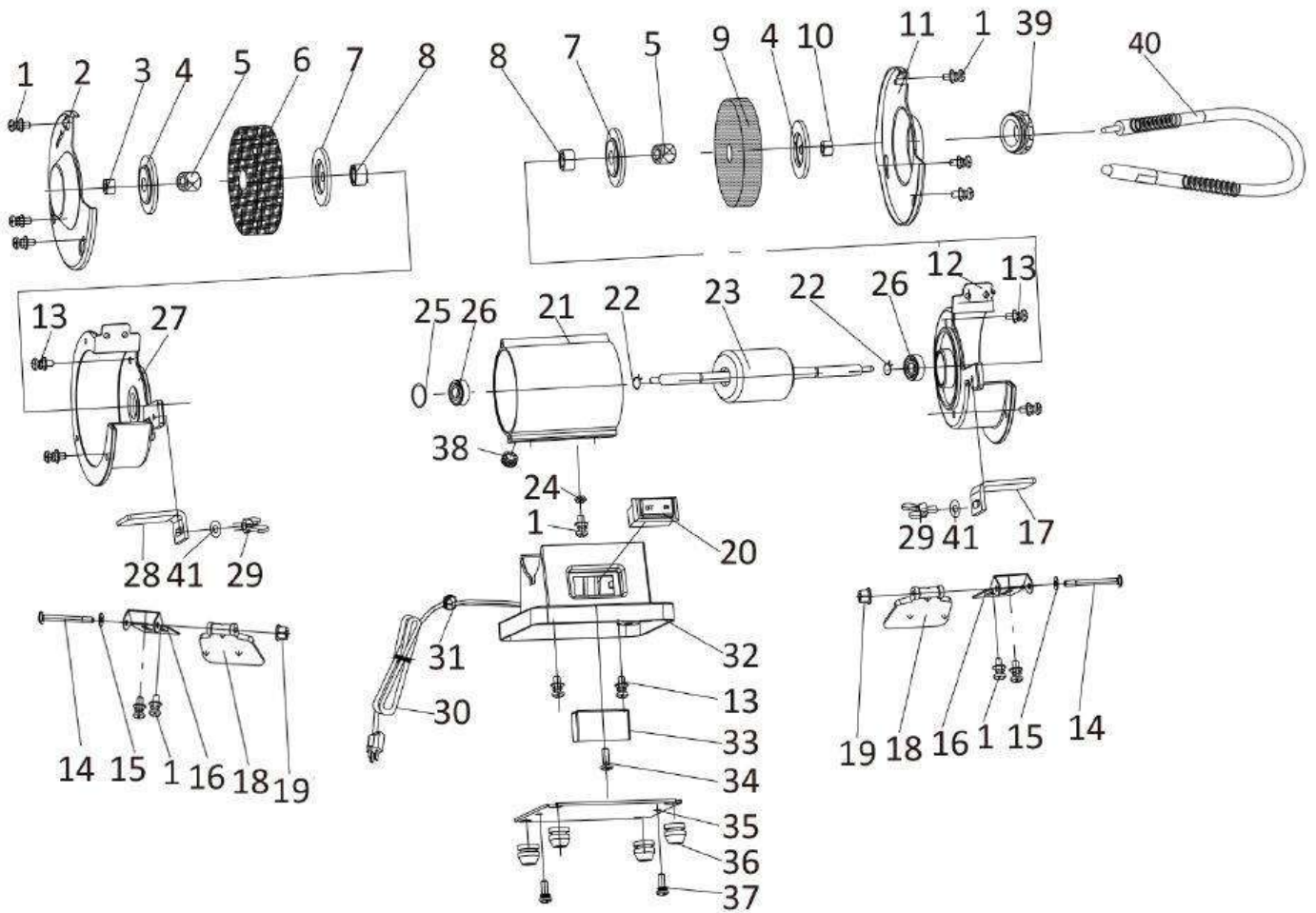
Signed: 

Dated: 10/01/2014

Location: Leicestershire, UK

Richard Cook, Director

# Charnwood BG3 Parts Drawing



## Charnwood BG3 Parts List

Part No.	Description	Part No.	Description
001	Screw M4 x 8	002	Left Safety Guard Cover
003	Nut M6	004	Outside Flange
005	Wheel Bushing	006	Wool wheel 75 dia x 13 x 12.7mm
007	Inside Flange	008	Spacer
009	Grinding Wheel 75 dia x 13 x 2.7mm	010	Nut M6
011	Right Safety Guard Cover	012	Right Safety Guard
013	Screw M4 x 10	014	Screw M4 x 10
015	Flat Washer	016	Eyeshield Mount Rod
017	Right Table	018	Eyeshield
019	Nut M4	020	Switch HY35C
021	Stator	022	Clamp Washer
023	Rotor	024	Toothed Lock Washer
025	Wave Spring Washer	026	Bearing 61900
027	Left Safety Guard	028	Left Table
029	Locking Knob Assembly	030	Power Cable
031	Cord Clip	032	Base
033	Capacitor 2uf 250Vac	034	Screw M4 x 10
035	Base Plate	036	Rubber Foot
037	Screw M4 x 6	038	Cord Bushing
039	Sealing Cover	040	Flexible Shaft Assembly
041	Washer	042	Spanner (Not Shown)



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**Charnwood Machinery Ltd, Cedar Court, Walker Road,  
Hilltop Industrial Estate, Bardon Hill, Leicestershire, LE67 1TU, England**

**Tel. 01530 516 926    Fax. 01530 516 929  
email: [sales@charnwood.net](mailto:sales@charnwood.net)    website: [www.charnwood.net](http://www.charnwood.net)**