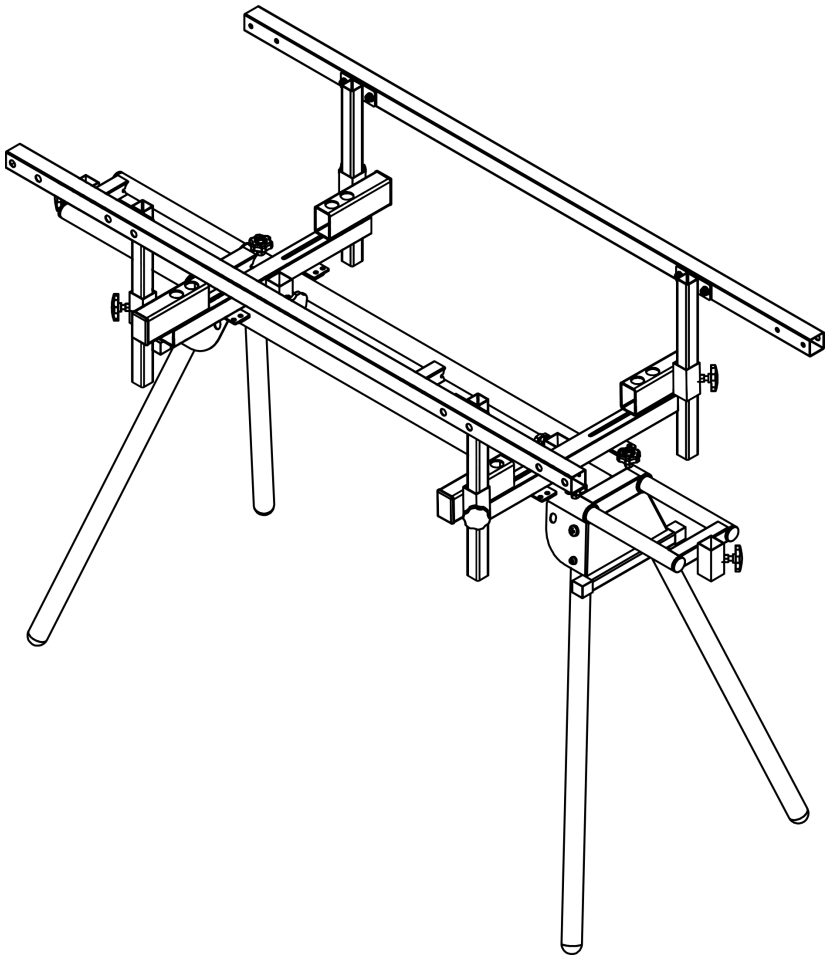
Forest Master Universal Woodworking Station

Model: UWWS



IMPORTANT: Read this manual fully before assembly and use and observe all safety rules and operating instructions

Thank you for purchasing the Forest Master Universal Woodworking Station. We hope you are 100% satisfied with your product but if you have any questions or queries, please don't hesitate to contact us:

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About Your Product

The Forest Master Universal Woodworking Station is used for milling logs into all kinds of lumber. A chainsaw is mounted to the chainsaw frame that comprises of two C-shaped runners and an adjustable support bar. The runners slot onto the two guide rails of the chainsaw mill, allowing the chainsaw to glide freely along the horizontal plane, with no movement in the vertical plane, to give the smoothest and most accurate cut possible. The chainsaw mill can be used in a variety of ways outlined below:

- Milling slabs of wood from a large log.
- Milling multiple boards by clamping a number of slabs together, turning them onto the side and milling off the bark on both sides.
- Creating fence posts in a quick and efficient way by drilling bolts into both ends of the log resting the bolts into the V shaped slots. This allows the log to be milled, unsecured, rotated 90° re secured and the milled again for all four sides.
- Clamping a log in the vertical position to mill log coins.
- Used as a sawhorse by placing a log into the four, toothed V shaped sections and cutting vertically with a chainsaw.
- Attaching the Forest Master Router Bed to the two guide bars to the surfaces and edges of the wood can be routed (requires extra parts you can purchase from Forest Master).
- It can also be used as a mitre saw stand by attaching the mounting clamps to the frame and bolting a mitre saw to the clamps with the M6 coach bolts and fastenings. Details of this can be found in the mitre saw stand manual.

No matter how you use your workbench, please read the safety instructions and guidelines before use.

Contents

Specifications

Maximum Guide Bar Width	680mm
Minimum Guide Bar Width	400mm
Maximum Log Length (Up to 12ft with extension sold separately)	1450mm
Minimum Log Length	200mm
Maximum Log Width	250mm - 520mm
Maximum Cutting Depth	400mm
Minimum Cutting Depth	15mm

Forest Master Recommendations for Chainsaw Milling
After thorough testing with this product, Forest Master can confidently give the following recommendations to achieve the best results when chainsaw milling.

- A ripping chain is required for the best finish due to the acute angle of the cutting blades.
- A low-profile bar can make the cutting process faster, but may have effects on the finish of the cut.. A low-profile bar has an approximate cut thickness of 6mm whereas a standard 3/8 or .404 bar has a cut thickness of 8mm.
- The slower the cut the better the finish - be patient when milling timber, it can be a slow process. Forcing the chainsaw can lead to a poor finish or bending within the bar which leads to the saw becoming stuck or being overworked.
- A chainsaw as little as 52cc can be used for milling but be aware, the more powerful the chainsaw, the quicker and easier the milling process.
- Ensure the chain blades are always sharp before cutting. They must be sharp in order to provide an efficient cut.
- The width of the guidebars and chainsaw clamps should be as small as possible and as close to the wood on each side to produce the best finish. By having a lot of free space between the wood and where the chainsaw is clamped, this gives the chainsaw bar space to flex, causing problems during the cut and adversely effecting the finish.

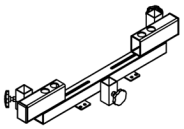
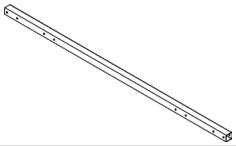
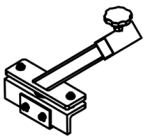
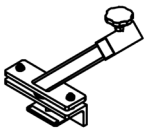
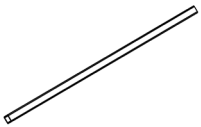
Safety Instructions
These instructions are intended for your safety. Please read them carefully before using the workbench and retain for future reference.

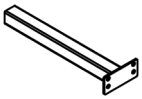
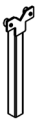
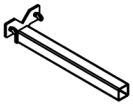
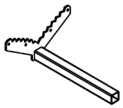
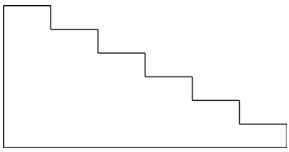
Before You Start
- Check the box and make sure all the listed parts are included. If not, contact the retailer for assistance.
- Remove all plastic bags and packaging and dispose of them safely.
- Retain the instruction manual for future reference.

Important Safety Information
- Always check the tightness of nuts and bolts prior to use.
- Make sure the chainsaw mill is positioned on a firm and stable surface before operating. It is best to position the frame so you are cutting downhill.
- Make sure all the adjustment thumbscrews are tight before cutting.
- Always wear appropriate safety gear; gauntlets, safety glasses, ear protection, chainsaw trousers, safety boots and a dust mask should always be worn when operating the chainsaw mill.
- Always start the chainsaw on the ground and then lift onto the guide bars with your hands away from the throttle trigger – use the support bar above the chainsaw to lift.
- Never assemble, dismantle or readjust any parts of the chainsaw mill while the chainsaw is still running.
- Be extremely careful of the chainsaw cutting chain while in use.
- Any bystanders or pets must be a distance of at least 10 metres from the chainsaw mill when in operation.
- Do not operate under the influence of drugs, alcohol, medication or if you feel tired or drowsy.
- Never operate the chainsaw mill in an enclosed area – fumes from the exhaust contain carbon monoxide which is a toxic, odourless and potentially fatal gas.
- Always turn the chainsaw off before dismounting from the guide bars.
- Always operate with one hand on the support bar and one hand on the chainsaw.
- Never leave the chainsaw running unattended.
- You must be over the age of 18 to operate the chainsaw mill.
- Don't overreach when milling – only operate the chainsaw from a comfortable position.
- Don't force the chainsaw through the cut – apply some force but ease the blade through the wood. Over forcing the blade can cause injury and damage the chainsaw.

The warnings, cautions and instructions referred to in this manual cannot cover all possible conditions and situations that may occur. It must be understood that common sense and caution must be applied by the operator when using the chainsaw mill.

Parts List

Part No.	Name	Picture	Qty.
1.	Base Frame		1
2.	Crossbeam		2
3.	Guide Bars (1490mm)		2
4.	Vertical Guide Bar Support		4
5.	Left Chainsaw Clamp		1
6.	Right Chainsaw Clamp		1
7.	Chainsaw Frame Handle		1

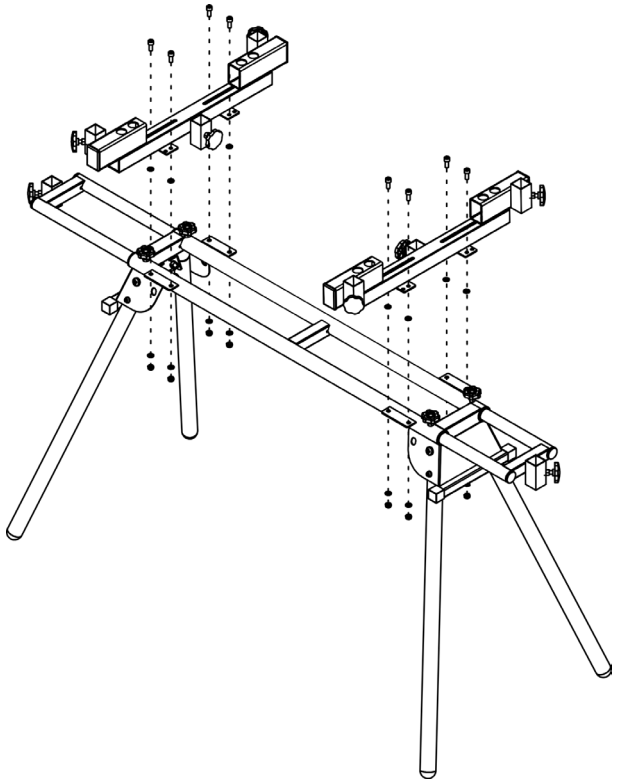
Part No.	Name	Picture	Qty.
8.	Gripping Plates		4
9.	Perpendicular Telescopic Slot (PTS)		2
10.	Vertical V-Slot		2
11.	Horizontal V Slot		2
12.	Vertical Sawhorse		2
13.	Horizontal Sawhorse		2
14.	Step Gauge		1

Part No.	Name	Qty.
15.	M8 Hex Bolt	8
16.	M8 Cap Head Bolt	8
17.	M8 Washer	24
18.	M8 Nyloc Nut	16
19.	M8 Thumbscrew	16
20.	Mounting Clamps (Use with Mitre Saw)	2
21.	M6 Coach Bolt (Use with Mitre Saw)	4
22.	M6 Washer (Use with Mitre Saw)	4
23.	M6 Spring Washer (Use with Mitre Saw)	4
24.	M6 Nut (Use with Mitre Saw)	4

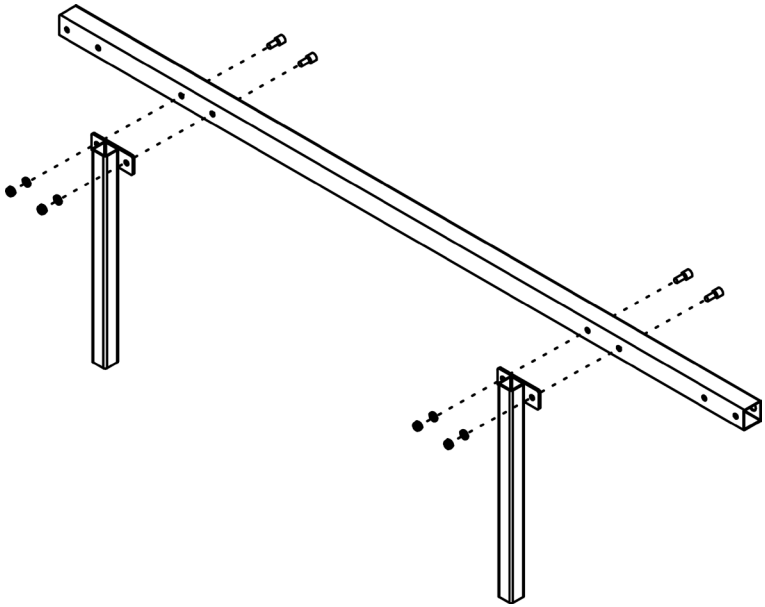
Assembly of the Frame

1. Open the legs of the frame (1) by pressing the pin on the side of the frame and folding out the legs until the locking pins click into place in the corresponding holes.

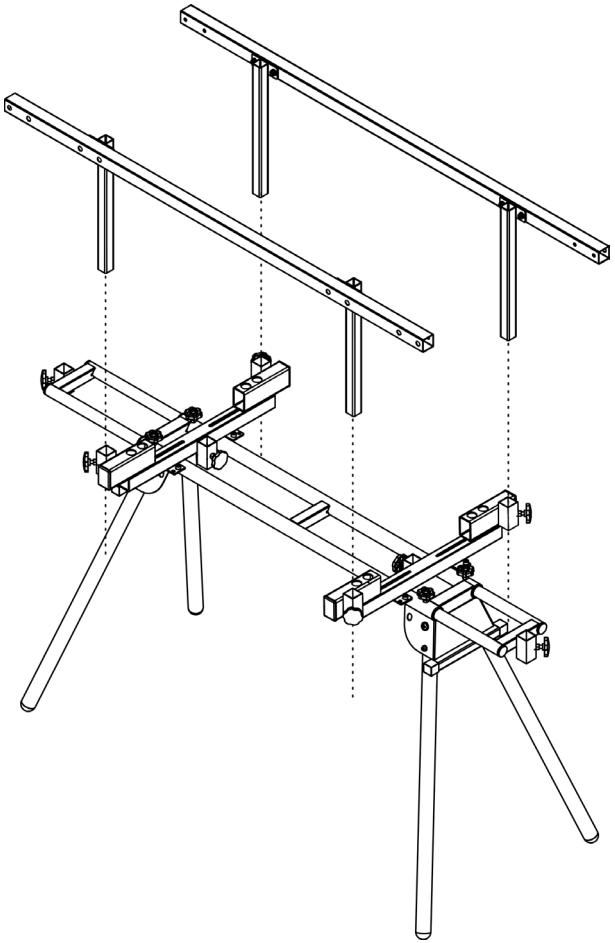
   NOTE: For the next two steps it is essential that the bolts are loosely fastened to allow for movement between the materials. This is so that the guide bars can be calibrated and then tightened later to allow for smooth telescopic adjustment in use.
2. Bolt the two crossbeams (2) to the base frame (1) with the middle telescopic slots inwards, using the M8 hex bolts (14), M8 washers (16) and M8 nyloc nuts (17). Two washers should be used for each bolt, one in between the crossbeam and the frame and one in between the frame and the nut.
   REMEMBER: bolts should be loosely fastened.



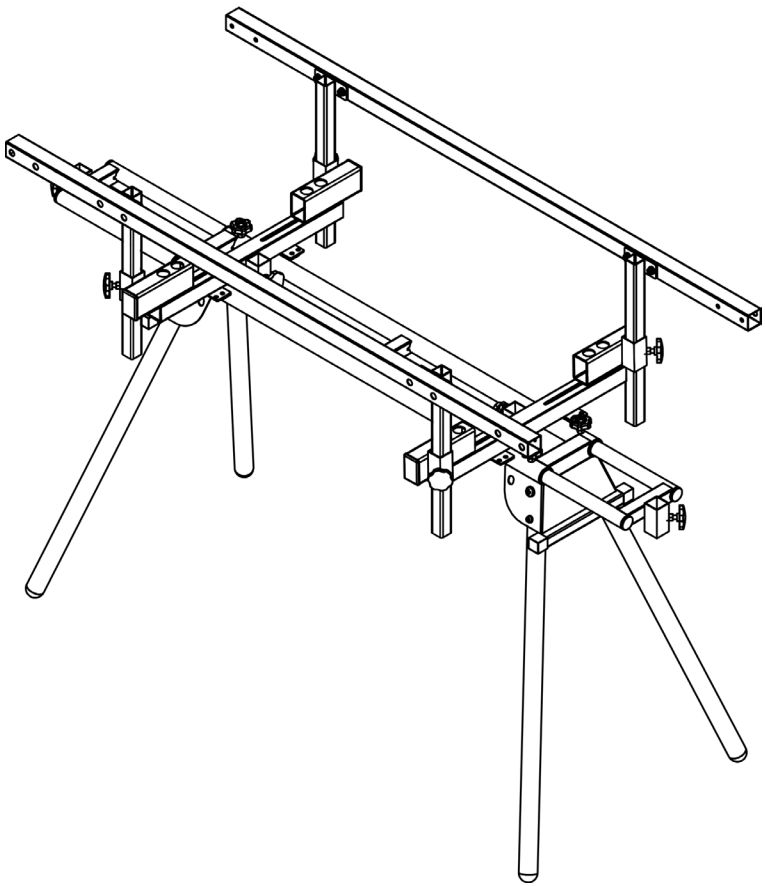
3. Bolt the vertical guide bar supports (4) to the guide bars (3) by threading the M8 cap head bolts (15) through the large holes of the guide bars to fasten into the small holes and the plate of the vertical guide bars. The M8 cap head bolts should situate inside the guide bars and be fastened on the outside with the M8 washers (16) and M8 nyloc nuts (17).
   REMEMBER: bolts should be loosely fastened.



4. Slide the assembled guide bars (3, 4) into the telescopic slots on the outside of both cross beams (2), making sure the large holes on the guide bars are facing outwards and the nuts are facing inwards. Drop both guide bars half way down, using the full height of the smaller side of the step gauge (19) (pg. 14) and tighten all four thumbscrews on the slots to lock in place.

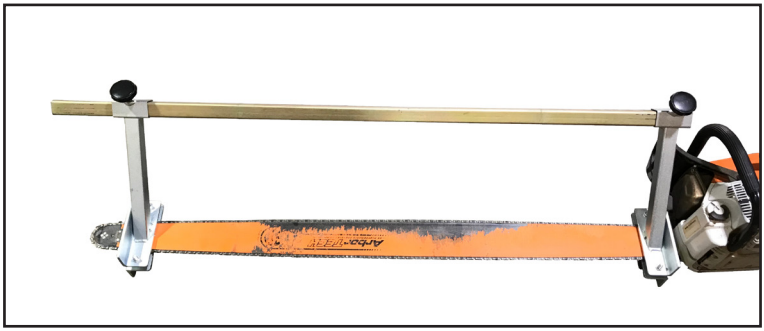


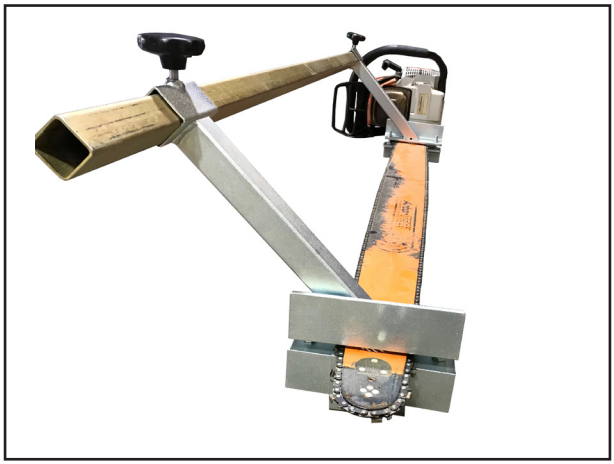
5. Make sure the guide bars are the exact same height from the cross beams at all four supports and then tighten all the loose bolts, starting with the crossbeams and then the vertical guide bar supports. This should calibrate the guide bars to allow for smooth vertical adjustment.
6. All the attachments are available to be mounted as desired in the telescopic slots found in the middle of the crossbeams and at the end of the dual rails (see adjustments and setup section).



Assembly of the Chainsaw Frame

1. Loosen the thumbscrews on both the left chainsaw clamp (5) and the right chainsaw clamp (6) and slide them onto the chainsaw frame handle (7) so that they are facing the same way.
2. Loosen the two M8 nuts on both chainsaw clamps so that you can slide your chainsaw bar in between the two serrated plates inside the clamps so that the chainsaw frame handle is situated behind the chainsaw. Make sure the serrated plates rest only on the bar of the chainsaw and not the chain nor the sprocket on the nose of the bar.
3. Slide the clamps along both the chainsaw frame handle and the chainsaw bar itself to the desired position and then tighten the thumbscrews and the M8 bolts on both clamps.
4. Check the chain can move freely through both clamps by manually turning the chain.



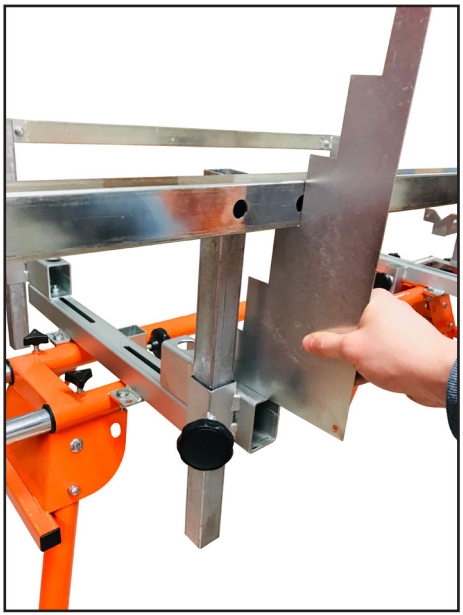


Setup and Adjustments

Setting the Height of the Guide Bars

For the height to be set correctly, the guide bars need to be of equal distance from the crossbeams at all four vertical guide bar supports. This can be done one guide bar at a time.

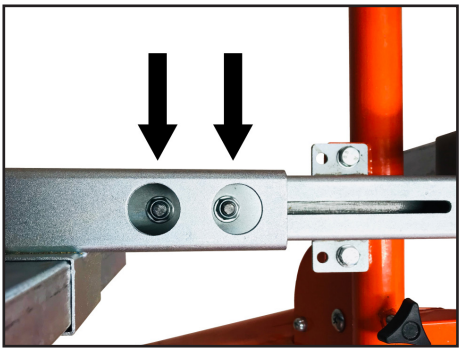
- To do this, loosen the thumbscrews on the crossbeams for the two vertical supports of the guide bar, so that it can move freely up and down the in slots.
- Place the step gauge in between the upper section of the crossbeam and the guide bar and make sure the flat edge of the step gauge is flush with the cross-beam.
- Drop the guide bar down onto the step gauge at the step that is the desired height and tighten the thumbscrew. Repeat for the other vertical support of the same guide bar. Then do the same process for the second guide bar and make sure the height is the same at all four vertical supports.
- You can make your own gauges for specific heights you may require by cutting blocks of wood down to size and using them in the same manner.
- The lowest the guide bars can be set is the smallest step on the gauge. If thin-ner cuts are required then move the gripping plates underneath the wood up to suit.



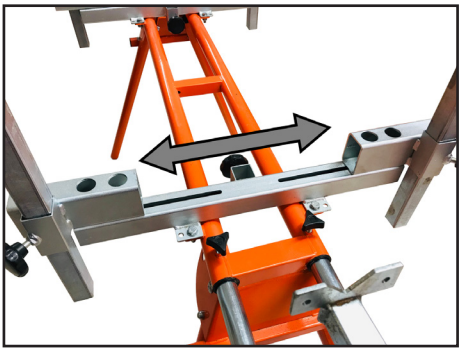
Width Adjustment

The width of the guide bars is adjustable by sliding the upper sections of the cross-beams inward and outward to the desired position. This requires a 13mm socket with a depth of at least 60mm.

- Loosen the two M8 nuts on the inside of each upper section by threading the socket through the holes. NOTE: they only need to be loosened by a couple of turns so that the section can move - do not fully take the nut off the bolt.



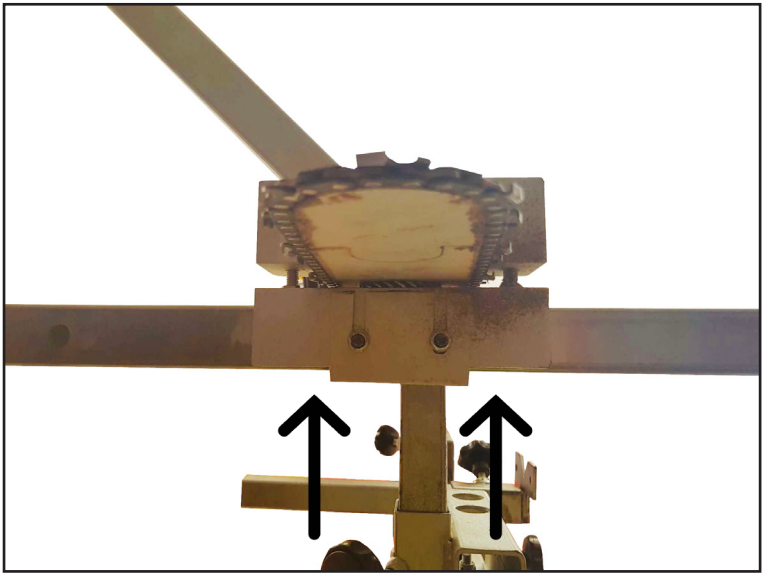
- Measure the width the guide bars need to be in order to fit your specific chain-saw bar. You must allow the space for both clamps and the nose sprocket to be on the outside of the guide bars. It is easier to measure of you have already assembled the chainsaw frame.
- Make sure the distance from the middle is the same for both upper sections and crossbeams and retighten the M8 nuts to secure in place.
- Small adjustments can be made on the chainsaw clamps themselves by read-justing the position on the chainsaw bar so that the C-Sections fit perfectly on the guide bars.



Clamp Setup

The height of the C-Section underneath the left and right chainsaw clamps needs to be set in accordance with the size of the guide bars.

- To do this, loosen the two M6 nuts found on the side of both chainsaw clamps, so that the lower plate can move up and down freely in the grooves.
- Slot the C-Sections onto the guide bars and position the chainsaw frame so that it is perpendicular to the guide bars.
- Move the lower plate of the C-Section up so that it lightly clamps the guide bar and then tighten the two M6 nuts on the side to secure. It needs to be tight enough to the guide bars so that it cannot tilt or jump, but not so tight that it is difficult to move the chainsaw along the guide bars. Move the chainsaw along the guide bars to test the ease of movement before performing any cuts.



Gripping Plates and Attachments

The gripping plates and attachments fit into the telescopic slots in the middle of the crossbeams and at the end of the dual rails. You can also add the perpendicular telescopic slot (PTS) so that the gripping plates and attachments can be used in a horizontal plane.

- The gripping plates have four holes for screws to pass through and grip into the log to secure it in place. They can be used to grip the underside of he log or used with the PTS to grip the ends of the wood. We recommend using M6 flanged head coach bolts to screw into the wood. This is because normal Phillips wood screws will be rounded after constant use. The screws also do not need to be particularly long, 50mm is enough as they are only there to hold the wood in place.
- The V-Slots and sawhorse attachments are used in the same manner and the specifics of which can be found in the operation section. The horizontal versions of the attachments are to be used with the PTS.

Operation

This section explains how to operate the chainsaw mill and the different processes which can be performed on the frame for all types of work.

Mounting the Log

There are a few techniques that can be used to mount the log to the frame depending on the size and weight of the log.

- For manageable logs and timber, they can be simply lifted and placed so that it rests on the two crossbeams. It is easier to have the guide bars as low as possible or removed, so you don't need to lift over them.
- For heavier logs, you can lift one end at a time and place each end on the crossbeam. You will need to remove the guide bars for this method. To help even further, you can position some trestles next to the frame to act as a step so that you only lift half the height at a time for each end of the log.
- For very large or heavy logs, fold the legs in, turn the frame upside down and place on top of the log. Then secure the frame to the log by screwing into it through the gripping plates. The log can now be rolled over by hand or with a log peavey so that the frame sits upright. It is usually best to perform the first few cuts on the floor to take some weight off the log before extending the frame.

Securing the Log

The log can be secured to the frame through the four gripping plates enabling the user to grip from underneath and the ends of the log by screwing wood bolts into it - We recommend using M6 flanged head coach bolts.

- When using the PTS, it is better to have the dual rails extended as little as possible for stronger securing.
- We suggest using two bolts for each gripping plated used. This is because the more secure the log, the less it can move during the cut and therefore the better the finish.
- The logs can also be secured through the two holes either side of the V on the V-Slot when cutting fence posts.

Performing Cuts with the Chainsaw

Before performing any cuts make sure all adjustable components of the chainsaw mill and frame are tight and secure and the guide bars are the same distance from the crossbeams at all four vertical supports.

- Cuts can be performed with the legs folded out and the stand at full height or the legs folded in and the stand at a lower height, resting on the bottom of the frame.
- It is best to perform cuts with the frame on a downhill angle so that gravity aids the force of the cut.
- Start your chainsaw on the floor first and then lift by the frame handle to slot the C-Sections into the two guide rails. DO NOT lift with a hand on the throttle, this could be very dangerous.
- Once the chainsaw is in position, you can start the cut. Run the chainsaw before contact with the wood and then gently push the chainsaw by the frame handle and the throttle handle through the wood.
- Push with enough force to ease through the cut but not so much that you overwork the chainsaw. Patience is required when milling as it can be a slow process. You cannot force the chainsaw too hard as it can jam in a downward motion and get stuck, ruining the finish of the cut.
- The C-Sections have two spacers inside them to allow the chainsaw to tilt in the horizontal plane. This allows the chainsaw to tilt in a 'see-saw' action as you work your way through the cut, which is especially useful when encountering knots.
- When you reach the end of the cut, turn off your chainsaw whilst the frame is still mounted to the guide bars and then dismount the chainsaw frame from the guides.
- Make sure all wood that has been cut is removed from the log before starting the next cut.

Milling Slabs

To cut your wood into slabs, it is important that the wood is always resting on the crossbeams and secured using all four gripping plates. We advise to use the two vertical gripping plates in the crossbeam slots and the PTS with the other two gripping plates to secure both ends from the dual rails.

- Set the guide bars to a height that can take the top of the bark off the full log, making sure that the width of the second slab (beneath the cut) is as desired.
- Perform the first cut following the cutting instructions.
- Once the cut has been completed, the guide bars need to be dropped to the next position. The distance the guide bars are moved down will equate to the thickness of the next slab. Therefore, you can do this with the step gauge or measure it yourself for your own desired thickness.
- Then perform the next cut to complete the slab. The last two steps can be repeated until the log has been completely cut down.

Remember: Slabbing takes a long time for each cut due to the volume of wood being cut. Therefore, you must be patient with the cutting process and ensure you do not force the chainsaw too hard into the wood. This can cause the bar to bow, get stuck in the wood and overwork the chainsaw.

Milling Planks

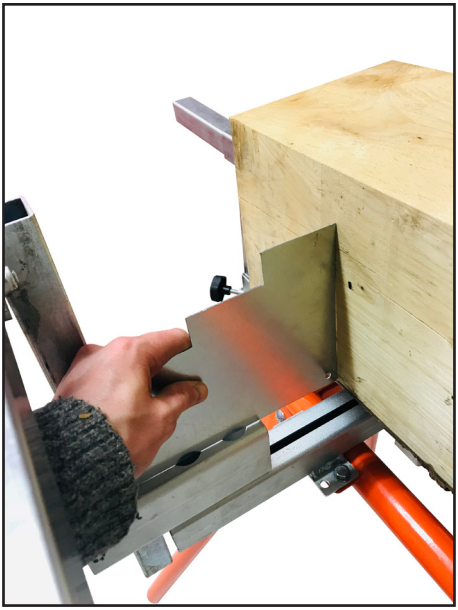
If you are cutting your wood into planks, they need to be cut into slabs of the desired thickness first. Cut as many slabs as needed before moving onto the length and width of the planks.

- Slot as many slabs as possible vertically in the gap between the upper sections of the crossbeams, with the slabs resting on the lower section. Make sure nothing is in between the slabs and clamp them all together using at least two G-Clamps.
- Make sure the slabs sit perpendicular with the upper section of the crossbeams by using the step gauge as a square between the wood and the crossbeams. Then secure them to the frame by screwing into the wood through the gripping plates, making sure they remain perpendicular.
- Set the guide bars to a height that ensures all the bark is taken off the top of the slabs with enough wood left to meet your desired plank width.
- Perform a cut following the cutting procedure to cut the top of the slabs.
- Unscrew the wood and rotate the full block of slabs 180° without unclamping the G-Clamps. Make sure the slabs are still perpendicular to the crossbeams and secure them again.
- To set a specific height of the guide bars (or width of the planks), measure from the bottom of the slabs and make a mark on both ends of the wood at the desired plank width. Position the guide bars so that the chainsaw can cut where the mark has been made. This needs to be done on both ends of the log, ensuring all four vertical supports are the same distance from the crossbeams.
- Perform the second cut, following the cutting instructions.
- Unscrew and unclamp the planks and cut down to the desired length using a mitre saw.

Milling Fence Posts

Logs can be rapidly cut into fence posts when using the V-Slot attachments which enables the log to be easily rotated between cuts.

- First you need to screw two large coach bolts into each end of the log, so they are positioned as close to the middle and as aligned with each other as possible. Leave a small amount of space between the head of the bolt and the log.
- Position the V-Slots at the same length as the log so that the bolts in the log can rest in the V-Slots and the log can rotate freely. Then screw some wood bolts into the log through the two holes on either side of the V.
- To prevent the log from moving during the cut, use the vertical gripping plates in the middle slots to push against the wood from underneath - these don't necessarily need to be screwed.
- Measure half your desired fence post width from the middle of the log bolt, vertically upwards and mark where the cut needs to be on both ends of the log.
- Position the guide bars at the correct height so that the chainsaw can cut where the mark has been made. This needs to be done at both ends of the log, making sure the vertical supports are all the same distance from the crossbeams.
- When the guide bars are set and fully locked, perform the first cut following the cutting instructions.
- After the cut, unscrew the wood and drop the two vertical gripping plates. Rotate the log 90° (use the step gauge as a square against the crossbeam and the freshly cut face) and then secure the wood again with the bolts and clamp with the vertical gripping plates.
- Perform another cut following the cutting instructions.
- Repeat the last two steps for the remaining two sides.



Milling Log Coins

Logs can also be placed vertically on the frame to cut log coins. In this case the log can rest on the frame itself and the PTS and gripping plate can be placed in the middle two slots so that the plates can be screwed horizontally into the bark. The logs can also be gripped through the four holes in the sawhorse attachments by placing them vertically in the slots and screwing into the wood from underneath (this also allows you to mount two logs at once and cut two log coins per cut).

- Set the guide bars to the desired height and perform the first cut following the cutting instructions.
- Drop the guide bars down by the desired thickness of the log coins and perform the next cut.
- Continue this for as many coins as desired.

Sawhorse

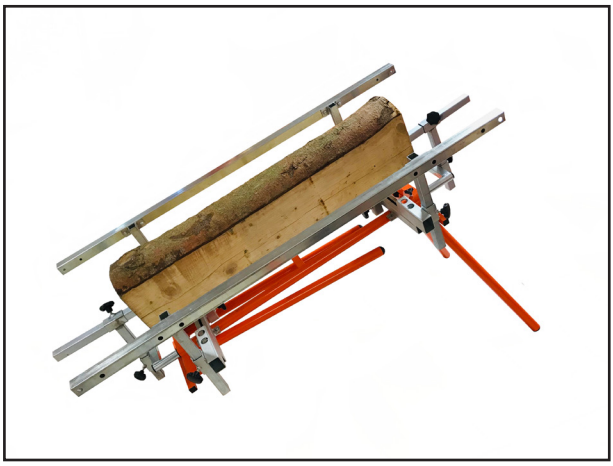
The frame can be turned into a sawhorse by using the sawhorse attachments in the telescopic slots. You can use as many as four sawhorse grips to rest a wide range of lengths of wood on the sawhorse.

- The guide bars must be removed from their slots so that they cannot be in the way.
- Place the sawhorse attachments in the telescopic slots; the horizontal sawhorse attachments need to be used in conjunction with the two PTS's.
- Make sure the attachments and log sit high above the frame to reduce the risk of hitting the frame with the chainsaw.

Milling with a Sloped Frame

To make milling easier in all the applications, you can make the frame slope downwards by folding in two legs on one side of the frame so that end is resting on the square bottom of the frame. This then uses gravity as an aid during cuts so that the user does not have to force the chainsaw through the cut.

- A lot of care needs to be taken when the chainsaw reaches the end of the cut so that it does not fall off the end of the guide bars. A precautionary measure can be taken by attaching two G-Clamps to the end of the guide bars so that they cannot be hit by the chainsaw but will stop the clamps from moving any further.



Mitre Saw Stand

The frame itself can be used as a mitre saw stand with roller supports to move the material along the saw bed easily. It is best to remove the guide bars and cross-beams to use in this manner. The full instructions of this can be found in the base frame manual.

Warranty

This product carries a limited parts warranty for 1 year from the date of purchase. Please keep your proof of purchase as this will be required for any claim.

Should this product become defective, contact the store where it was purchased and either replacement parts will be issued, it will be repaired or it will be replaced free of charge.

IMPORTANT: NO RESPONSIBILITY IS ACCEPTED FOR INCORRECT USE OF THIS PRODUCT. MODIFICATION OF THIS PRODUCT (UNLESS SAID MODIFICATION HAS BEEN AUTHORISED BY FOREST MASTER) WILL VOID THE WARRANTY.

This Warranty Does Not Cover:

1. Any part that has become inoperative due to misuse, abuse, neglect, accident, improper maintenance, or alteration
2. The unit, if it has not been operated and/or maintained in accordance with the owner's manual
3. Normal wear
4. Routine maintenance items such as lubricants, blade sharpening
5. Normal deterioration of the exterior finish due to use or exposure

Shipping Charges:

Shipping charges for the delivery or collection of the unit, parts of the unit or attachments to the unit are the responsibility of the purchaser. The purchaser must pay transportation charges for any part submitted for replacement under this warranty unless such return is requested by Forest Master.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

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