



Woodworking machinery at its best!

**10" BANDSAW
OWNERS MANUAL
MODEL: BS410**



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GENERAL SAFETY RULES



WARNING: Do not attempt to operate the machine until you have thoroughly read 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 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 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 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.

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 manufacturers nor the supplier are liable for any damage or injury caused by incorrect assembly, operation or electrical connection of this machine.



Risk of Injury!
Never reach into
Moving parts



Wear Eye
Protection



Wear Ear
Protection

BS410 Specification

Table size	340 x 335 mm
Table Size with Extension	490 x 335 mm
Motor 240v / 50Hz	370W (1/2hp)
Blade length	1712 mm (67-1/2")
Blade speed (no load)	730±10% m/min
Blade widths	6 to 13 mm (1/4" to 1/2")
Maximum depth of cut at 90°	100mm (4")
Throat capacity	240mm (10")
Dust extractor hose connection	100mm (4")
Weight	32kg net / 34kg gross
Rating	Hobby
Warranty	1 Year

Hobby Rating – Suitable for weekend DIY'ers and woodworking enthusiasts. Refers to 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 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 The Bandsaw



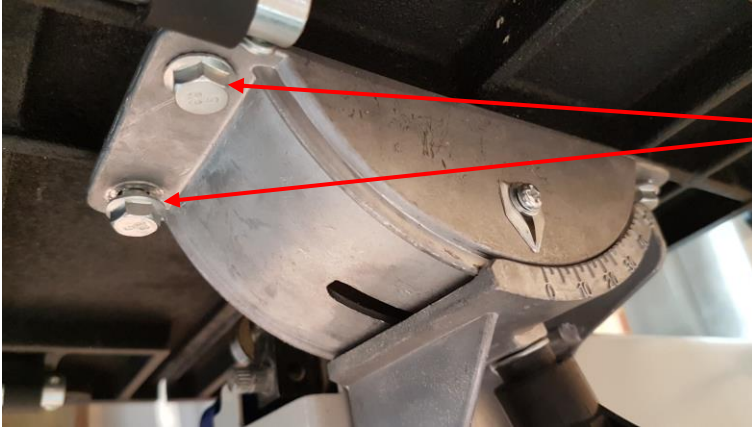
Cut the strapping and remove the polystyrene insert from the carton.

Remove all parts from the packaging, look underneath the packaging too.

Layout the parts as shown to check they are all present.

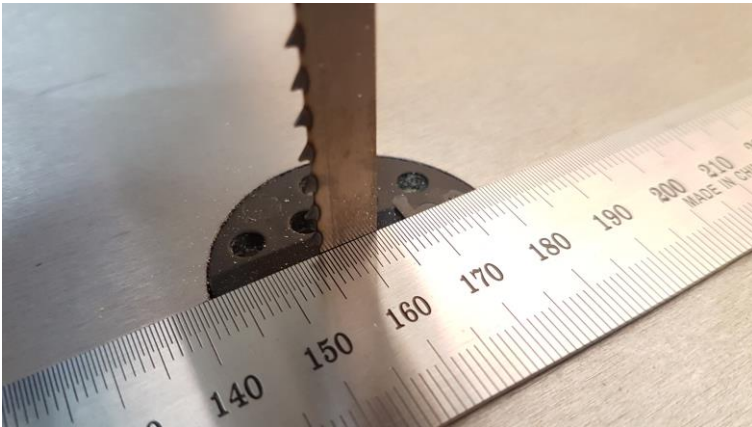
Please Note: As a safety feature, this model is fitted with micro switches on both upper and lower doors. The machine will not operate unless both doors are closed and locked.

Assembling The Bandsaw

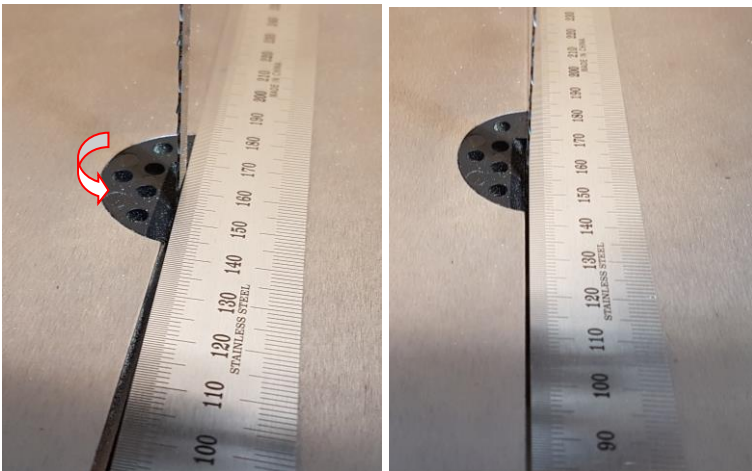


Pull the table extension out so you can slot the table into place on the trunnion.

Line up the four threaded holes in line with the holes in the upper trunnion. Use the four bolts attach the table to the trunnion, leaving the bolts slightly loose.



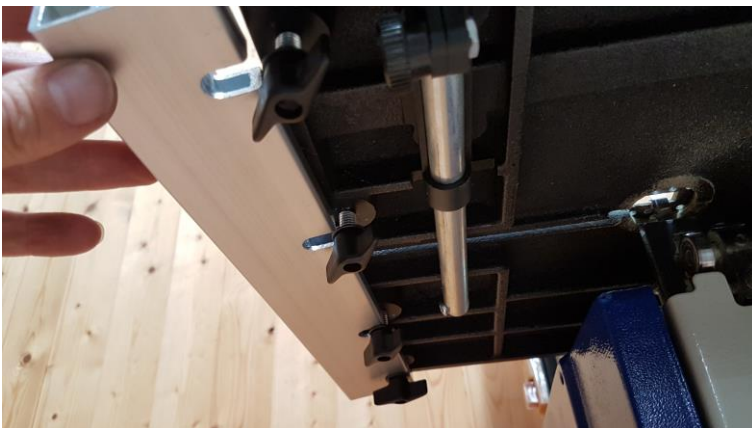
Carefully place a steel rule against the side of the blade, in the gap between 2 of the teeth.



Set the table parallel to the blade.

Twist the table on the trunnion until the rule is aligned with the table slot.

Fully tighten the four bolts holding the table to the trunnion.

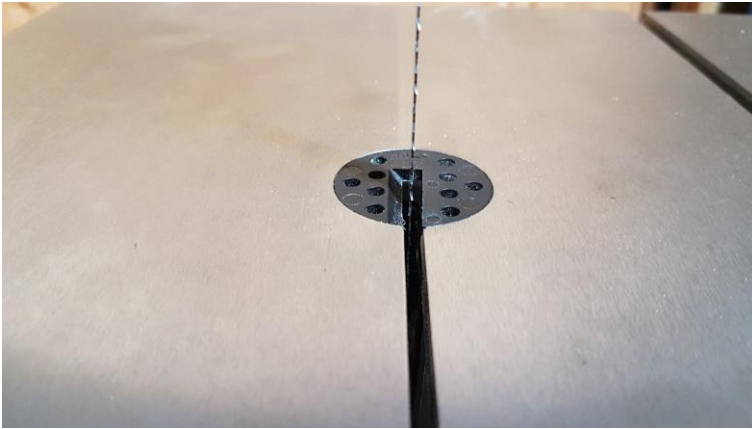


Screw four wing bolts with washers, 2 turns into the tapped holes in the underside of the table.

Slide the rip fence carrier over the bolts.

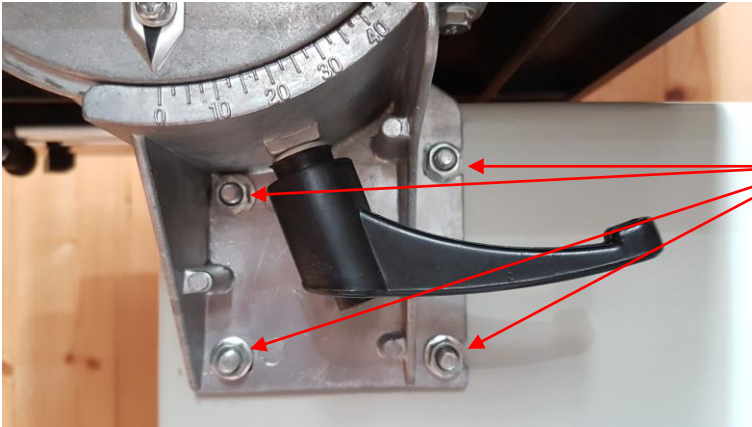
Ensure the carrier fits firmly up against the front edge of the table.

Any gap in this fit will result in the rip fence will not being correctly aligned with the blade.



Check the blade is centred in the table insert slot without interference.

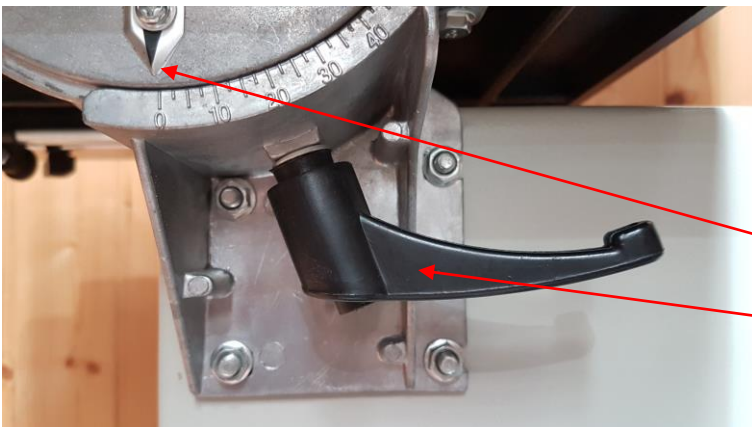
If the blade is offset to one side or the other, it can now be adjusted.



The lower trunnion is attached to the body of the saw by four hex headed bolts.

These may be slackened and the trunnion slid in either direction until the blade is centred.

After adjustment, tighten them securely.



The locking lever locks and unlocks the trunnion so that the table may be tilted.

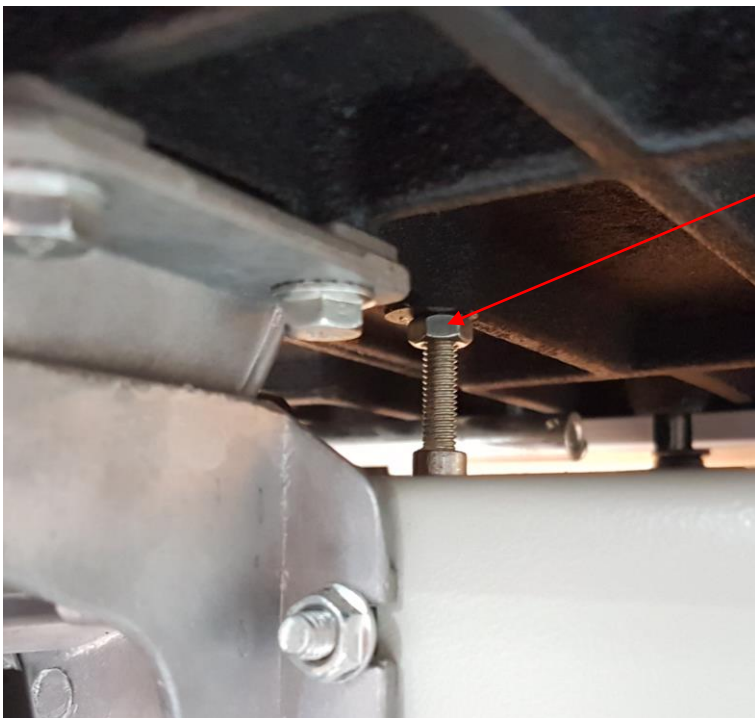
Adjustable pointer

Table Angle Locking Lever



Having set the table so that the blade is centred, apply a little tension to the blade and use a set square to position the table at right angles to it.

Lock it in position and if necessary, set the adjustable pointer so it aligns with zero.



Adjust the table support bolt, so it touches the top of the lower machine frame.

Fix it in place using the lock nut.

This allows the table to be quickly and accurately reset to 90 degrees after tilting the table.

Setting Up The Bandsaw



Blade tensioner adjuster

Blade tensioner quick release lever

Blade guard adjuster and lock

Blade Tracking control adjuster and lock



Set the Blade Tension

Make sure the blade tension quick release lever is in the down position.

The blade tension indicator is to be used as a guide.

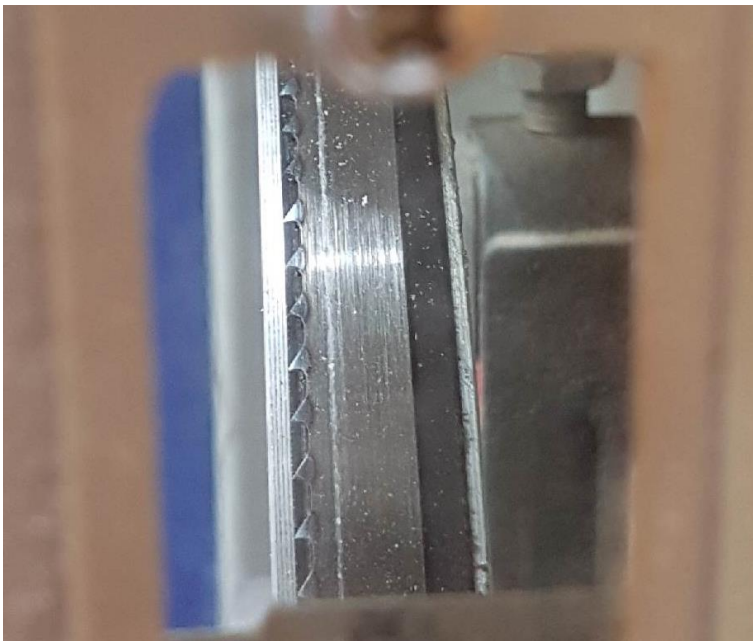
Press the side of the blade here to check the tension. Adjust the tension until the blade can be deflected sideways by 3 to 5mm with finger pressure.

To increase tension, turn the adjuster clockwise.

To decrease tension, turn the adjuster anti-clockwise.

In future, when removing a blade, use the quick release lever to take the tension off the blade. After fitting the new blade use the quick release lever to add the tension back.

If the blade is a different width to the previous one, you may then need to use the tension adjuster to fine tune the blade tension up or down.



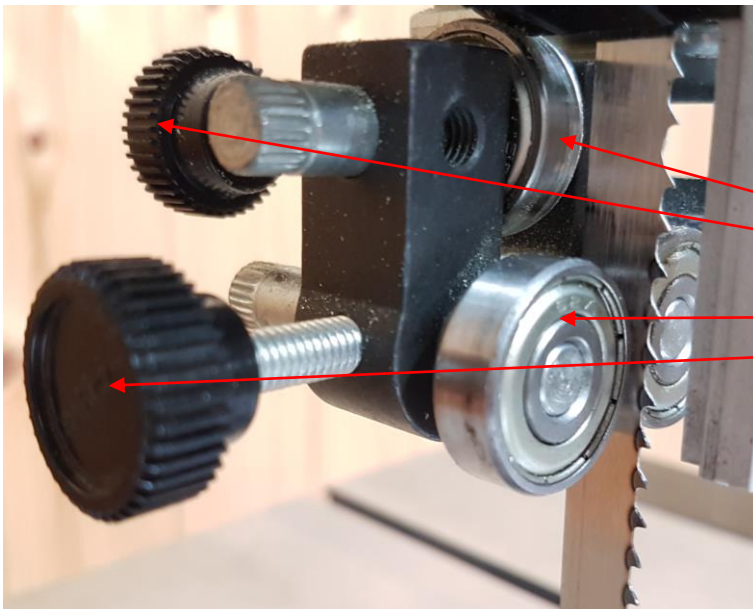
Set the Blade Tracking

Unlock the adjuster using the wingnut.

By hand, slowly rotate the bandsaw upper wheel clockwise. If the blade starts to move forward or backwards on the wheel adjust the tracking control until the blade is balanced.

The blade can sit in the centre of the rubber tyre or with the tips of the teeth projecting over the front end.

Lock the wingnut to set this position. Repeat this process whenever the blade is changed.



Set The Upper Blade Guides

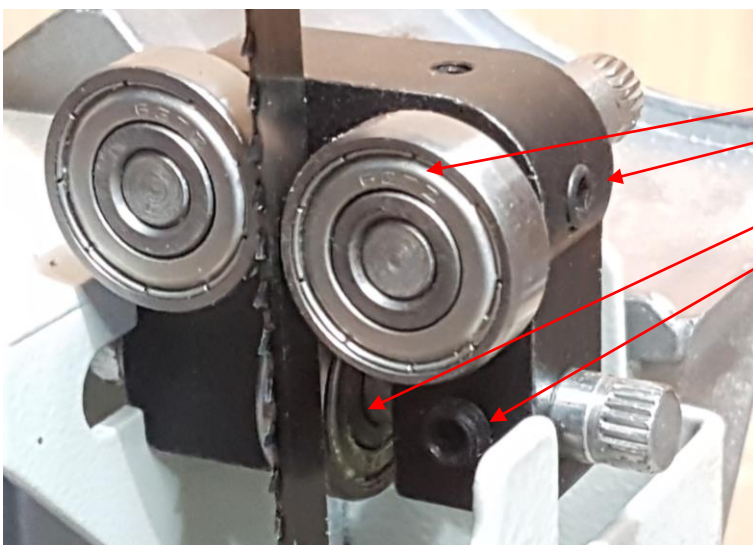
The upper and lower thrust bearings and guide bearings should be set up next.

Rear thrust bearing
Rear thrust bearing locking knob

Guide bearing
Guide bearing locking knob

The thrust bearing should be set 0.5mm off the back of the blade. Adjust and lock it in place.

The guide bearings should be set 0.5mm off the sides of the blade. Adjust and lock them in place.



Set The Lower Blade Guides

Guide Bearing
Guide Bearing Locking Screw

Rear Thrust Bearing
Rear Thrust Bearing Locking Screw

The thrust bearing should be set 0.5mm off the back of the blade. Adjust and lock it in place.

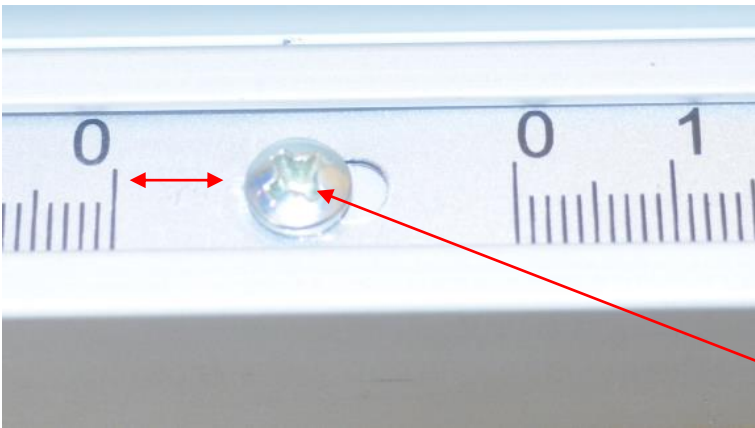
The guide pins should be set 0.5mm off the sides of the blade. Adjust and lock them in place.

Set The Rip Fence Scale

Fit the rip fence to the table. Use a ruler to measure the distance between the blade and the fence.

Slide the scale left or right to adjust the scale to match the measurement you have taken.

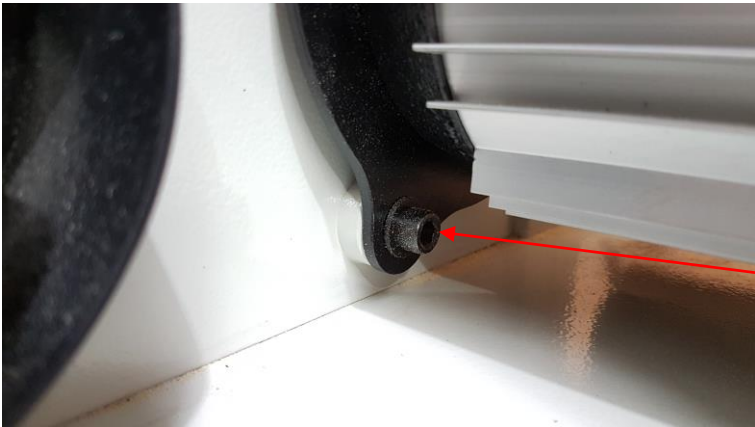
Scale Locking Screw



Set The Drive Belt Tension

At the rear of the bandsaw, loosen (but do not remove) the two bolts holding the motor, using a Hex key.

Pivot Bolt



One bolt passes through a slotted hole in the mount allowing the motor to rotate around the pivot bolt.

Apply pressure to the top of the motor, rotating it to increase drive belt tension.

Tighten the slotted bolt first, then the pivot bolt.

Slotted Bolt



Open the lower door.

Check the drive belt tension by pressing the belt.

When set correctly the belt should deflect by approximately 5mm when using moderate pressure.

Tip: If you are experiencing a lack of cutting performance, the blade is easily stalled or there is a squealing sound under load, it might be necessary to increase tension on the drive belt.



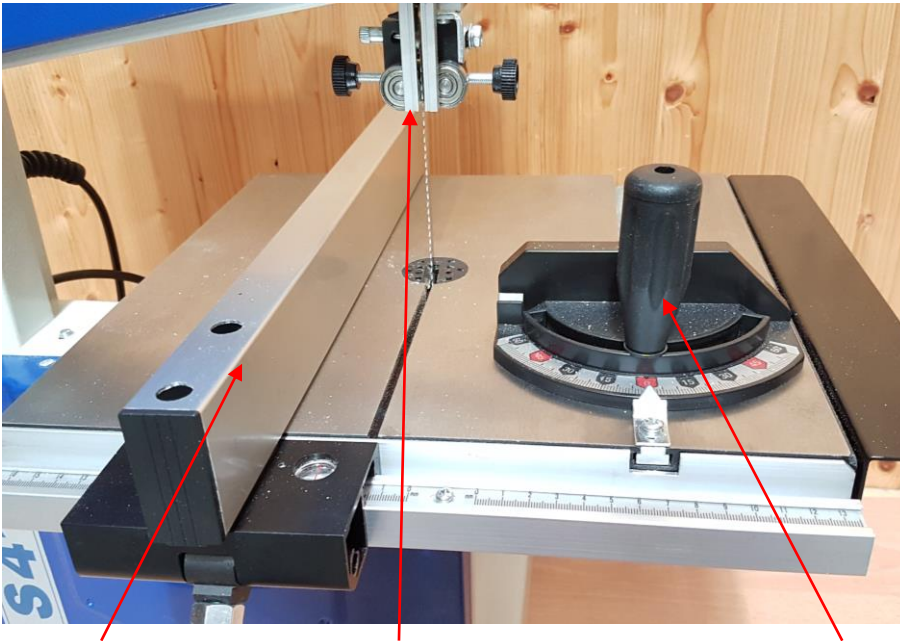
Your bandsaw is now ready for use.

It is recommended that the saw is bolted to a bench and a suitable dust extractor attached.

Making A Cut

For every type of cut, the blade guard should be lowered so that the bottom edge of the guard 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.



Rip Fence

Blade Guard

Mitre Fence

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.

Crosscutting

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

The rip fence may be used as a length stop for repetitive cross or mitre cuts.

Cutting Curves

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 below gives a guide.

Blade Width	Minimum Diameter
6mm (1/4")	60mm (2.1/2")
10mm (3/8")	100mm (4")
13mm (1/2")	130mm (5")

Note: Once you have cut curves with a blade, the set (angle) 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 only used for straight cuts and a separate blade for curved cuts.

Replacing The Blade



When you notice the cutting performance of the bandsaw starts to deteriorate it is time to replace the blade.

Bandsaw blades are sharp enough to cause injury even when too blunt to cut wood! It is recommended that protective gloves be worn when handling blades.

- 1) Unplug the bandsaw from the electric supply
- 2) Reduce the blade tension by moving the quick release lever into the up position
- 3) Open the upper and lower doors
- 4) Lower the blade guard
- 5) Remove the rip fence
- 6) Remove the rip fence carrier
- 7) Slide the blade off the wheels, bringing it forward out of the machine via the slots in the frame, blade guard and table.

Reverse these steps to fit the new blade.

Ensure that the teeth are at the front and pointing down.

Position the blade between the blade guide bearings.

Tension and adjust the blade tracking as per the instructions in the 'Setting up the bandsaw' section of this manual.

Check, and adjust if necessary, the position of the two thrust bearings and side bearings.

Dust Extraction



It is strongly recommended that a suitable dust extraction unit is used with this machine at all times.

100mm Diameter Dust Extraction Port

Troubleshooting

Problem	Cause	Remedy
Machine does not start	Blown Fuse	Replace Fuse
	Loose switch terminal	Inspect back of switch
	Faulty switch	Replace switch
Only starts when Green button is held down	Door Switch not made	Close and lock doors
	Faulty switch	Replace switch
Motor slows down during operation	Loose belt	Tighten Belt
	Blade is blunt	Replace blade
	Feed Speed is Too high	Feed the Work slower, let the blade do the cutting
Machine does not run but buzzing noise heard from motor	Attempting to take too deep a cut	It may exceed the capacity of the machine
	Failed capacitor	Replace the motor start capacitor.


Declaration of Conformity for CE Marking

Charnwood Declare that Woodworking Bandsaw, Model BS410

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. BM 50331328 and AE 50349294 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: 29/04/2016 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.



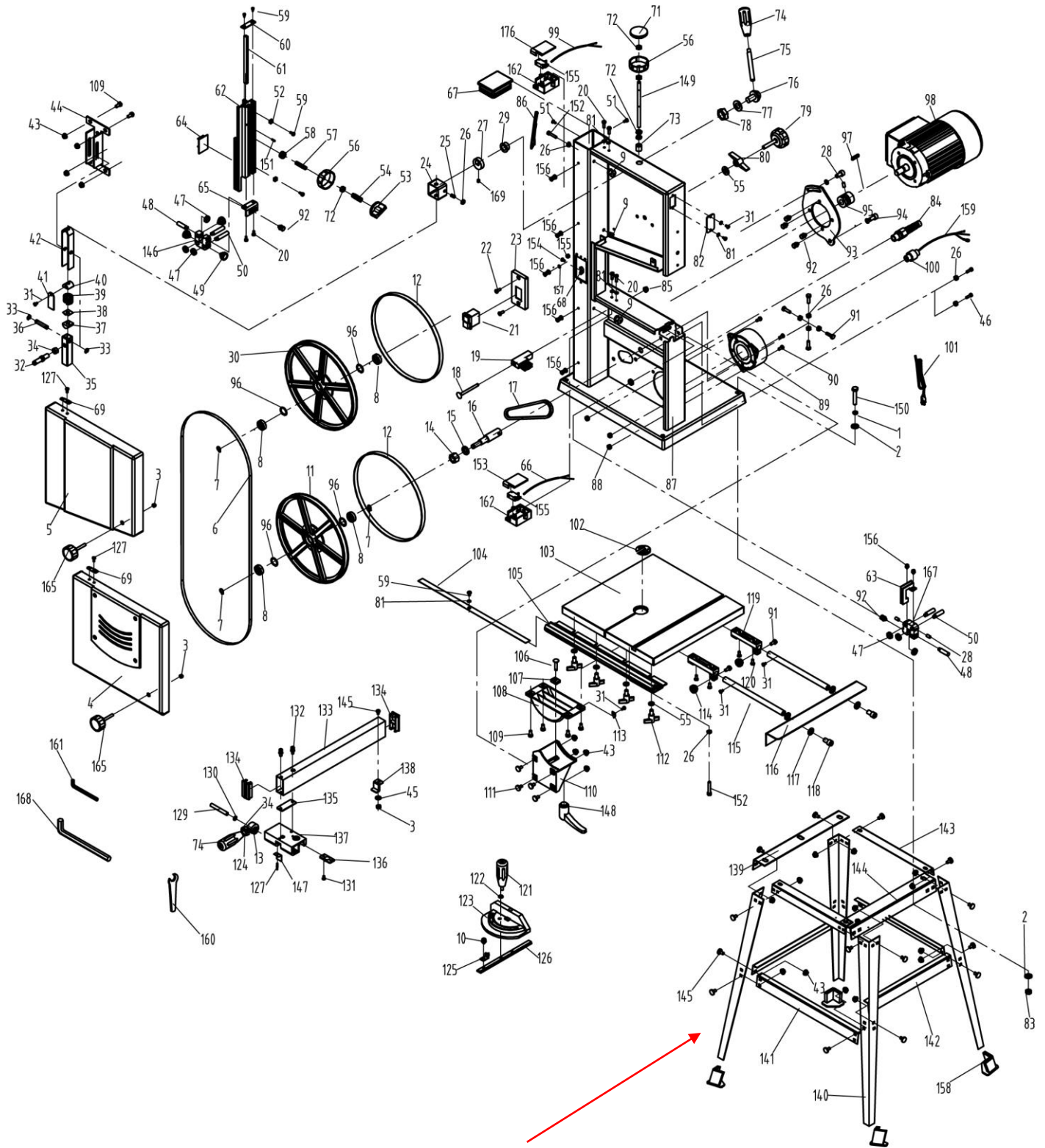
Only for EU countries
Do not dispose of electric tools together with household waste material!

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

BS410 Parts Diagram



Optional Floor Stand

BS410 10” Bandsaw Parts List

No	Name	Spec	Qty	No	Name	Spec	Qty
1	Spring Washer	8 (galvanized)	3	61	Gear Rack		1
2	Flat Washer	8 (galvanized)	6	62	Saw Guide		1
3	Lock Nut	M6 (galvanized)	3	63	Saw preventer plate		1
4	Nether Door		1	64	Preventer plate		1
5	Upper Door		1	65	Guide holder		1
6	Saw blade	T10/1712X9.5X0.35 6TPI	1	66	Ligature	VDE 2*0.75*0.3	1
7	Circlip for shaft	11	3	67	End Cap		1
8	Bearing	6001-RS	4	68	Cable clip plate		1
9	Retainer		3	69	Shrapnel	65Mn	2
10	Screw assy	M5X8 (galvanized)	1	70	Circuit board		1
11	Nether Belt Pulley	ZL105	1	71	Handle Cover		1
12	Rubber Gasket		2	72	Hex Nut (4mm)	M8(galvanized)	5
13	Eccentric block		1	73	Cushion Cover		1
14	Hex Nut	M14X1.5	1	74	Handle Head		2
15	Standard Spring Washer	14	1	75	Handle Pole		1
16	Nether Axle		1	76	Axle		1
17	Poly V-Belt	4PJ337 (PU)	1	77	Flat Washer	14 (galvanized)	1
18	Bolt	M8X70(galvanized)	1	78	Hex Nut	M20X1.5(galvanized)	1
19	Brush		1	79	Adjustable Handle		1
20	Self-tapping Screw	ST3.9*12 (galvanized)	6	80	Lock Nut		1
21	On-off switch	KJD20-2	1	81	Flat Washer	4(galvanized)	7
22	Countersunk head screw	M4X12 (Black)	2	82	Window		1
23	Switch Plate		1	83	Hex Nut	M8 (galvanized)	3
24	Square tube		1	84	Cable Clip		1
25	Stopper Screw	M6X12(Black)	1	85	Nut	M8 (galvanized)	1
26	Hex Nut	M6 (galvanized)	9	86	Pushing Hands	ABS	1
27	Eccentric block		1	87	Saw Frame Assy		1
28	Stopper Screw	M6X6 (Black)	4	88	Hex Nut	M5 (galvanized)	3
29	Sleeve		1	89	Suction Inlet		1
30	Upper Belt Pulley		1	90	Philips Screw	M5X12 (galvanized)	3
31	Philips Screw	M4X5 (galvanized)	6	91	Hex Bolt	M6X20 (galvanized)	6
32	Upper Axle		1	92	Hex Bolt Assy	M6X12 (galvanized)	6
33	Split Washer	6	2	93	Connection Plate		1
34	Hex Nut	M10 (galvanized)	2	94	Screw Assy	M8X16 (Black)	2
35	holder	Q235(Black)	1	95	Motor Wheel		1
36	Coupling Shaft	45钢 (galvanized)	1	96	Circlip for Hole	28	4
37	Spring Nut	45钢 (Black)	1	97	Flat Key	C5X25	1
38	Pointer		1	98	Motor	230V	1
39	Spring		1	99	Ligature	VDE 2*0.75*0.6	1
40	Spring Cushion		1	100	Cable Clip	φ8	2
41	Dividing Ruler		1	101	Cable	3X0.75X2.2	1
42	Type U Support		1	102	Table Cover		1
43	Nut	M6 (galvanized)	40	103	Table		1
44	Guide plate		1	104	Scaleplate		1
45	Flat Washer	6 (galvanized)	1	105	Slide		1
46	Hex Bolt	M6X12 (galvanized)	2	106	Bolt	M8X30 (galvanized)	1
47	Bearing	627Z	6	107	Slide plate		1
48	Short Eccentric Shaft		2	108	Angle support		1
49	Lock Handle	ABS(M6X10)	3	109	Hex Bolt	M6X12 (galvanized)	8

50	Eccentric block		4	110	Angle Support		1
51	Self-tapping Screw	ST4.2*10 (galvanized)	2	111	Bolt	M6X16	4
52	Guide Block		2	112	Lock Handle	M8X15	4
53	Lock Handle		1	113	Pointer		1
54	Lcok Spring		1	114	Lock nut	M6	2
55	Flat Washer	8(Black)	5	115	Extension Rod		2
56	Adjustable handle		2	116	Extension Table		1
57	Adjustable Axle		1	117	Flat Washer	10(Black)	4
58	Adjusting Gear		1	118	Screw	M10X16(Black)	2
59	Self-tapping Screw	ST3.5*9.5 (galvanized)	5	119	Support		2
60	Cover plate	Q235 (galvanized)	1	120	Philips Screw	M5X10(Black)	4
121	Handle		1	146	Bearing Bracket		1
122	Flat Washer	6(Black)	1	147	Spring plate		1
123	Mitre Gauge		1	148	Handle	M8	1
124	Rod		1	149	Tension rod		1
125	Pointer		1	150	Hex Bolt	M8X55(galvanized)	3
126	Rod		1	151	Elastic Cylindrical Pin	φ2.5x14	1
127	Rivet	4x6	5	152	Screws	M6X35(galvanized)	2
129	Axle	45 Steel (galvanized)	1	153	Cover		2
130	Spring	8 (Black)	1	154	Philips Screw	M4X10 (galvanized)	2
131	Philips Screw	M3X5 (galvanized)	1	155	Micro Switch	HY50-3	2
132	Screw Assy	M5X12(galvanized)	2	156	Screws Assy	M4X8 (galvanized)	8
133	Guiding rule		1	157	Lock plate	4 (galvanized)	2
134	End Cap		2	158	Feet		4
135	Plate		1	159	connection	3*0.75*0.5m	1
136	Magnifying Glass		1	160	Wrench		1
137	Support		1	161	Wrench	S=3	1
138	Locatin Plate		1	162	Box		2
139	Upper short support 2		1	165	Handle		2
140	Leg		4	167	Upper Bearing Bracket		1
141	Lower Long Support		2	168	Wrench	S=6	1
142	Lower short support		2	169	Screw	M6X10	1
143	Upper long support		2				
144	Upper short support		1				
145	Bolt	M6X12	33				



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