

Benchcrafted Planing Stop

Installation Instructions

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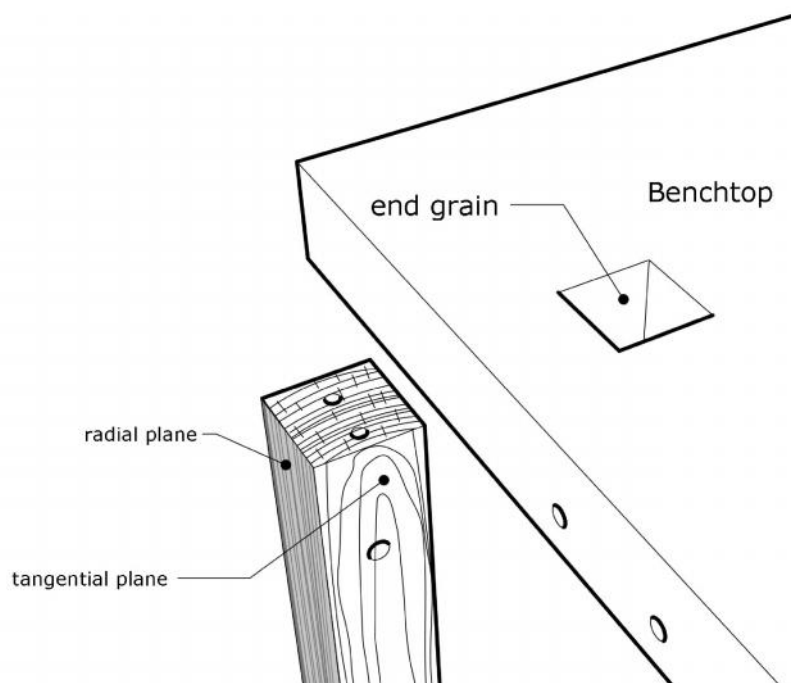
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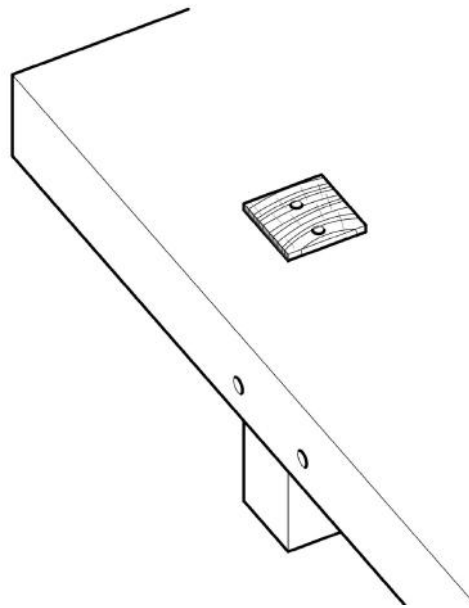
Package Contents:

- (1) Planing stop
- (1) Barrel nut
- (2) Cap screws

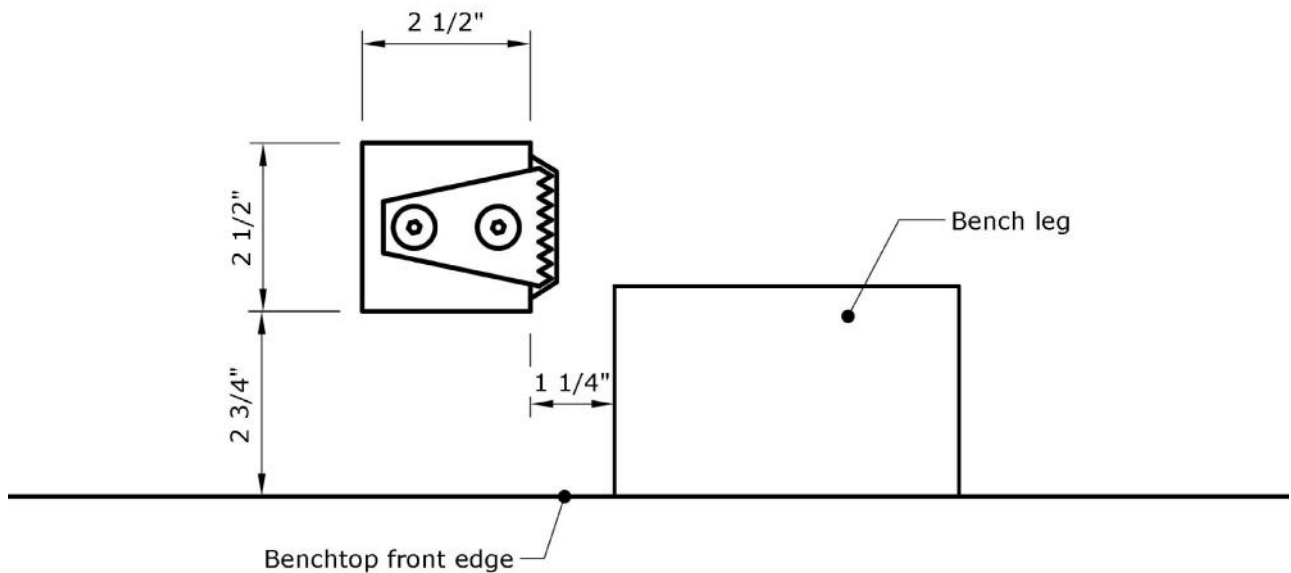
The Benchcrafted Planing Stop installs into any benchtop. Before the installation acquire a billet of wood that will finish out at 2-1/2" x 2-1/2" x 10" for the stock. You can make the stock slightly smaller than this, but not less than 2-1/8" square. The length can also be longer or shorter than 10". You'll adjust the height of the stop with mallet taps, so don't make it too long, or you'll have to bend over a lot to raise the stop. Similarly, don't make it too short or you'll only be able to raise it a small amount before running out of stock to tap against. Take your bench thickness into consideration when planning your installation.

The stock should have two opposing faces with quartersawn grain. You'll orienting the stock so the tangential surfaces face the end grain of your benchtop. The tangential faces in wood move less than the radial faces, so orienting the grain this way will minimize variations in the fit of your stock in the benchtop. Use the same species of wood as your benchtop, unless your benchtop is softwood. Use hardwood in this case.

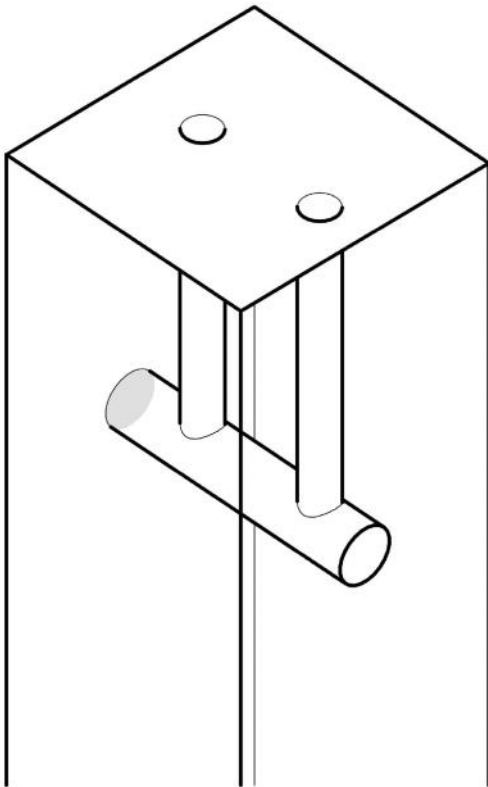




Prepare your stock accurately, making sure all four edges are square and flat. Layout the mortise in the top so its slightly smaller than the stock. You'll plane the stock later for a sweet fit. Here's the ideal place to locate your mortise.



To chop the walls, first scribe and chisel a "V" at the extents of the mortise to help prevent any tearout. Then drill four large holes clear through the bench, staying away from the mortise walls. We like to use the Wood Owl bits for this. Next, use a jigsaw with a long blade to nibble away the waste right to the layout lines. Finally, chisel out the walls of wood. Sneak up to the scribe line in several passes, then when about 1/32" of waste remains, place your chisel right in the scribe line and chop as perfectly vertically as you can muster. Go slow, and check your progress frequently with a square. You want your mortise as dead square and straight as possible so the planing stop's stock has equal friction through its range of adjustment.



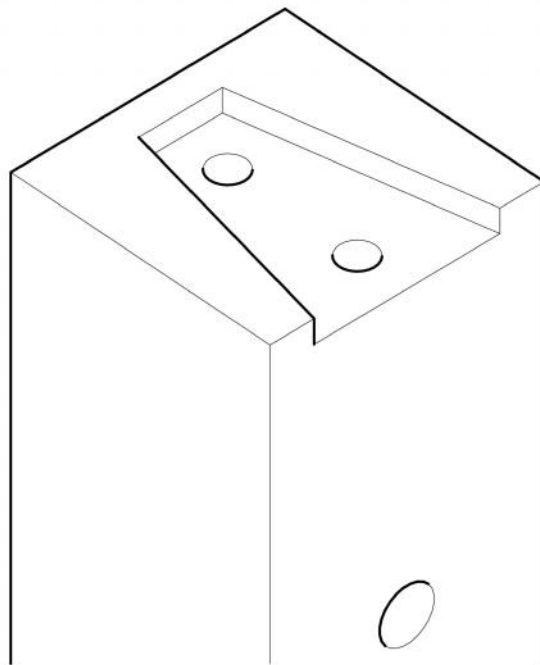
Using the template at the end of these instructions, layout the three holes to be drilled into the stock. If you have a drill press, this is easy work. If not, then we'll assume you have good skills with a hand drill or brace and bit. These holes need to be accurately placed and perpendicular to the outside surfaces and each other.

First, drill the 1/2" hole through the front of the stock. This hole goes entirely through the stock. Next, drill the two 5/16" holes through the end of the stock. Double check your measurements by placing the planing stop on the end of the stock and see if your marks line up with the holes in the stop. Drill until you feel the bit encounter the 1/2" hole beneath, then drill a little past this. Once the holes are drilled, chuck the 5/16" bit into a hand drill and "ream" the hole by gently twisting and rocking the bit while moving it in and out of the hole. This reaming will help the cap screw find the threaded holes in the barrel nut.

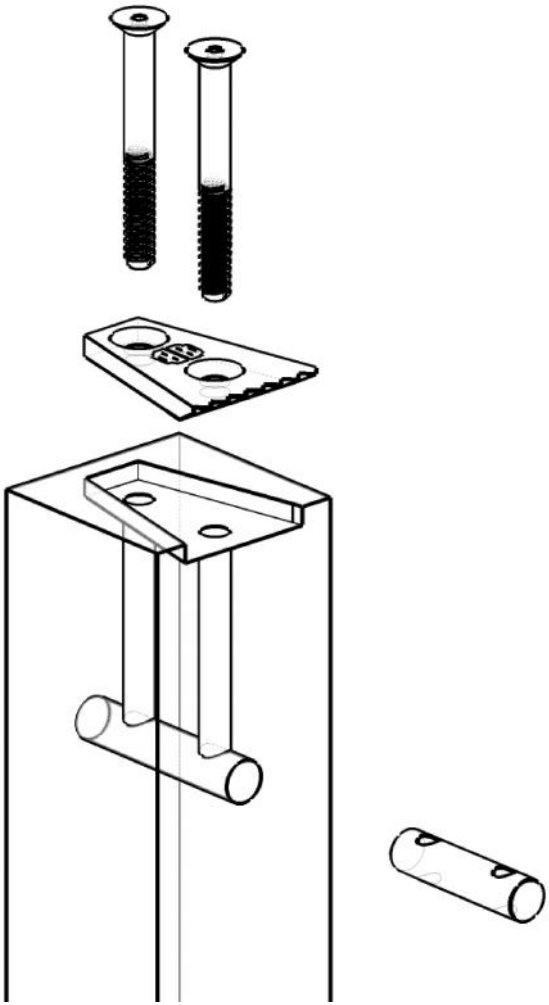
Its time to fit the stock in your benchtop. Plane the stock so it taps into the mortise with a medium amount of effort. You don't want to have to wail on it to get it to move, but you also don't want it moving during use. You'll have to use your own judgment here. You can always tweak it later if its too tight. Or add some wood if you've take too much off. Heavily chamfer the bottom edge of the stock so it doesn't chip out when you make adjustments with your mallet. We also like to round it slightly so the mallet whacks the center of the stock when tapping it up. You'll also want to chamfer the openings of the mortise a little to prevent chipping. Ease the top edge of the stock for the same reason. Even though you'll be tapping the toothed stop to adjust, you may whack the stock's corner from time to time.

Now try assembling the the stop to the stock. Pass the screws through the stop then into the stock and get them started in the barrel nut by hand, they should thread in easily. If they are tight, try reaming one of the holes a bit more. You can also enlarge the 1/2" hole to 9/16" to help things line up. The beauty of this system is that none of these holes need to be dead perfect. Now cinch down the screws and the stop will be rock solid in the stock. When your stock shrinks during dry times, the stop may loosen a little. Just torque the screws again and you'll be good to go.

If it pleases you, you can mortise the stop into the stock for added rigidity, and a lower profile look. You can mortise it into the stock by as much as 3/16". With the stop installed, simply scribe around it with a knife, then rout or chisel out the waste. This is one reason why you drilled your 5/16" a little deeper than necessary.



The last step is to mortise a small recess into your benchtop in front of the mortise. This will allow you to set the stop so the teeth are below the surface of the bench and out of the way when not using the stop. Simply trace a line around the teeth and chisel out the waste.



The planing stop is made of mild steel. As such, it will rust like any other raw steel component on your bench. You can wipe it down with camellia or jojoba oil if you like, or even apply a film finish like Tru-Oil, although the latter will quickly become worn off the top of the stop from frequent whacking. To spruce up the finish on the stop, use maroon scotch brite or 000 steel wool.

The stop's sharp teeth are milled into the steel and deburred here at the factory. After frequent use, or perhaps an accidental contact with something else made of metal, the teeth may need to be refreshed for maximum grip. The gullets are milled at 90 degrees, so any square edge file will work to re-point the teeth. Remove the stop from the stock, place it in a vise, teeth up, and file the gullets straight across, exactly the same way as you'd sharpen a rip saw. You'll notice some different levels of finish on the planing stop. Some surfaces may show a brighter or more refined finish. This is normal. We didn't go overboard on the cosmetic perfection on this one, rather keeping some of the hand worked surfaces intact to keep the price reasonable and the look honest. The top most visible surface is tumbled in our ceramic media for a satin look.

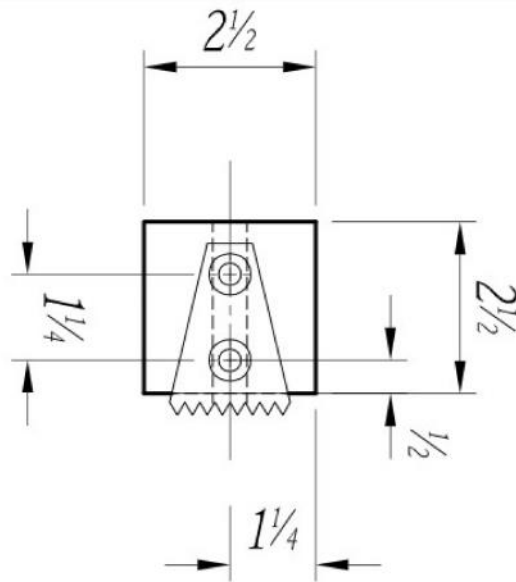
To use the planing stop, tap the stock from below until the teeth are slightly above the benchtop. Keep the teeth as low as possible on your workpiece, depending on thickness. You can use the stop for work as thin as 1/4", with care. Simply push the end of your board into the stop's teeth with a firm motion and it will stay put. You may want to give the opposite end a tap with your mallet for extra grip. This works well for planing directly along the length of the board's face. To plane across the board (traversing) or at slight angles you'll need a doe's foot and holdfast to resist the rotational forces this creates. A doe's foot is nothing more than a 1/4" thick piece of wood with a 90 degree notch cut in one end. The notched end is placed at the opposite corner of the board, and held flat to the bench with a holdfast. The doe's foot traps the board between itself and the planing stop.



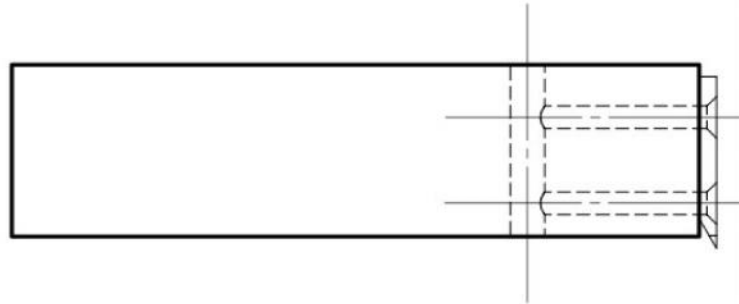
Doe's foot in use with holdfast

We hope you enjoy using your planing stop. If you have any questions about installation or use, drop us an email: info@benchcrafted.com

Top View



Front View



Side View

