

# Attaching Anchor to Cumaru and Other Hardwood Posts

## Steps of Attaching Anchor to Cumaru and Ipe Posts

Attaching anchor to cumaru and exotic hardwood posts like Ipe is identical in principle to softwood but requires one additional step.

Warning: Working with cumaru, ipe or any hardwood can be **dangerous**. Do not try this **if you are not skilled** with woodworking tools.

However the anchor to post connection with exotic hardwoods is the strongest you can get using the Titan Post Anchor.

### Step 1

Cut the post to length as you normally would. But since Ipe and Cumaru are so hard you absolutely should be using a good Miter saw with a high quality carbide bit designed for cross cutting.

Make sure there are now knots near the end of the post. Fortunately with these woods you very rarely see any knots as the grain is so tight and dense.

### Step 2

Mark the center of the post as normal. Use a sharp soft lead pencil and draw diagonals from corner to corner. Use a straight edge.

If the radius of the corner is significant, which it usually isn't with these woods, mark the middle of the corner with the pencil and use that as your reference point for the straight edge.

### Step 3

Use a sharp drill bit that is slightly smaller than the drill bit in your hole saw. Go slow and make sure you stay as close to perfectly perpendicular (90 degrees) as possible.

This drill has a water level with a bubble built into the handle to make it easy. Drill down at the center point about 2" deep.

## Step 4



Take a sharp hole saw because Ipe and Cumaru can make your blades dull pretty quickly. Or spend the bucks on a carbide hole saw if you need to do a lot of posts or you foresee another future use for the hole saw.

Keep the blade as close to perfectly perpendicular as possible and drill straight down using the pilot hole as a guide. You know you are perfectly straight if all sides of the hole saw start cutting the wood at the same time. This indicates you are perpendicular, not off line.

## Step 5



Use a 1.25" Forstner bit. This bits are designed to cut flat bottom circular holes. This is the most difficult and dangerous aspect of the process because Ipe and Cumaru are so hard.

Secure the post somehow or even better use a drill press. If you work with hand tools as I do here, be very careful about kick back. To prevent kick back, ensure the drill is always straight up and down, not tilted on an angle and do not push down too hard or too fast. Let the tool do the work.

Otherwise the edge of the bit will catch and can throw the post out of your grip. There is no easy way to drill into extreme hard woods like this. You have to be careful and preferably should be a good carpenter. Its totally different than working with the usual soft woods.

Drill down about 1.25" from the surface of the bottom of the post. You are clearing out some of the wood so that you can do one more pass with the hole saw - but starting deeper.


Of course if 3" hole saws exisited you wouldn't have to bother with this - but they don't or at least they are very tough to find.

## Step 6



Now use the hole saw and drill down as far as you can go. Think of it this way. The Forstner bit has now cleared out wood down to the 1.25" depth and the hole saw is 1 7/8" long so now you can cut down to over 3" deep.


## Step 7



Place the tube into the hole. Line it up square and push it down until it hits the end of the guide hole cut. Tap it into the wood. Check again to see it's lined up. Now using a 3 lbs mallet start driving it in using controlled easy swings and always striking the rim edge of the tube. Drive it all the way down until it's flush.


Since the tube is 3.5" long you will only have about 1/4" or 1/2" at most of uncut Ipe to hammer the tube into. That is still a lot of hammering given how hard this wood is. If one side is slightly high because your hole wasn't perfectly straight, tap that side. But don't worry too much because the lag bolts get a lot of grip in hardwood and can pull that down flush.

## Step 8



You must drill pilot holes for the lags. Use a bit that is just small enough so only the threads of the lag bolt cut into fresh wood. Go down the same length of the lag bolt.


## Step 9



Here's the strenuous part. Ratchet the bolts down with the washers. A drill gun probably won't have the torque strength to do this. Ipe and Cumaru are really tough.

Good work. You're done attaching the anchor to cumaru. A bit harder than cedar but worth it.

## One Tough Sturdy Connection



You will be rewarded with a very sturdy connection and your posts will now last literally a life time, staying high and dry from surface moisture.

Also, the strength of the connection is stronger than with softwood given the density of Specific Gravity of Ipe and Cumaru which is around .90. Cedar is somewhere around .40. So the breaking point is much higher with these species.

**But it looks super!** Clean and beautiful to look at. But functionally a high performer as well. Ipe and Cumaru are great woods for outdoor railings but require more care and skill to work with. Overall a great solution and a great marriage!