charnwood

Woodworking machinery at its best!

10” BANDSAW
OPERATORS MANUAL

MODEL: B250

CE

Charnwood, Cedar Court, Walker Road,
Hilltop Industrial Estate, Bardon Hill, Leicestershire, LE67 1TU

Tel. 01530 516 926 Fax. 01530 516 929
email: sales@charnwood.net website: www.charnwood.net

GENERAL SAFETY RULES

WARNING: Do not attempt to operate the machine until you have thoroughly read and completely understood 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 switching 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 from the work area.

8. Make workshop childproof. Use padlocks, master switches and remove starter keys.

9. Do not force the machine. It will do the job better and be safer at the rate for which it is designed.

10. 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.

11. 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.

12. Always use safety glasses. Normal spectacles only have impact resistant lenses. They are not safety glasses.

13. Do not over-reach. Keep proper footing and balance at all times.

14. Maintain the machine in good condition. Keep the machine clean for best and safest performance. Follow instructions for lubrication and changing accessories.

15. Disconnect the machine from its power source before servicing and when changing the blade.

16. Never leave the machine running unattended. Turn the power off. Do not leave the machine until it comes to a complete stop.

17. Do not use any power tools while under the effects of drugs, alcohol or medication.

18. 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.

ADDITIONAL RULES FOR BAND SAWS

1. Ensure that the saw table is clear of off-cuts, tools or anything else that might foul the work-piece.

2. When cutting long boards use one or more roller stand(s) to support the work or have a competent helper to support it as it feeds off the rear of the table.

3. Always make sure that the blade is tracked and tensioned correctly before starting to use the saw.

4. Always use a brush to clear the table of dust or debris. **NEVER** use your hands, especially when the machine is running.

5. Always ensure that the thrust bearings and/or guide blocks are correctly adjusted before using the saw.

6. ALWAYS USE A PUSH STICK WHEN IT IS NECESSARY TO PUSH ANY PIECE OF MATERIAL OF SUCH SIZE THAT IT WOULD BRING YOUR HANDS WITHIN 30 CM OF THE BLADE.

7. Do not cut material that is badly warped or which has screws or nails in it.

8. Be extra vigilant when cutting stock which has loose knots in it as these may fly out of the saw.

9. NEVER tilt the table when the saw is running.

10. To avoid exposure to hazardous dust, do not use this saw without connecting it to a suitable dust extractor.

11. Always work with a sharp saw blade and feed the work at a rate suited to the thickness and hardness of the material.

12. Do not try to operate the saw with the doors open. There are safety interlocks to prevent this. Do NOT try to override them.

Note: This band saw has been designed and built solely as a woodworking machine. Do not modify it in any way or use it for anything other than its designated purpose. Neither the manufactures nor the supplier are liable for any damage or injury caused by incorrect assembly, operation or electrical connection of this machine.

Important:

Risk of Injury!
Never reach into
the running saw blade.

Wear Eye
Protection

Wear Ear
Protection

B250 Specification

Table size	360 x 320 mm
Table height	940 mm
Motor (Induction)	375W (1/2hp)
Blade length	1826 mm
Blade widths	6 to 12 mm (1/4” to 1/2”)
Blade speeds (no load)	400 and 800 m/min
Maximum depth of cut at 90	150 mm (6”)
Throat capacity	245 mm (10”)
Dust extractor hose connection	50, 75 or 100 mm
Weight	41kg
Dimensions (W x D x H)	670 x 530 x 1450 mm
Rating	Light Trade

Rating Description

Light Trade: Suitable for professional woodworkers where the machine will not be in daily use.

Mid range machines with a heavier build and more power. Typically used by 2 or 3 people within a small business and also for the dedicated hobbyist with a larger budget. It is expected to be used up to the machines maximum limit with occasional long work periods. Suitable for income generation. Expected maximum use of 300 hours annually.

Unpacking

Cut the strapping, open the carton and remove all parts from the packaging

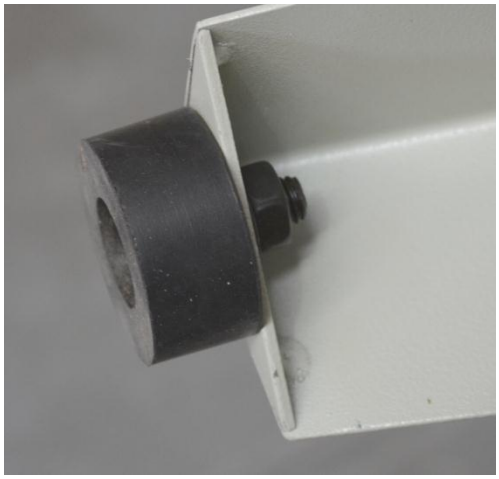
Familiarise yourself with the components and read this manual.

Assembly

Building the base is most easily accomplished on a bench or table

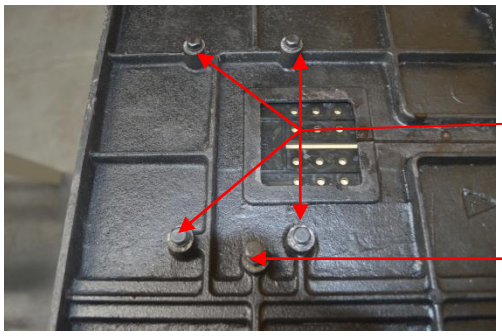
Leave all nuts and bolts finger tight until you have finished assembling the stand.
Lay the machine on its back and bolt the four legs to the base, using the M6 x 10mm cap head bolts.

Bolt on the four leg braces, noting that the fold goes to the upper side.
Use M6 x 10mm coach bolts, washers and nuts.



Bolt on the four rubber feet.

Stand the saw upright and true up the floor stand and tighten all the bolts.

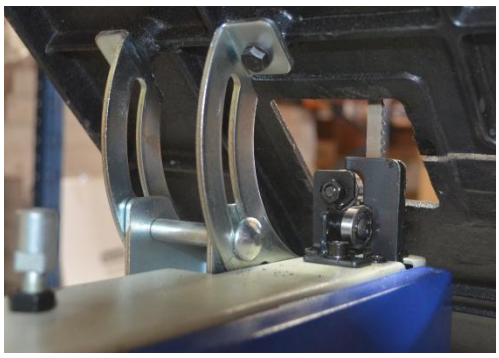


Take the table and lay it on the bench, face down.

Loosen these four bolts and remove them with their washers.

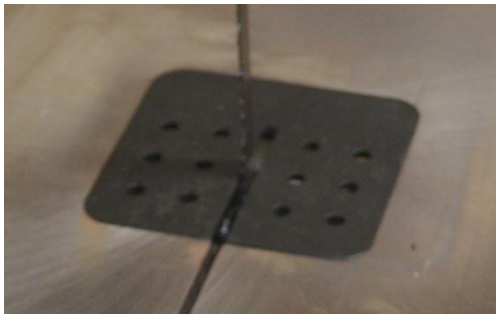
Do **not** touch this one.

Note that the upper face of the table is lacquered and this coating should be removed with thinners.



Pull the left hand edge of the table tilt trunnion upward as shown. Remove the plastic insert from the table. From the back of the bandsaw, slide the table forwards allowing the blade to pass through the slot in the table.

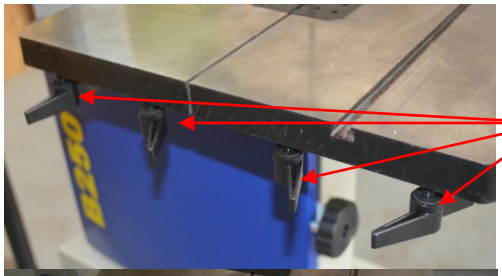
Bolt the table to the trunnion, using the four bolts previously removed. Leave the bolts finger tight for now.



Tilt the table back to horizontal.

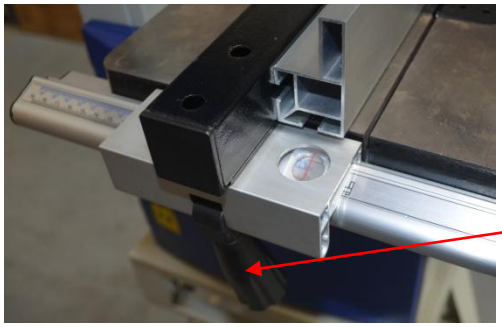
Replace the plastic insert and adjust the position of the table so that the blade is centred in the slot.

Do not tighten the table fixing bolts yet.



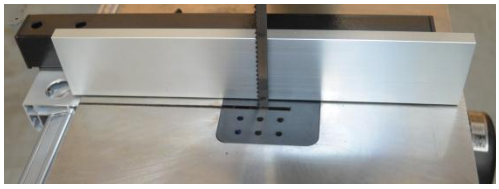
Screw the four large, plastic wing bolts into the tapped holes along the underside of the front edge of the table.

Offer up the fence rail so that the four slots slide over the shafts of the bolts and then tighten the wing bolts.



Place the rip fence on the table, with the black handle in the raised position, seat the assembly on to the guide rail.

Clamp it in place, by moving the handle down as seen here, so that it is roughly in a vertical position.



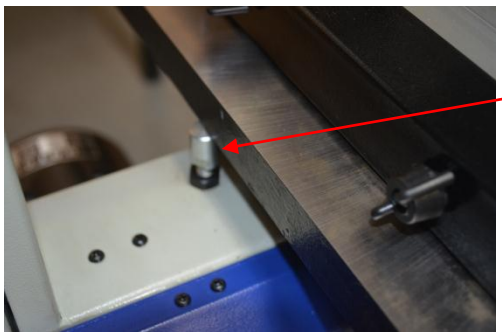
If necessary, adjust the table so that the slot in the table and the rip fence are parallel to the flat side of the blade.

Now tighten the table into place using four bolts underneath.

Screw a nut onto the push stick hook and screw this into the tapped hole high up on the left hand side of the saw. Lock it into position with the nut.

Hang the push stick on its hook and place the Allen keys and the spanner into the tool holder.

Insert the dust drawer into the slot in the base of the saw.

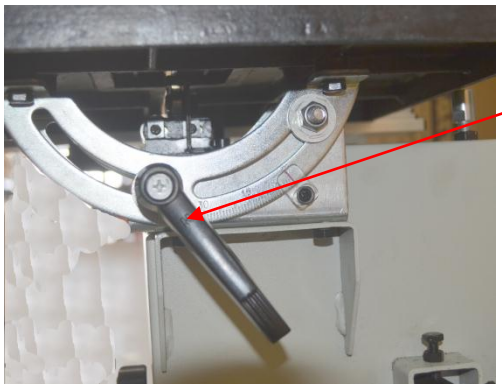


This special bolt sets the angle of the table for 90° cuts. When the edge of the table is resting on it, the blade should be perpendicular to the table top.
If necessary this bolt may be loosened and an adjustment made.

Slide the mitre fence into one of the T-slots in the table.

Loosening this handle will enable you to change the angle. There are stops for 90 degrees and 45 degrees each way. Pull out the silver pin at the front of the mitre fence to move past the stop. Ensure that the handle is fully tightened before using the guide.

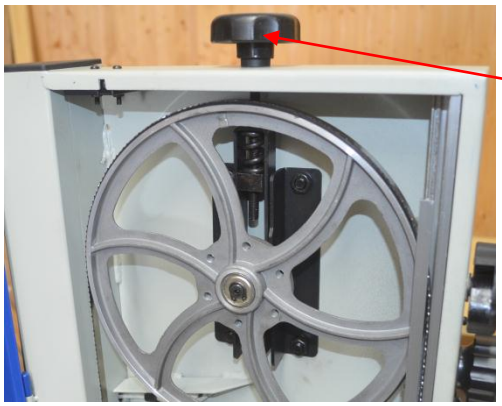
Setting Up The Bandsaw



Set The Table Angle

The angle can be changed by loosening this locking lever and setting the table to the required angle, using the scale on the trunnion.

Once the angle has been set, tighten the locking lever to hold the table in position.



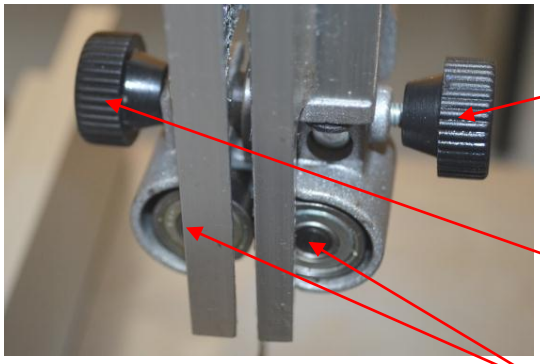
Set The Blade Tension

Turn the setting knob clockwise to increase the tension. Turn the knob anticlockwise to lower the tension.

Raise the blade guard to its highest position and increase the tension until it is only possible to deflect the blade sideways by 2 to 3 mm at its midpoint between the table and the guard.

Set The Blade Tracking

When fitting a new blade it may be necessary to adjust the tracking (the alignment of the top wheel). The blade should sit on the centre or to the front of the rubber band on the wheels. To check the tracking, open both doors and rotate the top wheel by hand. If the blade starts to move towards the front edge of the wheel, turn the adjusting knob clockwise. The adjusting knob is located at the rear of the machine.
There is a large wing nut to lock the position once set.

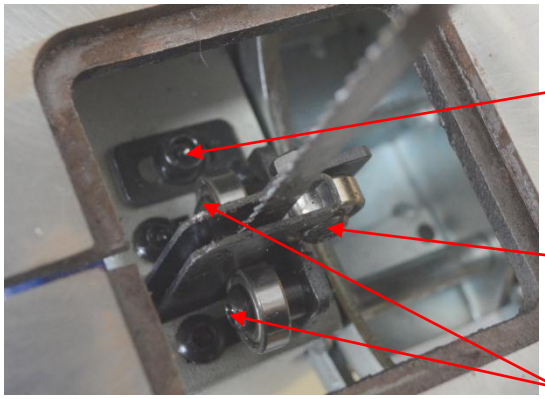


Set The Upper Blade Guides

Loosen the right hand knob and adjust the guide assembly forwards or backwards, so that the front of the bearing is 2mm back from the gullet of the blade teeth.

Loosen the left hand knob and adjust the rear thrust bearing so that it is 0.5mm from the back edge of the blade.

Use the Hex key provided to loosen the bolt behind each of the side bearings. Slide them left or right in the slot so that they are 0.5mm from the side of the blade.



Set The Lower Blade Guides

Loosening this bolt allows the guide assembly to move forwards or backwards, so that the front edge of the bearing is 2mm back from the gullet of the blade teeth.

Use the Hex key provided to undo the bolt and adjust the rear thrust bearing so that it is 0.5mm from the back edge of the blade.

Use the Hex key provided to undo the bolt on each of the side bearings. Slide them left or right in the slot so that they are 0.5mm from the side of the blade.

Remember to reset the upper and lower guides after changing to a different width of blade.

Set The Blade Speed

The bandsaw has 2 speeds. Use the higher speed, 800m/min, for general wood cutting. Use the lower speed, 400m/min, for cutting hardwoods and metals.

Loosen the motor pivot locking bolt and twist the motor anticlockwise to loosen the tension on the drive belt.

Open the lower door

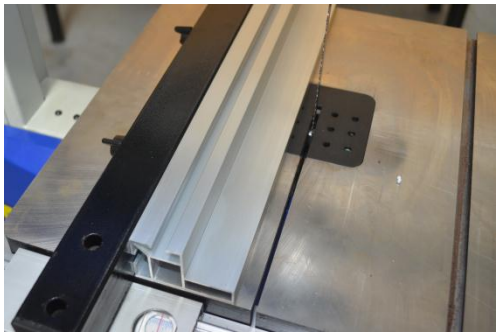
Move the drive belt over to the desired pair of pulleys. Re-tension the belt by twisting the motor clockwise and tightening the locking bolt.

The belt should deflect by about 10mm when squeezed by hand.

Making A Cut

For every type of of cut, the blade guard should be lowered so that the bottom edge of the guide is just above the work piece. This is for safety and to better control the blade during the cut.

Always use a push stick so that you keep your fingers at least 30cm from the blade.



Straight Rip Cuts

Ripping cuts are generally made using the guide fence and run along the grain of the timber.
The rip fence may be used on either side of the blade. The aluminium fence section can be reassembled for left or right handed cutting and also, as shown, for cutting thin strips in narrow material.

Crosscutting

Cutting across the grain is generally done using the mitre fence.

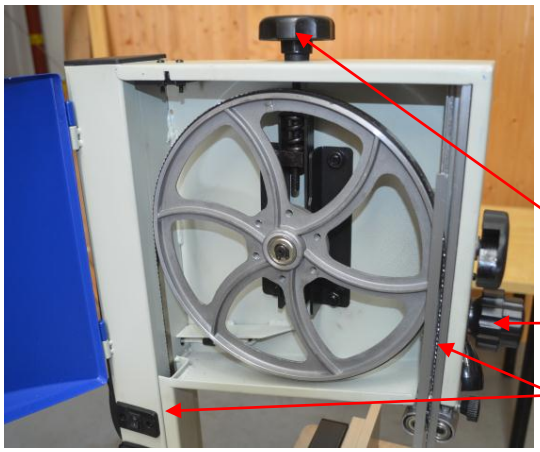
Cutting Curves

Blade width	Min. Diameter
6mm (1/4”)	60mm (2.1/2”)
10mm (3/8”)	100mm (4”)
13mm (1/2”)	130mm (5.1/4”)

The bandsaw can be used to cut curves freehand. The diameter of the curve you can cut depends on the width of the blade. A narrower blade can cut tighter curves than a wide blade. The table on the left gives a guide.

Note: Once you have cut curves with a blade, the set of the teeth will have changed. After having cut curves with a blade it will not cut so accurately in a straight line. Ideally you should keep one blade for straight cuts and one blade for curved cuts.

Changing The Saw Blade



Take care as the blade teeth are sharp. Wear protective gloves if necessary.

Remove the rip fence guide rail by undoing the four large wing bolts underneath the table.

Open the upper door and reduce the blade tension by turning the knob anticlockwise.

Lower the blade guard down to its lowest position.

Slide the blade off the wheels and ease it out through the slots in the left hand column, the blade guard and the table.

Follow the procedure in reverse to fit the new blade.

Once the blade is roughly in position, follow the set up section in this manual;
Set the blade tension
Set the blade tracking
Set the upper blade guides
Set the lower blade guides

Maintenance

Clean the interior of the machine on a regular basis, especially if you use it without a dust extractor. The dust drawer will fill quite quickly and dust will collect in both the upper and lower housings. This must be removed with a vacuum cleaner as an accumulation will reduce the efficiency of the saw and in an extreme case will pose a fire risk.

It is strongly recommended that this saw is connected to a dust extractor.

Optional Items

W520 Wheel Base
With the addition of the wheel base, one person can comfortably move the bandsaw around a workshop. There are two fixed wheels and two steering wheels allowing excellent manoeuvring across a relatively flat floor surface.

W510 Roller Stand
When cutting large panels or ripping down long lengths, a roller stand provides the necessary support to complete the job single handed.

Troubleshooting

Problem	Cause	Remedy
Machine does not start	Blown Fuse	Replace Fuse
	Loose switch terminal	Inspect back of switch
	Faulty switch	Replace switch
	Doors not closed	(The machine is fitted with a safety interlock switch, it will not run if a door is open)
Only starts when Green button is held down	Faulty switch	Replace switch
Motor slows down during operation	Blade is blunt	Replace blade
	Feed Speed is Too high	Feed the Work slower, let the blade do the cutting
	Drive belt is slipping	Re-tension drive belt
	Attempting to take too deep a cut	It may exceed the capacity of the machine
Machine does not run but buzzing noise heard from motor	Failed capacitor	Replace the motor start capacitor.

Declaration of Conformity for CE Marking

Charnwood Declare that Woodworking Band Saw, Model B250

Conforms with the following Directives: Machinery Directive 2006/42/EC
EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC

And further conforms to the machinery example for which the EC type examination Certificate No. M6A 13 08 28954 037, N8M 13 08 28954 036 and E8N 13 08 28954 038 have been issued by TUV SUD Product Service GmbH, Zertifizierstelle, Ridlerstrasse 65, 80339 Munchen, 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: 19/08/2013 Location: Leicestershire

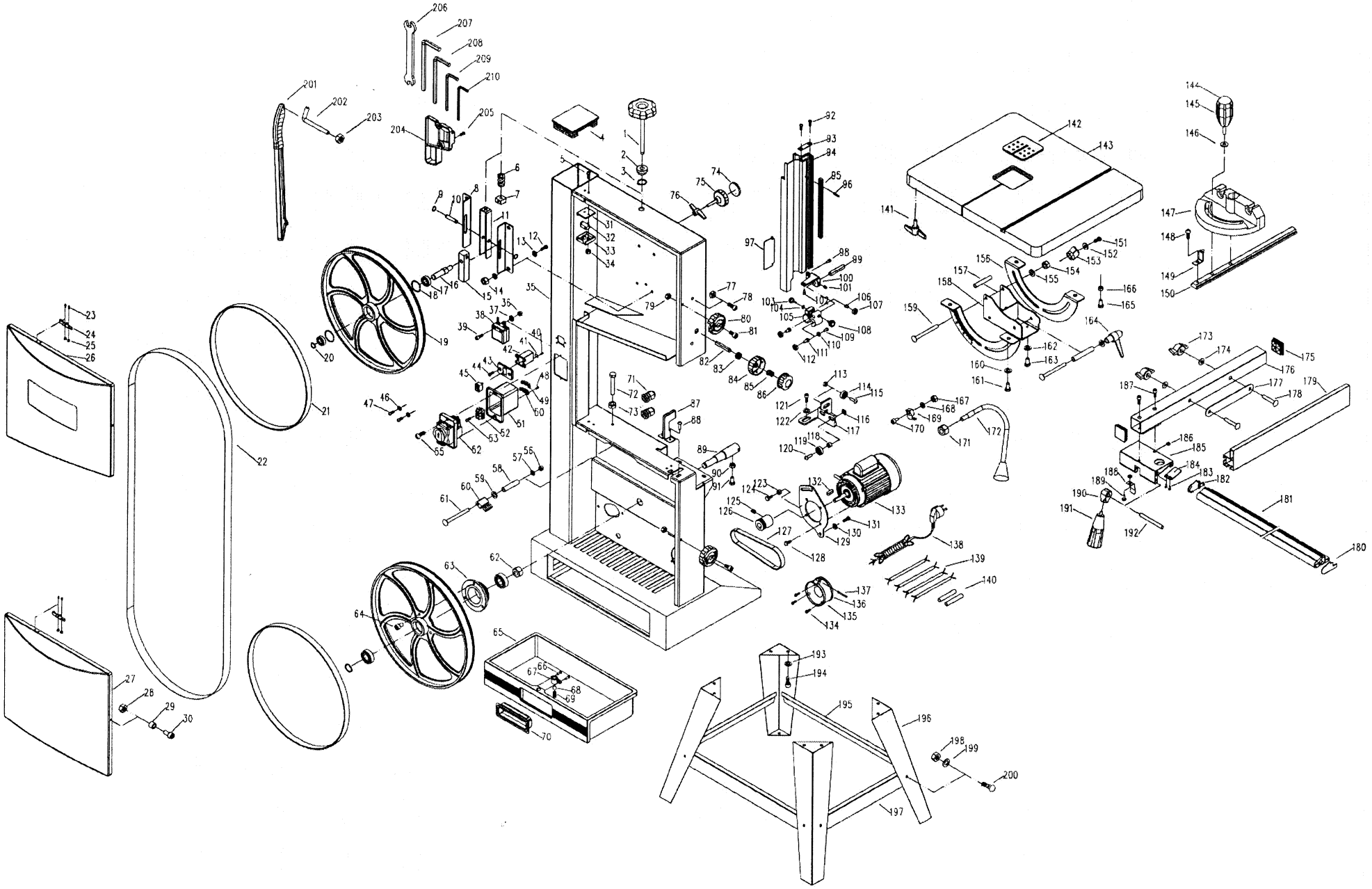
Richard Cook, Director

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

Assembly Diagram



CHARNWOOD B250 10" BANDSAW PARTS LIST

Part Number	Description	Part Number	Description
001	Blade Tension Knob M8 x 110mm	054	4 Way Connector Block
002	Plastic Bush for Tension Knob	055	M4 x 12mm Pozie Head Bolt
003	Circlip 13mm	056	M8 Dome Capped Nut
004	Plastic Cap for Main Frame	057	M8 Washer
005	M4 x 25mm Pozi Head Bolt	058	Spacer For Brush
006	Spring 18mm Diameter x 30mm	059	M8 Washer
007	Blade Tension Square Nut M8	060	Brush
008	Blade Tension Guide Plate	061	Coach Bolt M8 x 60mm
009	Circlip 7mm	062	M16 Nut
010	Shaft	063	Lower Wheel Pulley
011	Blade Tension Bracket	064	M5 x 14mm Cap Head Bolt
012	M8 x 16mm Hex Head Bolt	065	Dust Tray
013	M8 washer	066	3mm x 10mm Self Tapping Screw
014	M8 Nut	067	Retaining Clamp
015	Upper Wheel Bearing Block	068	8mm Ball Bearing
016	Upper Wheel Bearing Bolt	069	Spring
017	Wheel Bearing 6000Z	070	Handle For Dust Tray
018	Circlip 26mm	071	Plastic Wire Gromit
019	Wheel	072	Table Stop Bolt
020	Circlip 9.5mm	073	M8 Nut
021	Rubber Band for Wheels	074	Cap for Blade Alignment Knob
022	Blade 1826mm	075	Blade Alignment Knob M8 x 40mm
023	M4 x 12mm Pozi Head Bolt	076	Locking Wing Nut M8 Female
024	Door Spring Plate	077	Rise & Fall Guide Bush
025	M4 Nut	078	M4 x 12mm Pozie Head Bolt
026	Upper Door	079	M6 Nyloc Nut
027	Lower Door	080	Door Locking Knob
028	M6 Nyloc Nut	081	M6 x 16mm Cap Head Bolt
029	Lower Door Spacer Bush	082	Shaft for Rise & Fall Cog
030	M6 x 16mm Cap Head Bolt	083	Square Block
031	Door Switch Bracket	084	Knob for Guide Rise & Fall
032	Door Switch	085	Spring 22mm Diameter x 25mm
033	Door Switch Cover	086	Locking Knob for Guide Rise & Fall
034	M4 Nut	087	Blade Guard
035	Main Frame	088	M6 x 10mm Cap Head Bolt
036	M4 Dome Capped Nut	089	Lower Wheel Bearing Shaft
037	M4 Washer	090	M6 Nut
038	LED Control Box - LED-5V700-2	091	M6 x 20mm Hex Head Bolt
039	M4 x 10mm Cap Head Bolt	092	Self Tapping Screw
040	4mm x 10mm Self Tapper Screw	093	Cover for Guide Rise & Fall
041	Plastic Retaining Plate	094	Extrusion for Upper Bearing Guides
042	Light Switch Box	095	Rack for Upper Bearing Guides
043	Light Switch Cover	096	Cog
044	M4 x 12mm Pozi Head Bolt	097	Slider Plate for Upper Bearing Guide
045	Light Switch - KND1	098	M4 x 6mm Cap Head Bolt
046	M4 Washer	099	Shaft for Upper Bearing Guide
047	M4 x 12mm Pozi Head Bolt	100	Carrier for Upper Bearing Guides
048	4mm x 12mm Self Tapper Screw	101	M6 x 6mm Grub Screw
049	Cable Clamp	102	Self Tapping Screw
050	Cable Clamp	103	Knob for Bearing Guides M5 x 22mm
051	Switch Box	104	M5 Washer
052	Switch - KJD17B-4	105	Upper Bearing Guide Housing
053	4mm x 12mm Self Tapper Screw	106	M5 Bearing Insert

CHARNWOOD B250 10" BANDSAW PARTS LIST

107	Upper Guide Bearing 607ZZ	160	M6 Washer
108	Knob for Bearing Guides M5 x 8mm	161	M6 x 12mm Hex Head Bolt
109	M5 x 12mm Cap Head Bolt	162	M6 Washer
110	M5 Washer	163	M6 x 10 Hex Head Bolt
111	M5 Bearing Insert	164	Kipp Handle M8 Female
112	Upper Guide Bearing 607ZZ	165	M6 x 12mm Hex Head Bolt
113	M6 Nut	166	M6 Washer
114	Lower Guide Bearing 626Z	167	M5 Dome Capped Nut
115	M6 x 16mm Dome Head Bolt	168	M5 washer
116	M6 Square Nut	169	Cable Clamp
117	Lower Bearing Guide Bracket	170	M5 x 10mm Cap Head Bolt
118	Spacer for Lower Guide Bearing	171	M10 Nut
119	Lower Guide Bearing 626Z	172	Light
120	M6 x 20mm Dome Head Bolt	173	Wing Nut for Fence M6 female
121	M6 x 10mm Cap Head Bolt	174	M6 Washer
122	M6 Washer	175	Plastic End Cap for Fence Bar
123	M6 Nut	176	Fence Bar
124	M6 x 16mm Cap Head Bolt	177	Retaining Plate for Fence
125	M6 x 10mm Grub Screw	178	Coach Bolt M6 x 50mm
126	Motor Pulley	179	Fence Extrusion
127	Drive Belt 135J 211422	180	Right Hand End Cap for Fence Carrier
128	M6 x 12mm Hex Head Bolt	181	Fence Carrier
129	Motor Bracket	182	Left Hand End Cap for Fence Carrier
130	M8 Washer	183	Self Tapping Screw
131	M8 x 15mm Cap Head Bolt	184	Pointer for Fence
132	Motor Key	185	Fence Clamping Extrusion
133	Motor 375w	186	M5 Washer
134	Self Tapping Screw	187	M5 x 10mm Cap Head Bolt
135	Dust Extraction Port	188	Spring Metal Bracket for Fence
136	Dust extraction Port Cap	189	M5 x 10mm Dome Head Bolt
137	Pin for Dust Extraction Cap	190	Cam for Fence Locking Knob
138	Mains Power Lead	191	Fence Locking Handle M6 x 10mm
139		192	Pin for Fence Cam
140		193	M6 Washer
141	Wing Nut for Fence Carrier M8 x 18mm	194	M6 x 10 Cap Head Bolt
142	Table Insert	195	Front & Rear Bracket for Floorstand
143	Table	196	Leg for Floorstand
144	Cap for Mitre Guide Knob	197	Side Bracket for Floorstand
145	Mitre Guide Knob M6 x 22mm	198	M6 Nut
146	M6 Plastic Washer	199	M6 Washer
147	Mitre Guide	200	M6 x 10mm Coach Bolt
148	M4 x 8 Pozi Head Bolt	201	Pushstick
149	Pointer for Mitre Guide	202	Hook for Pushstick
150	Guide Rail for Mitre Guide	203	M6 Nut
151	M4 x 10mm Pozi Head Bolt	204	Tool Holder
152	M4 Washer	205	Self Tapping Screw
153	Pointer for Table Tilt	206	8mm & 10mm Spanner
154	M8 Nyloc Nut	207	6mm Allen Key
155	M8 Large Washer 25mm Diameter	208	5mm Allen Key
156	Table Tilt Bracket	209	4mm Allen Key
157	Spacer for Table Tilt Bracket	210	3mm Allen Key
158	Table Tilt Trunnion		
159	M8 x 70mm Coach Bolt		

charnwood

Woodworking machinery at its best!

Charnwood, Cedar Court, Walker Road,
Hilltop Industrial Estate, Bardon Hill, Leicestershire, LE67 1TU

Tel. 01530 516 926 Fax. 01530 516 929
email: sales@charnwood.net website: www.charnwood.net