charnwood

Woodworking machinery at its best!

12” PANEL SAW
OWNERS MANUAL

MODEL: W670

CE

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

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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 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 CIRCULAR SAWS

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

2. If your saw has a dust extractor hose connected to the crown guard, ensure that it is held clear of the table and will not foul the work-piece as it passes over the table.

3. When cutting large sheets of material or 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.

4. Never use the saw without the riving knife and check that it is in line with the blade before using the saw.

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

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 30cm 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 remove the table insert 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 table saw has been designed and built solely as a woodworking machine.
Do not modify it in any way or use for anything other than its designated purpose. Neither the manufactures nor the supplies are liable for any damage or injury caused by incorrect assembly, operation or electrical connection of this machine.

Risk of Injury!
Never reach into
the running saw blade

Wear
Eye
Protection

Wear
Ear
Protection

Specification

Main table size	350(w) x 760(d) mm
Support table size	600(w) x 760 (d) mm
Table height	875mm
Motor (induction)	2200W (3hp), 230v single phase
Blade diameter x bore x kerf	315mm (12”) x 30mm x 3.2mm
Blade rotation speed (no load)	4000rpm
Maximum depth of cut at 90	100mm
Maximum depth of cut at 45	75mm
Maximum ripping width using fence	940mm (24”)
Maximum cross cutting width	1225mm (48”)
Dust extractor hose connection	100mm
Weight	194kg
Rating	Trade
Warranty	1 Year

Rating Description

Trade: Suitable for daily use by professional woodworkers.

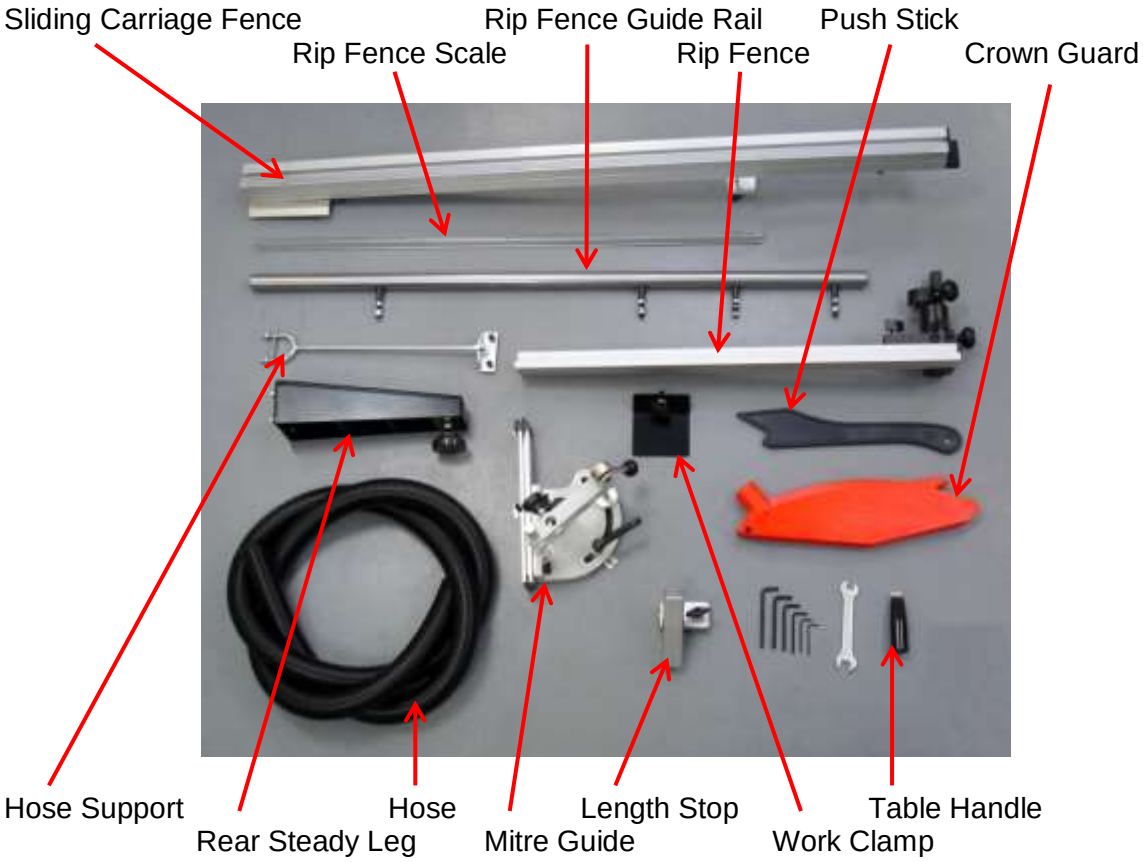
Continuously rated, high power and a heavy duty construction. Typically used by several different operators in a small or medium sized business. Will be used up to the machines maximum limit with some long work periods. Expected maximum use of 1000 hours annually.

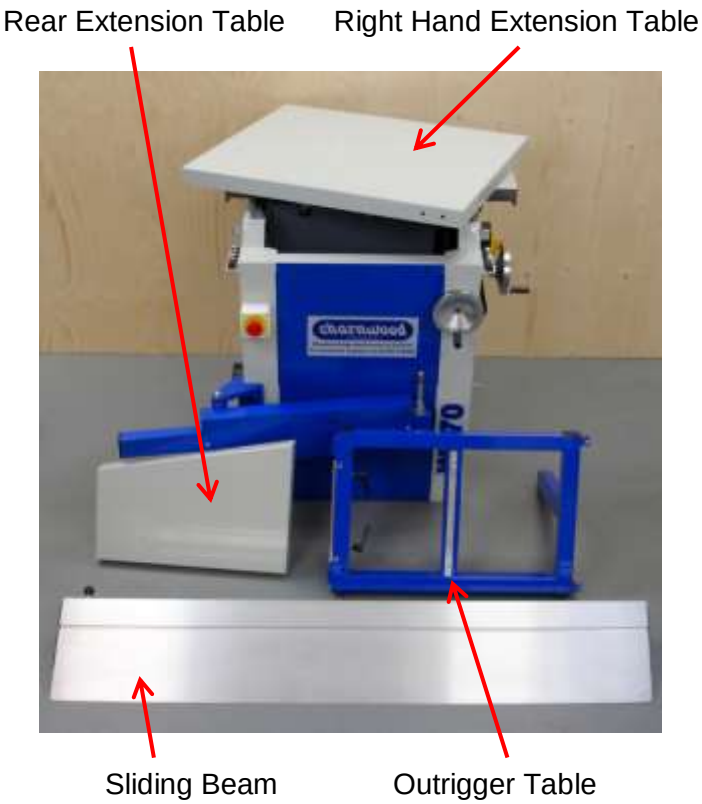
Unpacking

		The saw is shipped one wooden crate and one cardboard carton. Remove the upper part of the crate. This is nailed to the base pallet and corner bolted – beware of sharp nails.

		Unpack all items from the case and carton Please note: some parts are contained in the base of the saw. Check all items are present
		Remove the four locating blocks from around the base of the machine with a pry bar – these again are nailed to the pallet.

Contents





Assembly

Remove the protective paper from the table and clean off the grease using WD40 or a suitable cleaning agent.

Remove two M10 nuts from the sliding beam fixing bolts, located on the underside of the beam.

Release the sliding beam lock. (pull out and rotate through 90 degrees)

Slide the beam along to expose the two blanking plugs covering the bolts.

Prise out the plugs using a flat blade.

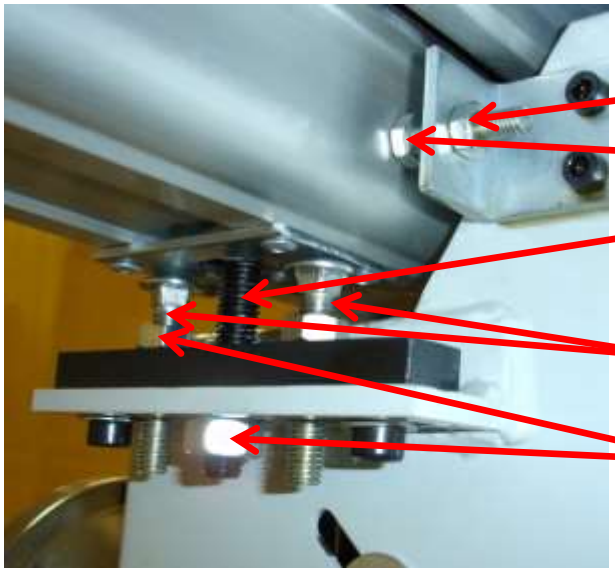
Use an 8mm hex key, to locate the bolts into the brackets situated at either end of the base cabinet.

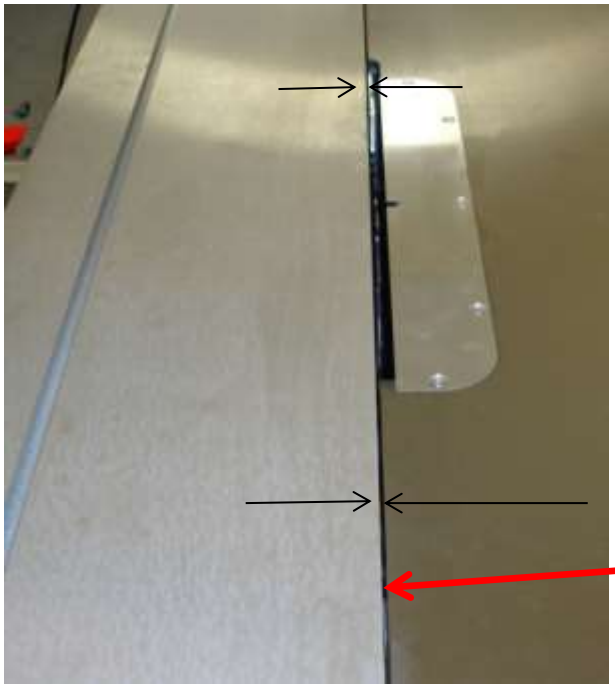
Lightly tighten the carriage onto the four levelling bolt heads.

Place a straight edge across the front of the sliding beam and fixed table.

Adjust the four carriage support bolts so that the sliding table and fixed table are perfectly level.

Repeat for the rear of the tables.

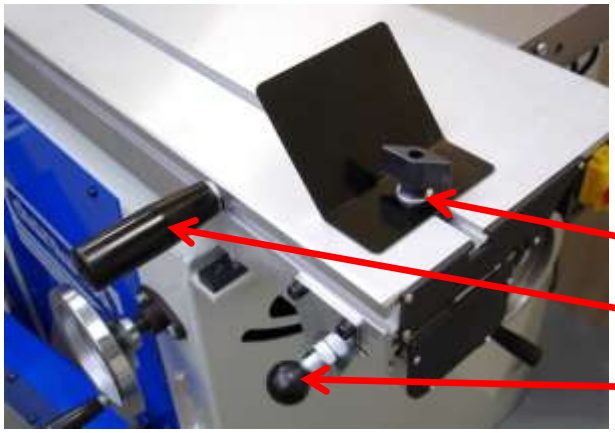




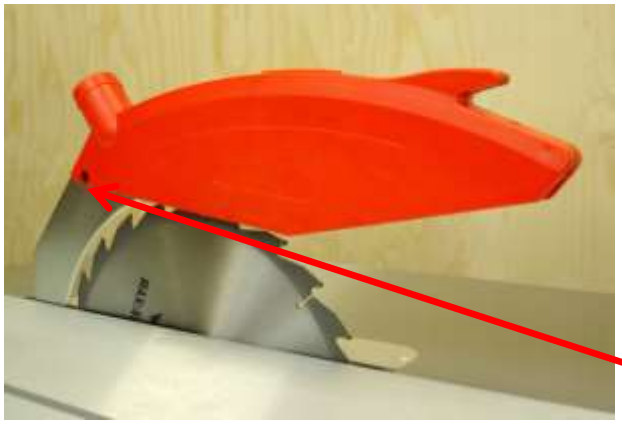
The sliding table and fixed table should be parallel and a maximum of 3mm apart.

Adjust the gap adjusting screw and tighten down the bed fixing bolts.

Then tighten all locking nuts and replace the blanking plugs.



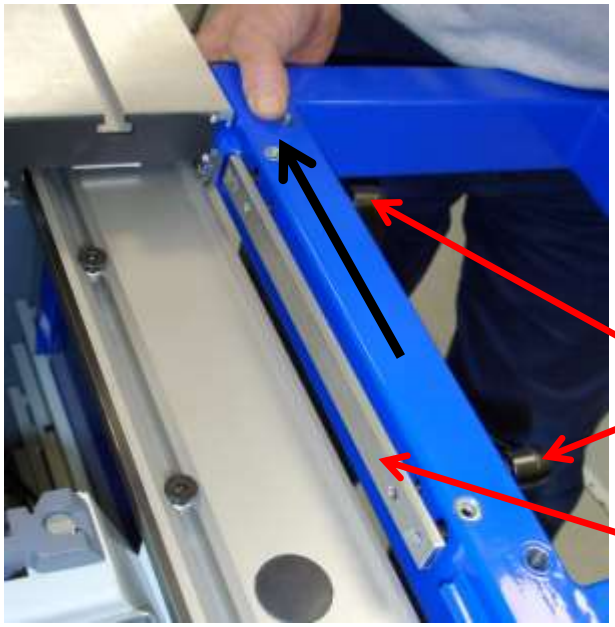
Attach the beam handle and clamp by sliding the square nuts into the channels of the sliding table extrusion and tighten in a convenient position.



Raise the saw blade and riving knife by rotating the handle at the front of the base cabinet.

Using a 5mm hex key, loosen the fixing bolt in the crown guard and hook it into the slot in the top of the riving knife.
Re-tighten the fixing bolt.

Fixing Bolt



Attach the outrigger extension to the sliding beam by locating the bottom of the leg onto the pin on the articulated support arm.

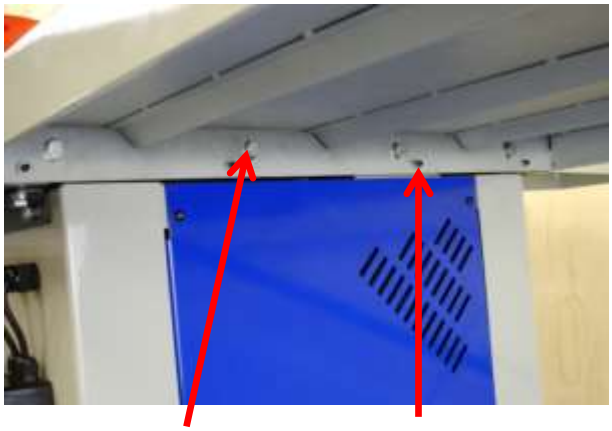
Slide the joining plate into the side channel in the table extrusion and tighten the two locking handles.

Locking Handles

Joining Plate

Using a straight edge, level the outrigger table with the sliding beam and main table by adjusting the height of the support arm.

Adjust the height with a 30mm spanner



Fixing Bolts Levelling Screws

Attach the side extension table with the M8 bolts and washers provided

Lightly tighten the bolts, again using a straight edge, level the extension table by adjusting the grub screws below each fixing bolt

Tighten the bolts and grub screw locking nuts

Attach the rear extension table

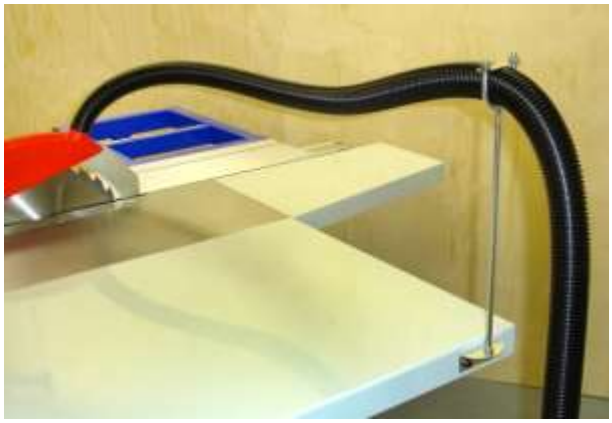
Attach the rear steady leg

Remove the blue side panel form the left hand side of the machine

Bolt through the four holes situated in the bottom corner of the cabinet

Adjust the rubber foot to make contact with the floor

Tighten the lock nut using a 16mm spanner



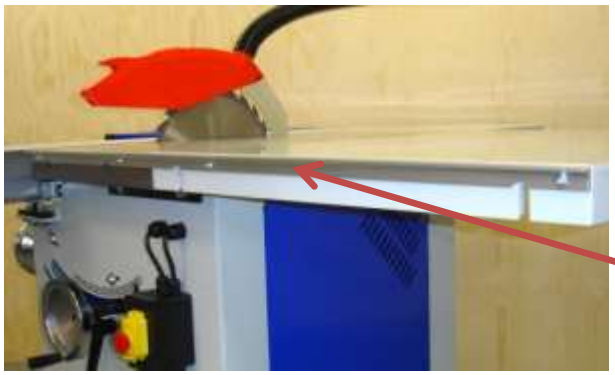
Attach the Hose Support Bracket to the Table Extension using the bolts supplied

Tighten with a 13mm spanner

Connect the extraction hose to the crown guard outlet

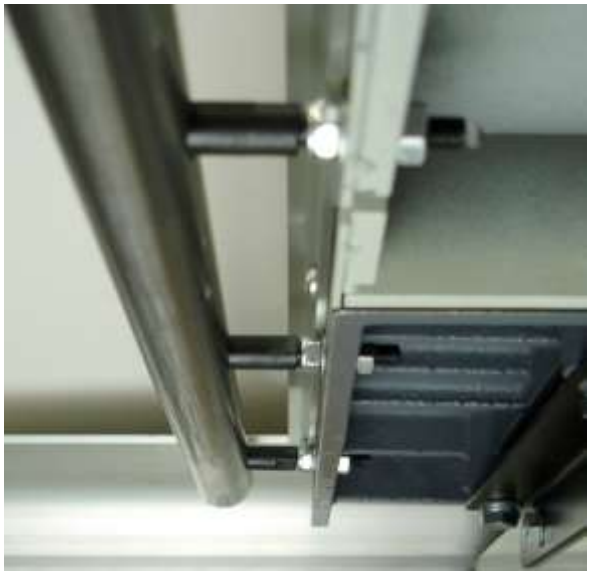
Clamp the hose into the hose support bracket, ensuring it is clear of the workspace

Connect the extraction hose to the main extraction



Attach the fence scale extrusion to the front of the table and side extension using the Pozi-head screws provided

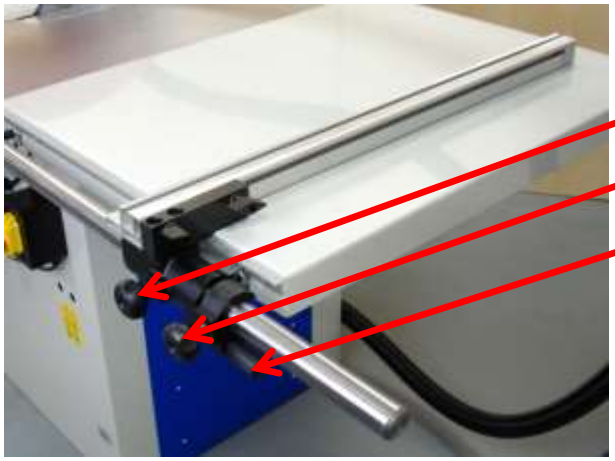
Fence Scale



Attach the rip fence guide rail to the table and side extension, ensuring that each mounting bolt has one nut and washer fitted on either side.

This allows for fine adjustment when squaring the rip fence to the saw blade.

Before tightening, slide the rip fence assembly onto the rail and adjust the height of the guide rail to enable the rip fence extrusion to lie flat on the saw tables.
Tighten the rail nuts using a 13mm spanner



Rip Fence Clamp

Fine Adjuster Clamp

Fine Adjustment Handle

To use the fine adjuster:
Lock the fine adjuster clamp, open the rip fence clamp. Turn the fine adjustment handle to the required measurement on the scale.
Lock the rip fence clamp.

The rip fence extrusion can be fitted in two positions.

The tall face position is used for general cutting.

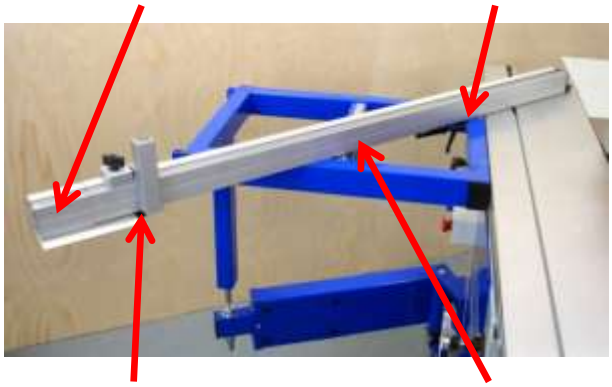
To change between the positions, slacken the two wing nuts and slide the aluminium extrusion off the carrier.
Rotate and then replace the fence extrusion in the preferred position.

The low face position is used when cutting narrow material, close to the blade.

It prevents the fence extrusion from fouling the crown guard

Fence Extension

Pivot Point

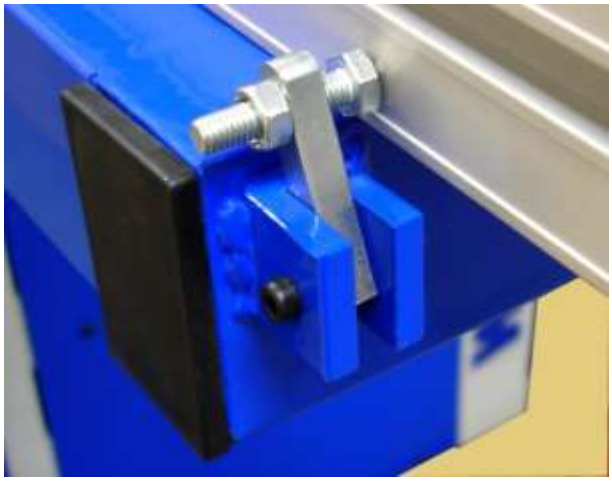


Locking Screw

Locking handle

Attach the sliding beam fence by locating the swivel pin into either the front or rear pivot point in the table outrigger

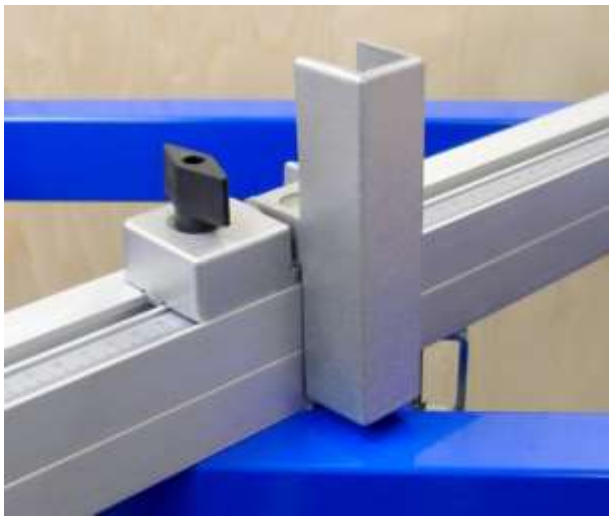
Adjust to the required angle, slide the clamp to a suitable position and tighten the locking handle



Set the adjustable stop so that the fence is set at 90 degrees to the blade.

There are 2 of these stops, one for each pivot point.

They are hinged so they can be moved out of the way when not in use.



Slide the length stop into the top channel of the fence extrusion

Lock it into place with the thumb screw

Instead of using the main fence on the sliding beam, a mitre guide is included

The mitre guide can be attached to the sliding beam, by sliding it into the T shaped channel. Lock it into the channel with the locking knob.

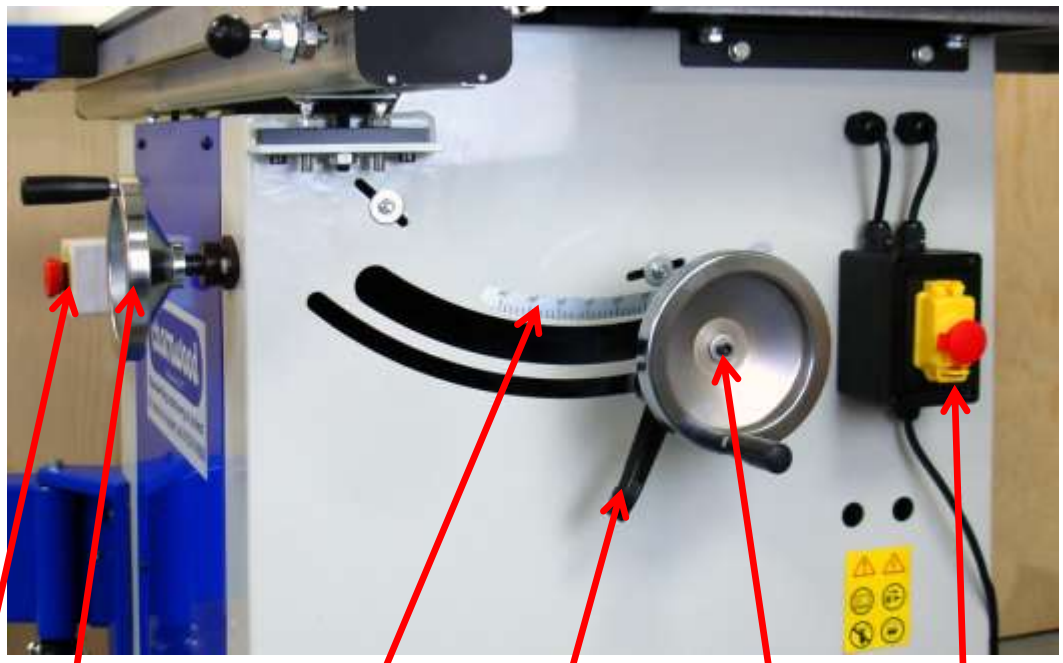
The fence can be set at any angle from -60 degrees to +60 degrees, and locked in place with the locking lever.

The mitre guide also has a built-in work clamp.

Locking Knob

Locking Lever

Using the Table Saw



On/Off Switch
Press the red tab on the left hand side to lift the hinged switch cover upwards. This will give you access to the green start and red stop buttons. Pressing the red section of the cover will stop the saw.

To turn the saw on, press the green button. Wait for the blade to reach its maximum speed of rotation before commencing with the cut.
The machine is fitted with an NVR (No Voltage Release) switch. This type of switch is designed so that if the machine is disconnected from the mains whilst running and then reconnected, the motor will not automatically restart.

The machine is also fitted with an emergency stop button. After pressing the button, it must be reset by turning the red knob clockwise until it is released.

Cutting Depth
Adjustments to the cutting depth should be made only when the saw is not running.
Turn the round hand wheel on the front, to set the blade to the required depth. Turn anticlockwise to lower the blade, turn clockwise to raise the blade. The blade height should always be set so that only the carbide tips of the blade (approx. 5mm) projects above the wood.

Angle of Cut
Adjustments to the angle of cut should be made only when the saw is not running.
To tilt the blade for making bevel cuts, undo the locking lever, rotate the hand wheel to the required angle using the scale provided for guidance. Lock the angle by tightening the lever.

Making a cut
Ensure there is enough space around the table for the work piece before starting the cut.
Position your feet in a stable and balanced stance.
When feeding the timber, place your hands on the section of timber being kept. Never hold the waste part of the timber.
Never force timber through the saw, always let it cut at its own speed.
When cutting narrow pieces - use the push stick provided.

Ripping Cut
The rip fence is used to make longitudinal (with the grain) cuts. Set the fence to the required dimension using the scale provided.
To avoid kickback, the far end of the fence extrusion should be set correctly.
The fence extrusion should be set so that the end is level with the centre of the saw blade.
This allows the timber space to expand into, after the cut has been made.
When cutting wider pieces the fence extrusion can be moved further towards the back of the blade, in a line projecting at roughly at 45 degrees out from the centre of the blade.

Cross Cutting
This saw has 2 options for making cross cuts: Using the mitre guide or using the sliding beam.

Mitre Guide
The mitre guide is most suitable for cutting small pieces. It fits into the T-shaped channel in the sliding beam and is then locked into place. To set 90 degrees or any other angle, undo the locking lever and rotate the quadrant to the desired angle. Lock the angle setting with the lever. The fence extrusion can then be adjusted so that the end is close to the blade, giving better support to the work piece. When setting the fence, take care to ensure the fence will not contact the blade.

Sliding Beam
The sliding beam is most suitable when working with large flat panels.
When working with large panels:

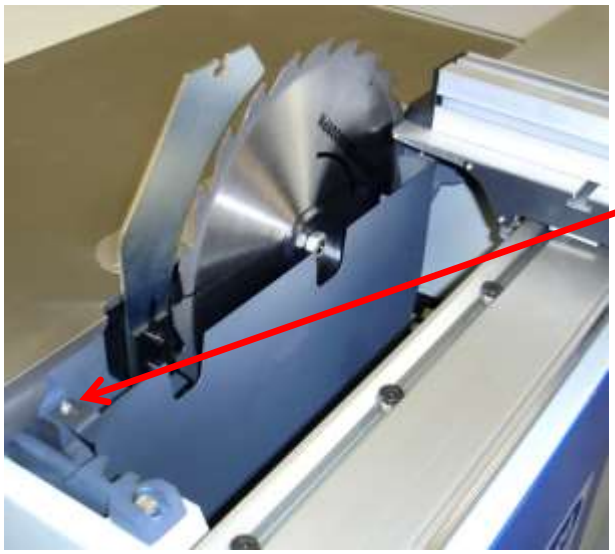
Pull the sliding beam all the way forward.
Load the panel onto the saw table.
Press the start button.
Push the panel through the saw blade.

An alternative configuration is available for the sliding beam. The fence can be assembled onto the front of the outrigger table, so that the work piece is loaded against the back edge of the fence and then fed onto the blade.
Using this configuration, the crosscut capacity is reduced, however some people to prefer to work this way.

There is a clamp provided, which fits on to the sliding beam.

The angled configuration is well suited to bull nosed boards and round stock.

Changing The Blade



Unplug the saw from the power source

Raise the blade height to its maximum and remove the crown guard

Slide the beam all the way to the front position and loosen the rear blade cover screw

Slide the beam all the way to the rear position and Loosen the front blade cover screw

The blade cover is hinged and can now be lowered

By hand, rotate the blade until the hole in the collar on the right hand side of the blade is in line with the cut out in the table insert.

Insert the end of the L shaped tommy bar into the hole to act as a spindle lock.

Please Note: The Nut is Left Hand Thread (Turn clockwise to undo)

Use a 19mm spanner to unlock the nut on the saw spindle

Remove the nut, the saw flange and the sawblade

Mount the new blade and then follow the procedure in reverse to complete the task

Troubleshooting

Saw vibrates	Check all nuts and bolts for tightness and check that blade is not damaged.
Cuts are slow, wood is blackened	Examine the blade. If any Tungsten tips are missing or broken the blade should be replaced. If the tips are blunt, the saw blade may to be professionally sharpened.
Saw stalls	Feed rate too high, slow down.
Rip fence is not parallel to blade	Bring the fence up to the blade and re-align the fence so it is parallel, by adjusting the 4 fixing studs which hold the round guide rail onto the table.
Lower saw guard fills with dust	It is essential to use a vacuum extractor or chip collector with this machine. If one is being used, check for blockages in the hose.
When pressing start, nothing happens	Check power supply, fuse in plug and switch. Check emergency stop switch is released

Declaration of Conformity for CE Marking

Charnwood Declare that Woodworking Circular Saw, Model W670

Conforms with the following Directives:

Machinery Directive 2006/42/EC
EMC Directive 2004/108/EC

And further conforms to the machinery example for which the EC type examination Certificate No. BM 50314369 and AE 50314321 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: R Cook Dated: 06/07/2015 Location: Leicestershire

Richard Cook
Director

CE

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.

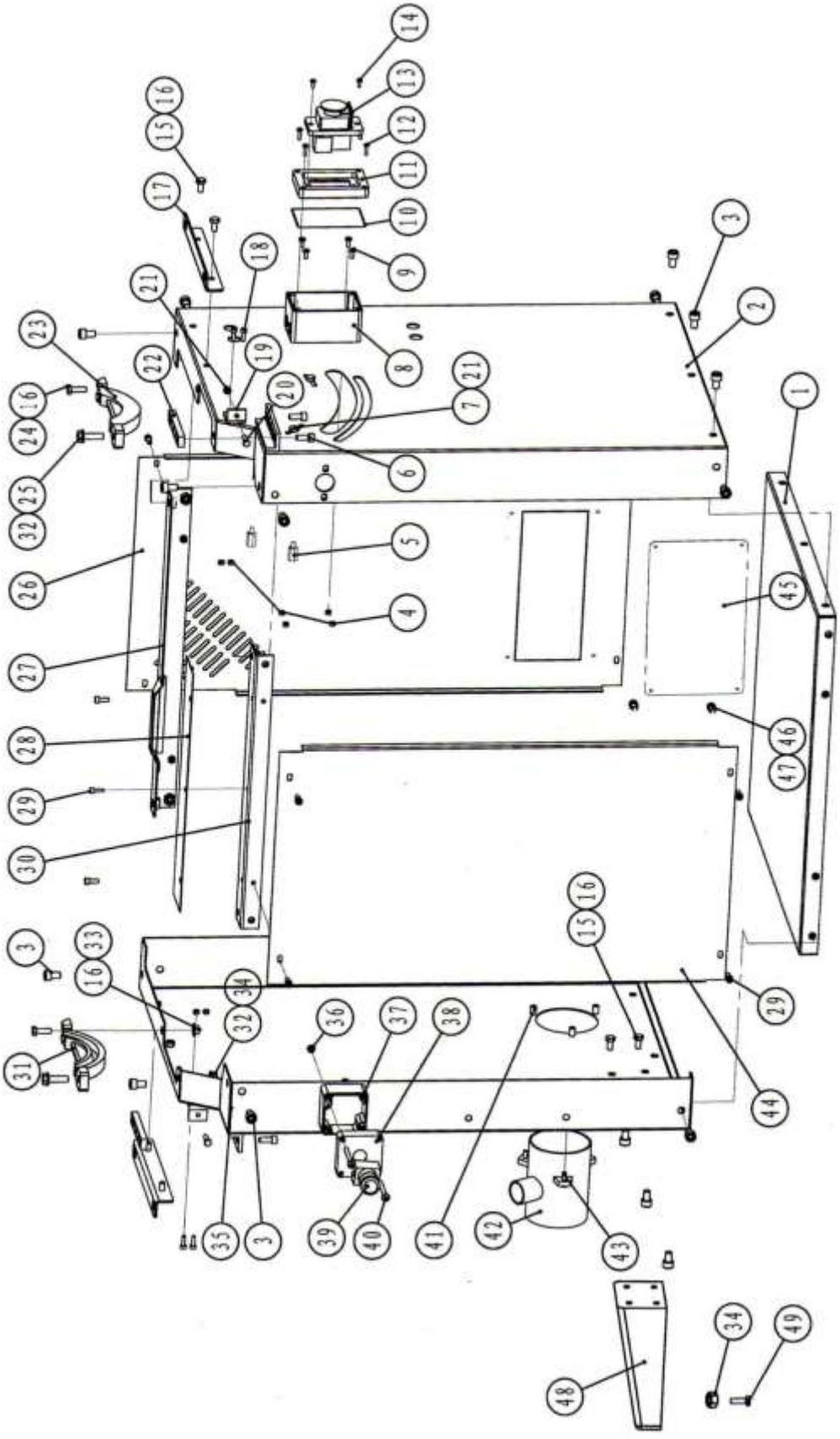
Charnwood W670 Parts List

Part	Description		Part	Description
001	Bottom Panel		049	Hex Bolt M10 x 55
002	Front Panel		050	Set Screw M8 x 12
003	Button Head Screw M10 x 16		051	Button Head Screw M5 x 12
004	Nut M5		052	Big Washer
005	Limited Block		053	Hand wheel
006	Cap Screw M8 x 20		055	Lock Handle
007	Flat Washer M6		056	Spring
008	Switch Box		057	Screw
009	Phillips Head Screw M5 x 12		058	Threaded Shaft
010	Seal		059	Lock Shaft
011	Switch Box Cover		060	Big Washer
012	Tap Screw M4 x 10		061	Short Bush
013	Switch		062	Flat Washer M5
014	Tap Screw M4 x 10		063	Angle Indicator
015	Hex Bolt M8 x 16		064	Threaded Tube
016	Flat Washer M8		065	Retaining Ring
017	Bracket		066	Bush
018	Cap Screw M5 x 16		067	Pin
019	Position Plate		068	Position Nut
020	Hex Bolt M6 x 25		069	Set Screw M6 x 8
021	Nut M6		070	Flat Head Screw M6 x 25
022	Adjusting Plate		071	Threaded Tube
023	Support Bracket (Right)		072	Guide Bush
024	Hex Bolt M8 x 25		073	Support Bush
025	Hex Bolt M10 x 35		074	Plate
026	Right Panel		075	Lock Nut M6
027	Right Bracket		076	Special Washer 6.5 x 23 x 2
028	Protection Plate		077	Cap Screw M6 x 35
029	Button Head Screw M6 x 16		078	Shaft
030	Angle Iron		079	Bracket
031	Support Bracket (Left)		080	Phillips Head Screw M6 x 12
032	Flat Washer M10		081	Flat Washer M6
033	Nut M8		082	Lock Nut M10
034	Nut M10		083	Motor
035	Rear Panel		084	Hex Bolt M6 x 16
036	Nut M4		085	Big Washer M6
037	Emergency Switch Box		086	Motor Plate
038	Emergency Switch Box Cover		087	Teeth Washer
039	Emergency Switch		088	Motor Pulley
040	Phillips Head Screw M4 x 60		089	Cap Screw M6 x 20 Left
041	Insert Nut		090	Belt
042	Dust Tube		091	Cap Screw M6 x 20
043	Phillips Head Screw M6 x 20		092	Special Washer 35 x 6.5 x 4
044	Left Panel		093	Bearing 6204
045	Panel A		094	Bush
046	Phillips Head Screw M4 x 8		095	Set Screw M5 x 6
047	Flat Washer M4		096	Bush
048	Foot Bracket		097	Key A5 x 20

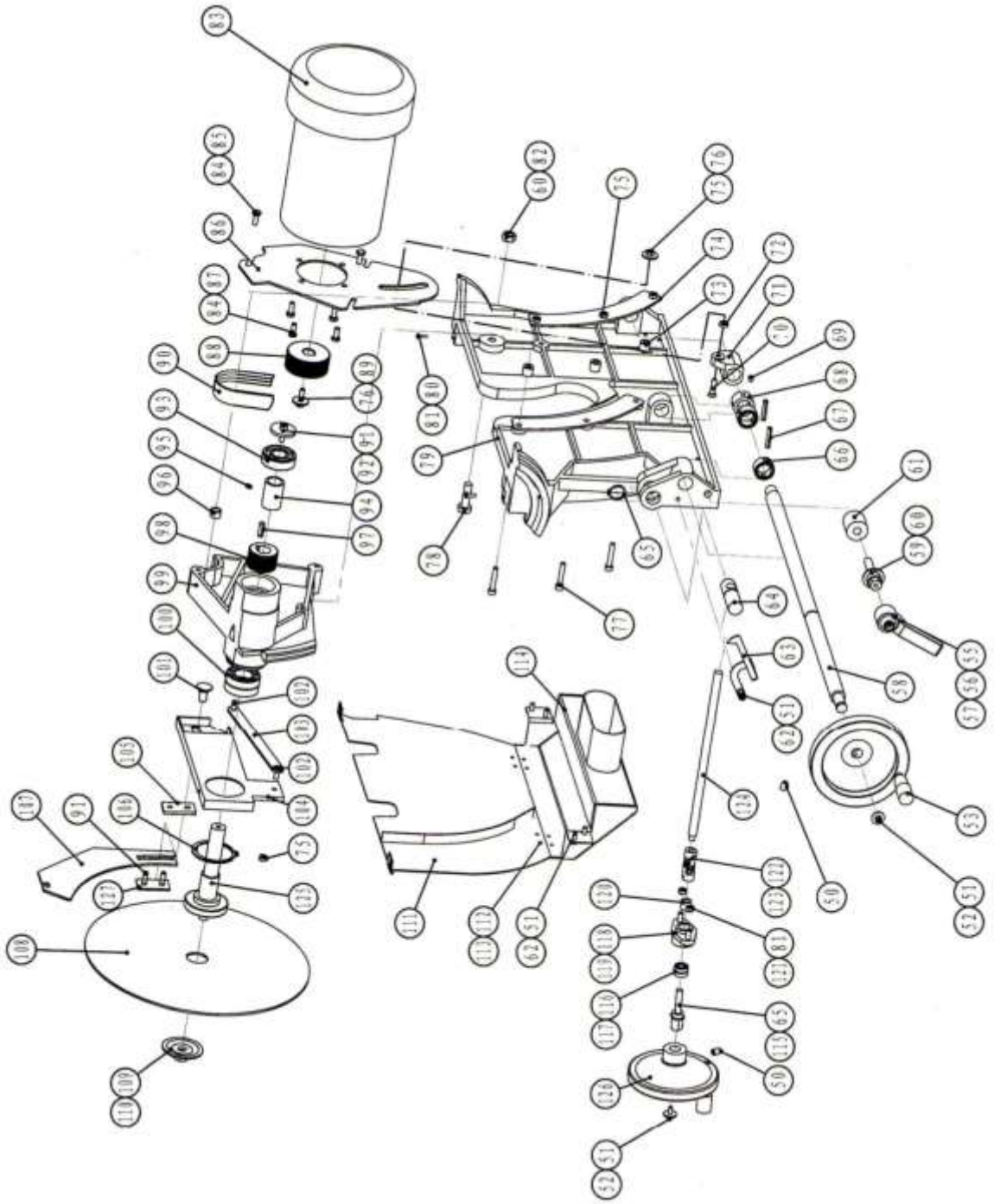
Part	Description		Part	Description
098	Pulley		162	Rear Extension Table
099	Shaft Bracket		163	Fence Knob
100	Bearing 6005Z2		164	Flat Washer
101	Carriage Bolt M10 x 25		165	Plate
102	Flat Head Screw M6 x 16		166	Square Head Nut
103	Connecting Rod		167	Table Insert
104	Split Bracket		168	Flat Head Screw M4 x 8
105	Guide Washer I		180	Fence Bracket
106	Retaining Ring 55		181	Thin Nut
107	Splitter		182	Big Washer
108	Blade		183	Lock Handle
109	Nut M12 Left		184	Bracket
110	Blade Plate		185	Micro Adjust Knob
111	Blade Guard		186	Front Guide Rail
112	Hinge 38		187	Support Shaft
113	Rivet		188	Nut M8
114	Dust Port		189	Phillips Head Screw M6 x 16
115	Shaft		190	Nut M6
116	Bearing 619/7		191	Scale Base
117	Retaining Ring 19		192	Scale
118	Bearing Seat		193	Phillips Head Screw M6 x 12
119	Hex Bolt		194	Cap Screw M8 x 30
120	Bush		195	Knob
121	Nut M6		196	Support Bracket
122	Gimbal		197	Square Head Nut
123	Pin		198	Rip Fence
124	Threaded Shaft		211	Phillips Head Screw M6 x 12
125	Spindle		212	Position Plate
126	Hand wheel		213	Square Head Nut
127	Guide Washer II		214	Bracket
140	Sliding Bracket		215	Flat Head Screw
141	Cap Screw M10 x 65		216	Scale
142	Sliding Table		217	Aluminium Bracket
143	Carriage Bolt M8 x 45		218	Flat Washer
144	Nut M8		219	Knob
145	Nut M10		220	Position Plate
146	Hex Bolt M10 x 16		221	Magnifier
147	Spring Washer M10		222	Phillips Head Screw M6 x 50
148	Flat Washer M10		223	Scale
149	Main Table		224	Scale
150	Hex Bolt M8 x 20		225	Bracket
151	Spring Washer M8		226	Fence
152	Flat Washer M8		227	Locking Plate
153	Flat Head Screw M6 x 10		228	Plate
154	Extension Table		229	Nut M6
155	Nut M6		230	Knob
156	Hose Bracket Seat		231	Plate
157	Cap Screw M8 x 12		232	Set Screw M6
158	Hose Bracket		233	Handle
159	Clamp		234	Screw
160	Blade Guard		235	Spring
161	Flat Head Screw M6 x 40		236	Pin

Part	Description		Part	Description
237	Cap Screw M4 x 8		309	Support Bracket
238	Tap Screw ST4 x 12		310	Position Shaft
239	End Cap		311	Shaft
240	Big Washer M6		312	Bracket
241	Set Screw		313	End Cap
261	Hex Bolt M6 x 20		314	Retaining Ring 15
262	Nut M6		315	Phillips Head Screw M5 x 8
263	Position Block		316	Flat Washer M5
264	Cap Screw M4 x 25		317	Phillips Head Screw M5 x 6
265	Lock Nut M4		318	Flat Washer M5
266	Square Sliding Table		319	Bearing 6001-2RZ/Z1
267	Long Position Block		320	Cap Screw M6 x 12
268	Big Washer		321	Flat Washer M6
269	Pin		322	Bearing 6202-2RZ/Z1
270	Lock Plate		323	Hex Bolt M8 x 25
271	End Cap		324	Nut M8
272	Cap Screw M6 x 16		325	Hex Bolt M10 x 25
273	Scale		326	Flat Washer M10
274	Phillips Head Screw M5 x 6		327	Nut M16
275	Set Screw M6 x 10		328	Flat Washer M16
276	Insert Nut M6		329	Hex Bolt M8 x 65
277	Insert Nut M6		330	Nut M8
301	Support Pole		331	Big Washer M8
302	Extension Bracket		332	Nut M20
303	End Cap		333	Flat Washer M20
304	Threaded Plate		334	Phillips Head Screw M6 x 16
305	Wheel		335	Nut M6
306	Wheel Bush			
307	Felt 55 x 25			
308	Eccentric Shaft			

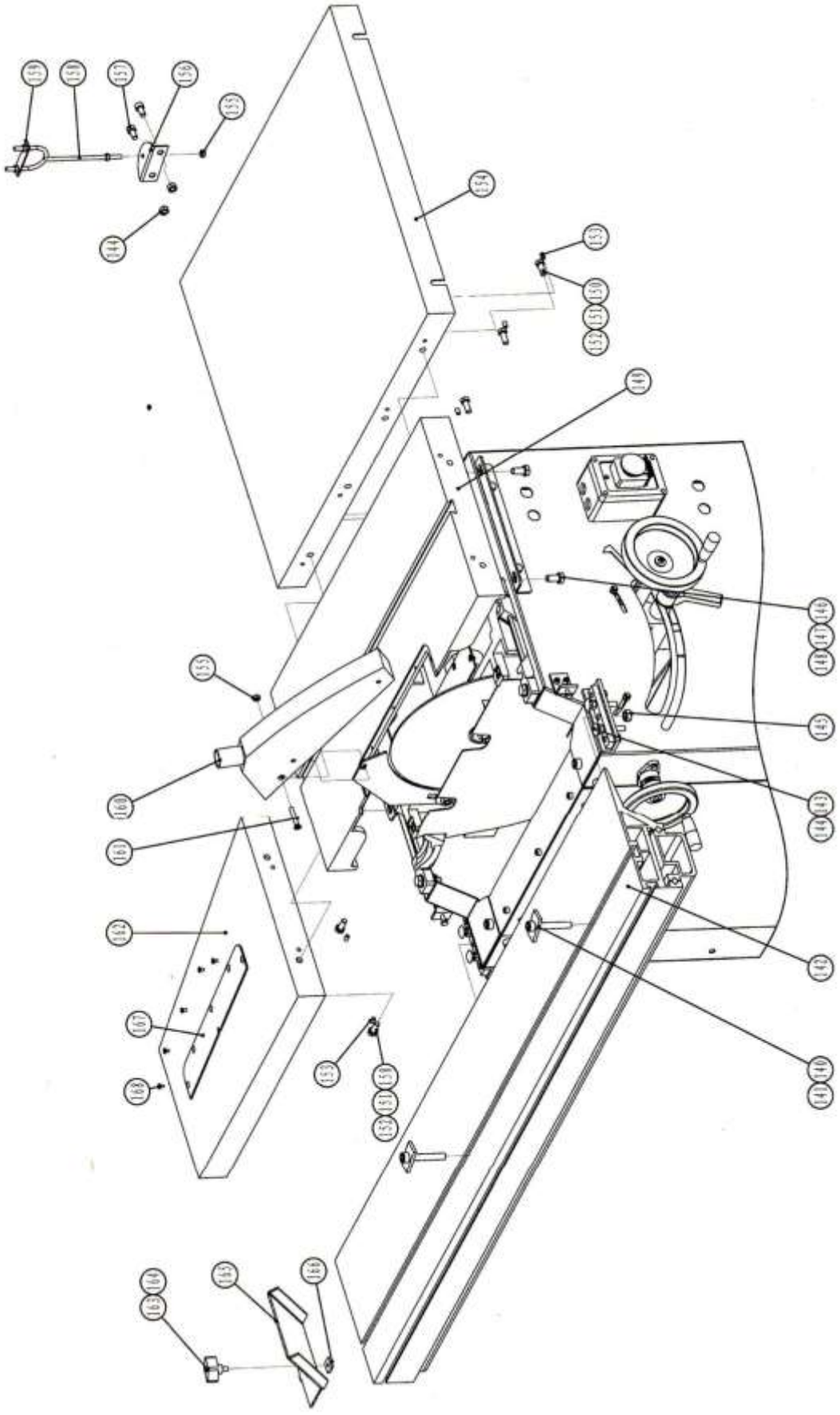
Charnwood W670 – Parts Drawing A



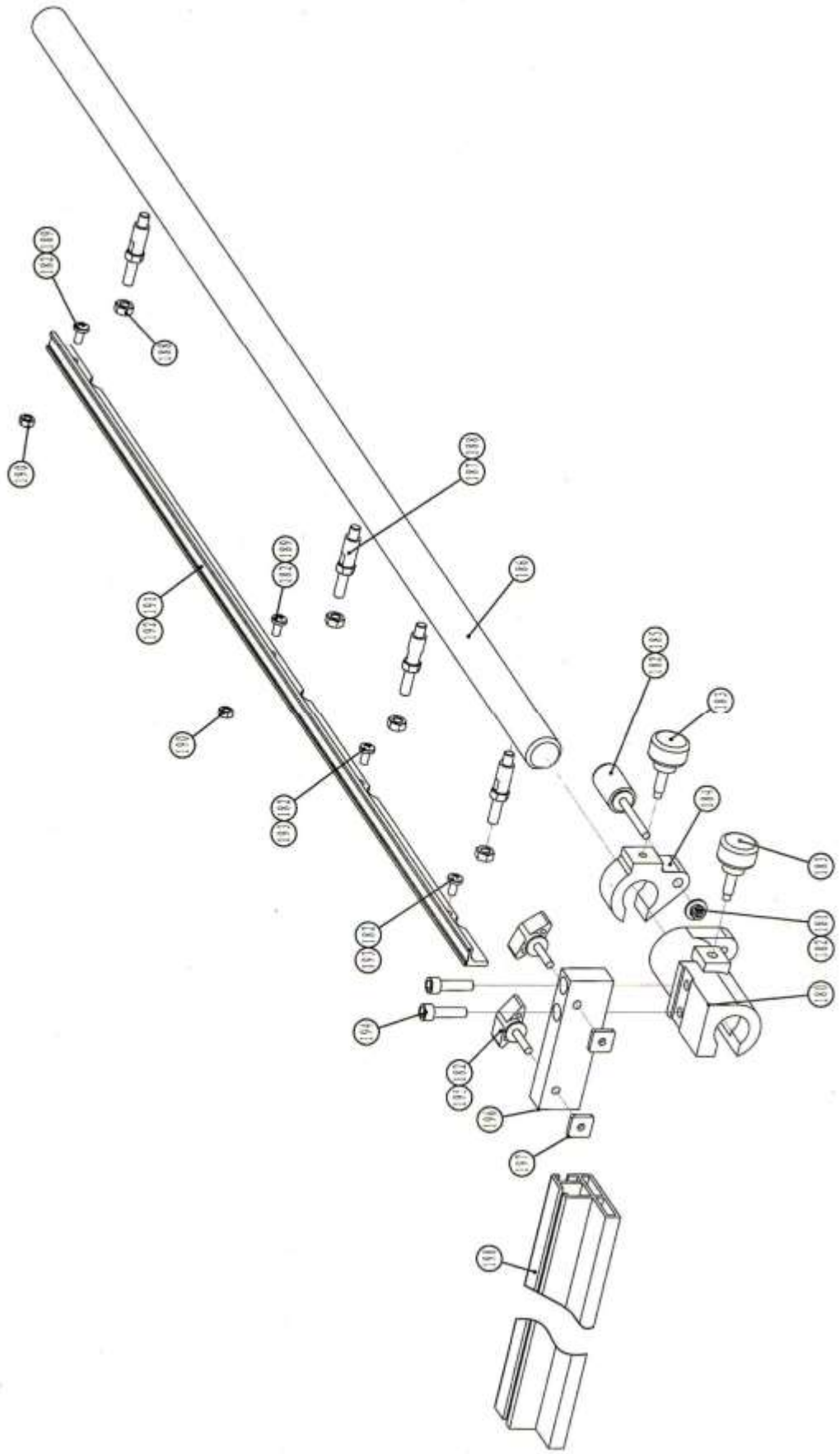
Charnwood W670 – Parts Drawing B



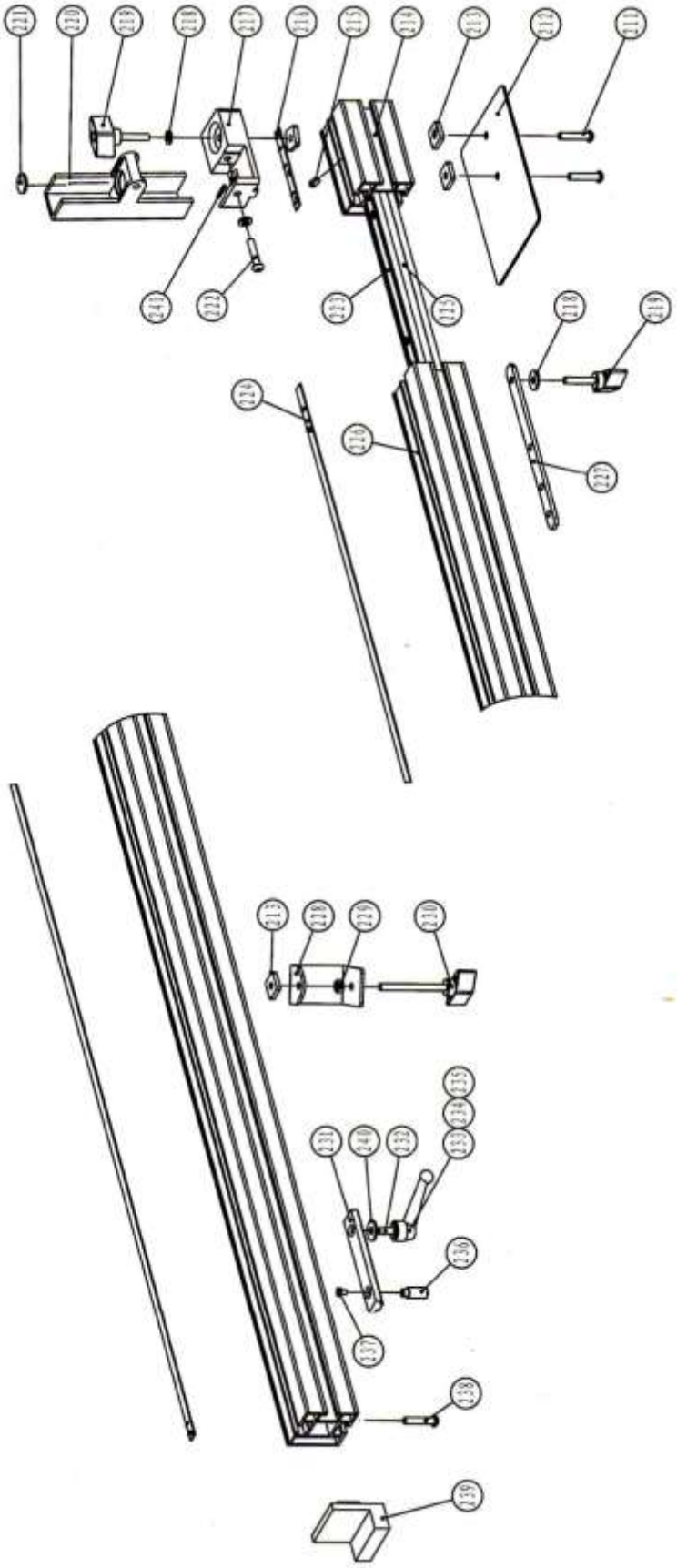
Charnwood W670 – Parts Drawing C



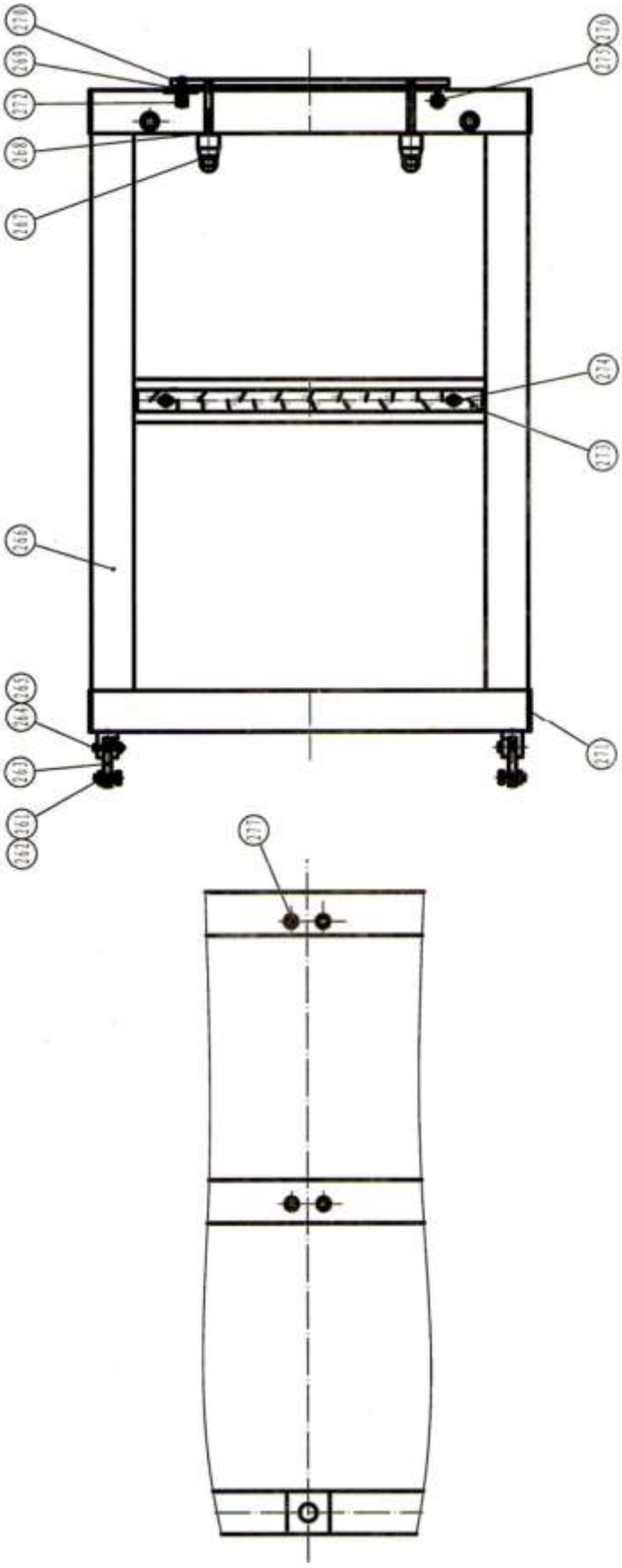
Charnwood W670 – Parts Drawing D



Charnwood W670 – Parts Drawing E



Charnwood W670 – Parts Drawing F



Charnwood W670 – Parts Drawing G