

Cutting planks

Martin Beat gives a step-by-step guide to chainsaw milling, where the saw is used in a frame to cut planks

1 The ladder that I use in the milling process is 11ft long, which means I can plank a log that is just over 10ft long. Ideally the ends of the log will be cut square to each other. Use a spade to peel away any bark containing dirt, stones or metal. Roll the log onto bearers if possible to give yourself more working room. Orientate the log, visualising that the planks will be cut horizontally 'through and through'. I align any curves in the log horizontally, because any vertical curvature will decrease the number of potential planks.



2 The chain at the top of the photo is a ripping chain with a 10-degree cutting angle on the teeth. This cuts more efficiently when ripping wood with the grain compared with the cross cut chain at the bottom of the photo, which has a 30-degree cutting angle on the tooth. Keep the chain sharp to give a smoother cut.



3 Clamp the mill to the chainsaw bar using a ratchet for the 13mm nuts. This style of mill is called an Alaskan Mill. This model is manufactured by Granberg, and comes in a variety of sizes depending on how big your chainsaw bar is. In this case I am using a 36inch bar. By the time the mill is clamped to both ends of the bar my actual cutting width is down to 28 inches.



4 This is one of the handmade wooden end-supports. You will need to make two of these from offcuts of timber screwed together.

5 Measure and align the top edge of the horizontal section of the end-support with the mid point of the log.

6 Ensure that the top edge of the vertical section of the end-support is level, and then screw the end-supports to both ends of the log.

7 Place the ladder on top of the end-supports. Pre-drill clearance holes in the rungs of the ladder. Screw

two small squares of plywood onto the rungs of the ladder using these holes, so that the plywood squares are above the end-supports.

8 Put two 80mm screws through the plywood square and into the end-support at the downhill end of the log, where the milling cut will finish.

9 Measure the distance down from the top edge of the ladder rails to where you want to cut into the log. Measure all along taking into account the low and high points of the log's surface. The mill has two sets of bolts which allow the guide rails to

be clamped a given number of inches above the chainsaw bar. Clamp the guide rails of the mill at the measurement you have taken.

10 Put on your chainsaw trousers, safety glasses and chainsaw helmet with ear defenders. Kneepads are a good idea too. Start the chainsaw, with the chain-break on, at the uphill end of the log. Lift the chainsaw and mill and slide the bar of the saw in between the end-support and the ladder, so that it sits between the end-support and the log. Rest the bars of the mill on top of the ladder, and then screw the second plywood square to the end-support

Feature Chainsaw milling



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as before, so that the ladder is now fixed solidly at both ends.

11 Use one hand to hold the handle of the mill and the other to hold the handle of the chainsaw. To enable the chain of the chainsaw to cut into the log at full revs, push slowly with your hands so that the mill slides along the ladder. Watch that the bars of the mill run parallel with full contact along both the rails of the ladder, which means that the chainsaw will be cutting exactly parallel with the ladder.

12 When the first cut is finished take the slab wood off the log, then carefully unscrew the plywood squares from the end-supports, slide the ladder away, rest the chainsaw and mill on the cut face of the log, then unscrew the end-supports from the ends of the log.

13 Set the guide rails of the mill at the measurement you wish to cut the planks at. In my case the mill is set at one and a quarter inches, which means that the bar of the saw is clamped at that distance

under the guide rails of the mill.

14 Now that the log has a flat cut on it we can use this surface to run the guide bars of the mill along to make other parallel cuts.

15 Hammer a wedge progressively into the saw cut to keep the saw chain from binding.

16 Keep cutting the planks one by one from the log, adjusting the settings



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Vertical chainsaw milling

19 The 'Mini Mill', also manufactured by Granberg, is clamped onto the bar of a chainsaw and makes vertical cuts. It is run along a metal guide rail (included with the attachment), which is screwed onto a straight piece of timber. This timber is in turn screwed onto a flat surface of a log, already cut by the Alaskan mill. The combination of the Alaskan and the Mini Mill attachments enable me to produce square-edge planks, to cut a square post from a log, and to make sectional timber for building.



on the mill if you wish to make thicker or thinner planks.

17 In order to air-dry the planks correctly choose an open spot with good airflow but out of direct sunlight and protected from driving rain. Lay the first plank that you cut upside down on a series of bearers. The bearers should be at least 4 x 4 inch timbers and longer than the width of the widest plank. Space these bearers every few feet and put one under each end of the plank. The angle of this first

plank dictates the angle of the roof sheet, so ensure that there is a slight fall in level along the length of the plank and that it is supported along its length by all of the bearers.

18 Stack the other planks upside down on top of the first plank in the order in which they were cut. Separate each plank with 'stickers', which are thin sections of wood roughly half an inch thick and as long as the planks are wide. The stickers must all be in vertical alignment above the bearers, so that as many stickers as there are bearers separate each plank from all the others. Put a final layer of bearers onto the top plank, then a sheet of tin, then some heavy objects. The aim is to exert maximum force through the stickers to the bearers underneath the stack to prevent movement of the planks as they dry. Seal the end grain of each plank with a layer of PVA glue to help prevent the ends of the planks from cracking. The Planks will air dry to 20 per cent moisture content at the approximate rate of one year per inch of timber thickness - so a year and a quarter for these one and a quarter inch planks.

See Martin Beat's website:
www.devonwoodworks.com