e·GUIDE

INSIDER GUIDE TO THE TITAN WOOD POST ANCHOR™

Written by Richard Bergman

TITAN BUILDING PRODUCTS THE ART OF BUILDING®

Hey, it's ***Rich Bergman*** here. Are you thinking of building a deck or any project that needs wood posts secured to almost any kind of surface?

I'd love to share my very best tips that I use on the job site when I am building with the Titan Wood Post Anchor™.

This little post anchor has proved to be a real workhorse for home owners and builders across North America. Here is everything you will need to know to decide if it's the right solution for your next building project.

TITAN BUILDING PRODUCTS® THE ART OF BUILDING

What is the Titan Wood Post Anchor?

1

Drill.

2

Drive.

3

Fasten.

It's a low profile, lightweight and affordable surface mounted post anchor that creates a clean look. It's a true workhorse

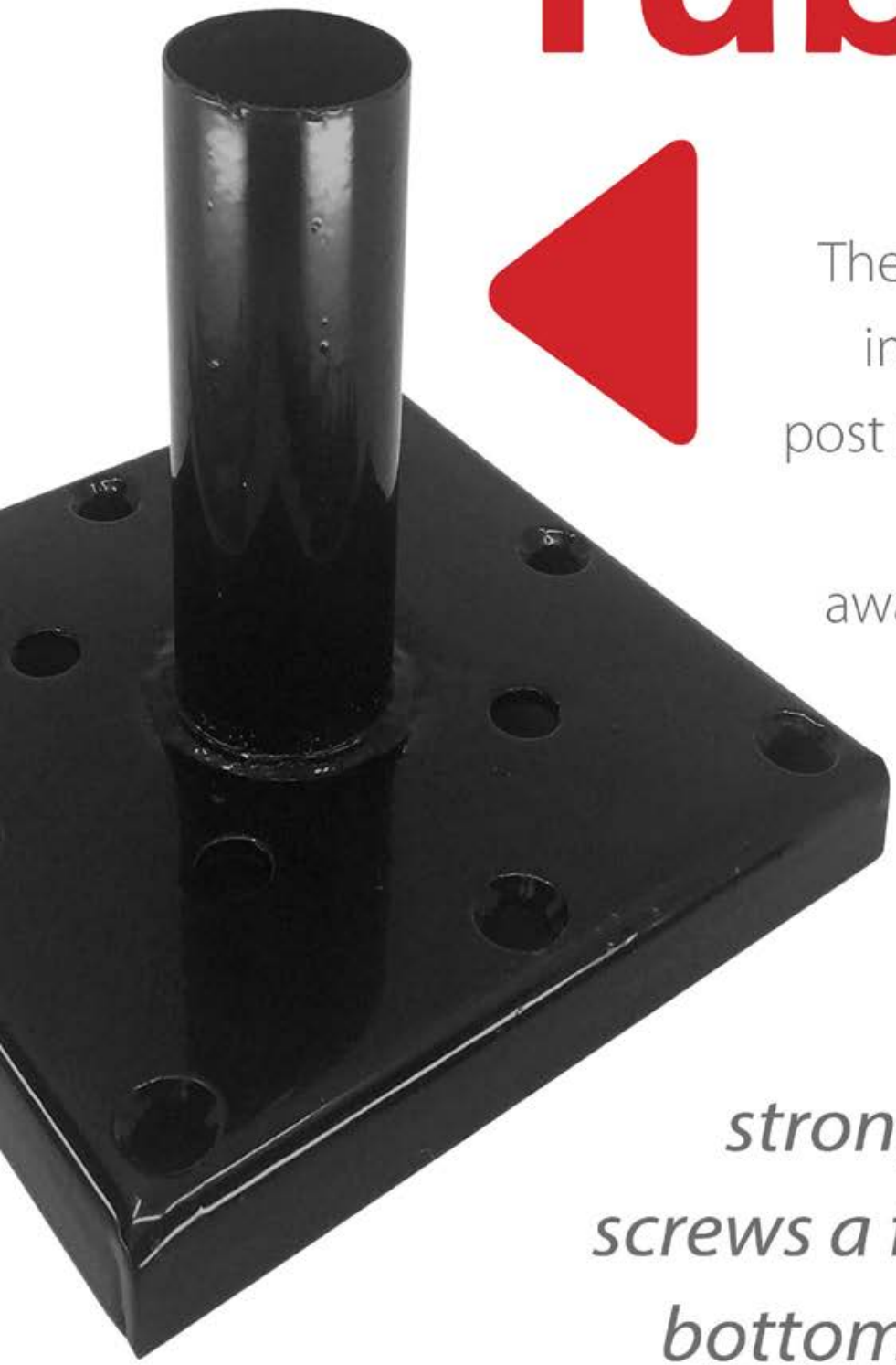
- Save time and effort not having to notch decking around posts.
- Avoid complicated joist hardware and carpentry techniques.
- Keep your wood posts high and dry for super long life.

Most of the anchor is *hidden inside the post.*

But perhaps one of the best things about the Titan Wood Post Anchor™ is that so much of the actual anchor is hidden inside the post, creating a clean, look that allows your wood posts to really shine unlike when using big bulky wrap around style post brackets.

This makes it a great solution for residential ***deck railings, pergolas, gazebos*** and ***more.***

Why the **Tube?**



The tube is impaled deep into the post. When the post is under load it diverts enough tension force away from the lag screws that the lateral performance is actually increased.

This makes it stronger than merely screws a flat plate to the bottom of a post.

Inspect the **Post Anchor.**

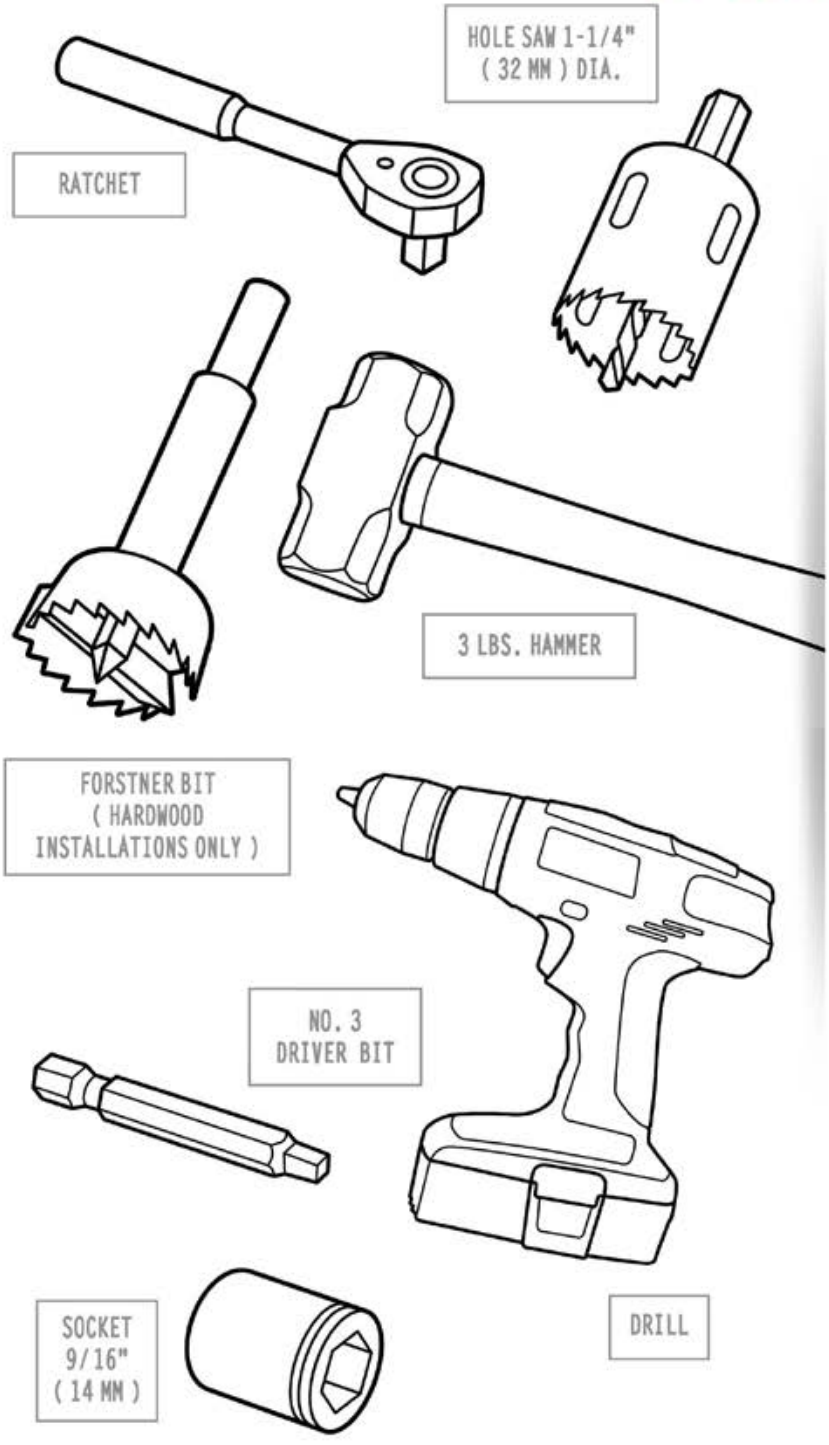
Is the tube perpendicular to the base? Variances like 1°or 2° are nothing to be concerned about. A variance of 3° or more means it's a flawed part and ***I will happily replace it for you.***

Thousands of post anchors are produced at a time and 99.9% are perfect. A bad one might slip through. Set it aside and use another one.

I'll explain how to install a post anchor on a hard wood post later... And don't worry if the base is not perfectly flat. This can happen during welding if the base is heated up excessively. But once the lag screws are driven into the post, any play in the base will be pulled perfectly flush with the post bottom.

Check for a ***complete weld*** around the circumference of the tube on the top surface of the base. ***Don't worry.*** The weld will be embedded into the bottom of the post once installed. Check for ***spot welds*** between the tube and the base from ***underneath the post anchor.***

Tools *for the job.*



The post anchor can be installed by ***practically anyone*** with ***basic carpentry skills*** and commonly available tools like a hole saw, a drill, a hammer and a ratchet.

We're not carpenters by any means, but my wife and I did this project entirely by ourselves. I'm 76 and she's 71 and it feels good to complete a project while adding value to our retirement home at the same time.

John Campbell

– Melbourne Beach, FL

Installing the **Post Anchor** on a common softwood post.

Let's get going. Get yourself a 4x4 post. The post anchor was designed to work with common SPF:

(Spruce, Pine, Fir) lumber available at your local lumberyard.

But it also works will Cedar, Redwood and exotic hardwoods.

I'll explain how to install on a hardwood post later.

1 Drill...

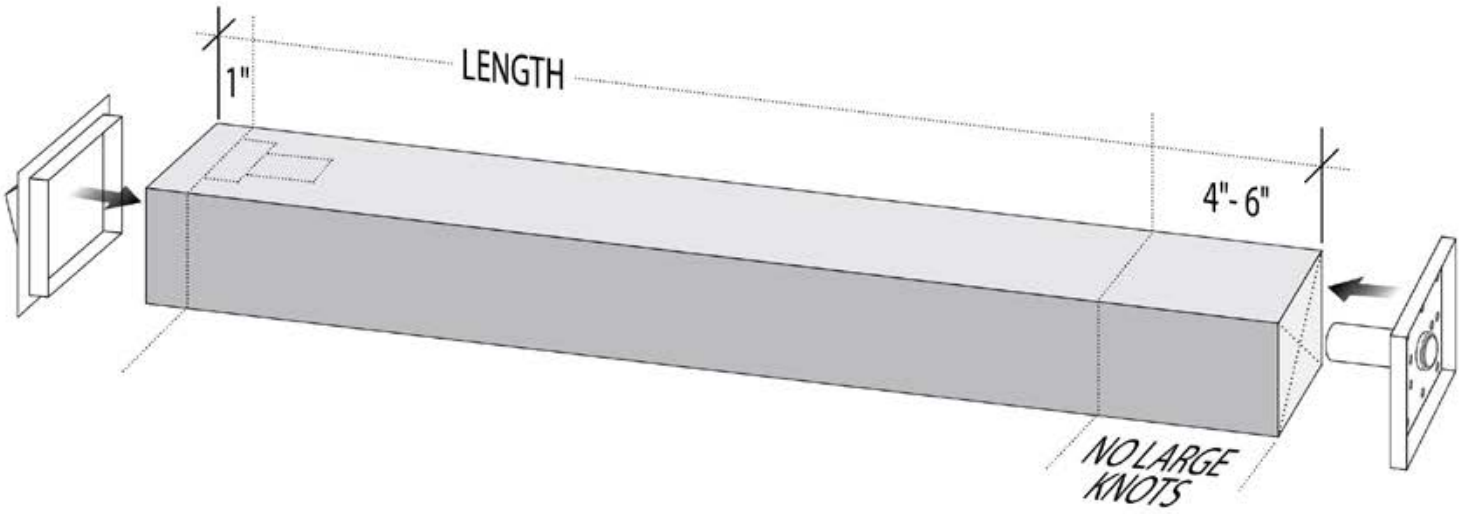
2 Drive...

3 Fasten!

That is essentially all it takes to install the Titan Wood Post Anchor™. But let me explain in greater detail so you'll understand everything.

Cut.

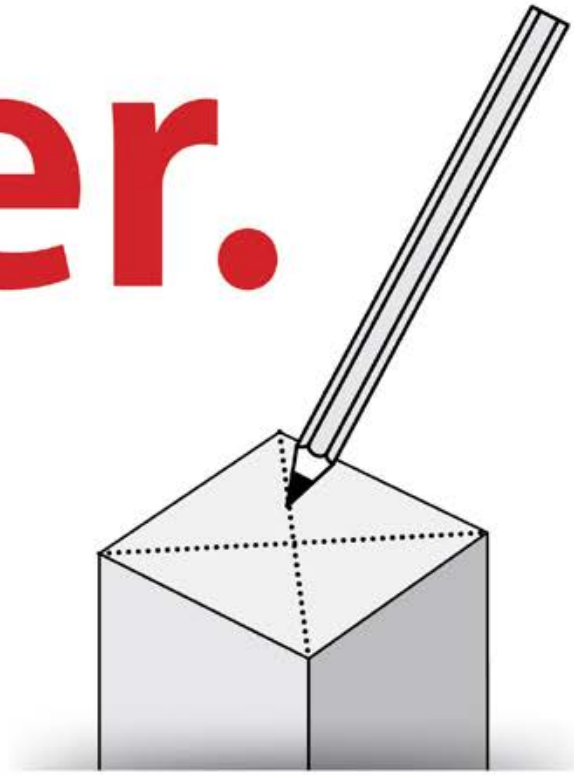
Cut the post to the desired length. In this case let's cut it at 37" because we are going to put a post cap on it and we want the post cap to sit at least *1/2" above the 2x4 top rail.*

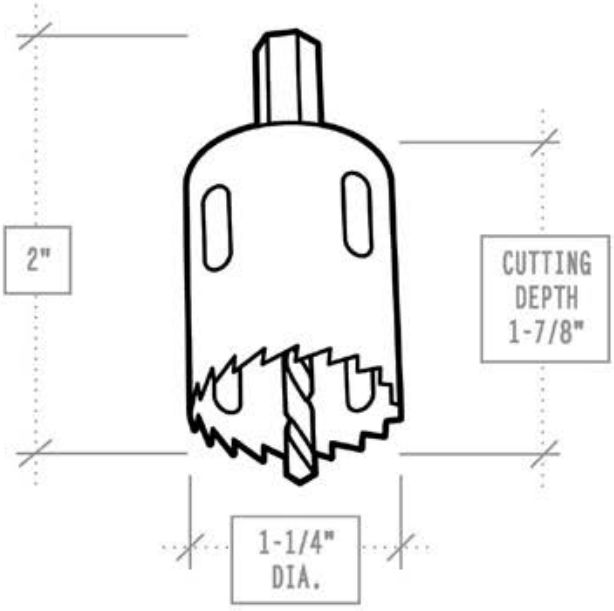


Inspect the post to make sure there are ***no large knots in the lower 4"- 6" of the post.*** Knots will prevent the tube from cutting into the post and in some cases ***causing the post to crack.***

Center.

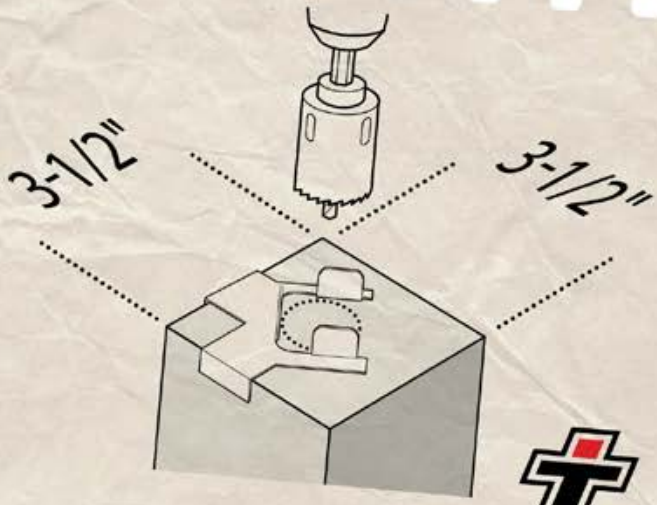
Mark the center of the post using a pencil and a ruler. Just draw diagonal lines from corner to corner.





Take a 1-1/4" diameter hole saw that is commonly available.

It is about 2" long and has an ***actual cutting depth of 1-7/8".***

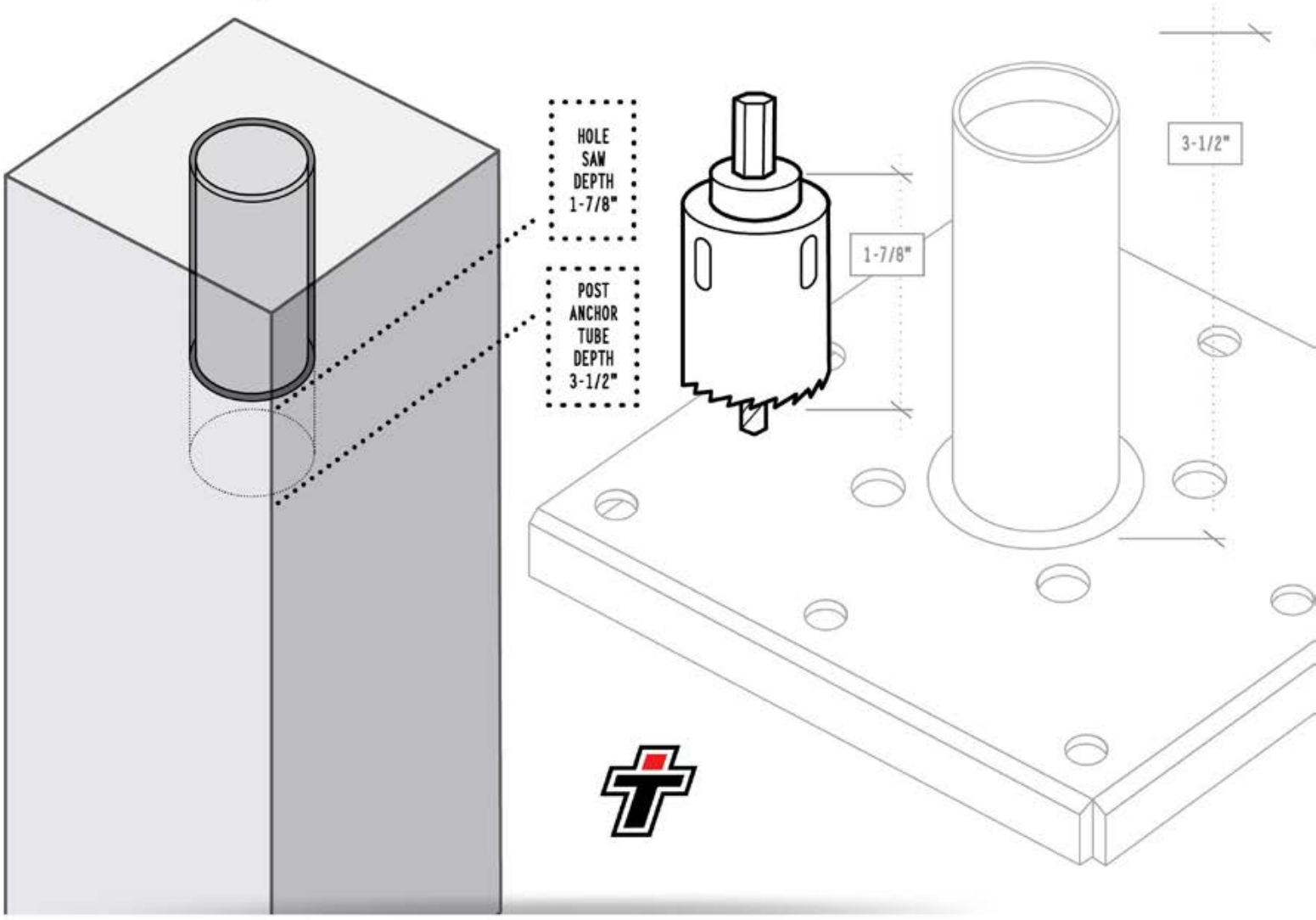


RICH'S PRO TIPS

Our Hole Saw Center Guide keeps the saw steady right on the center of the post

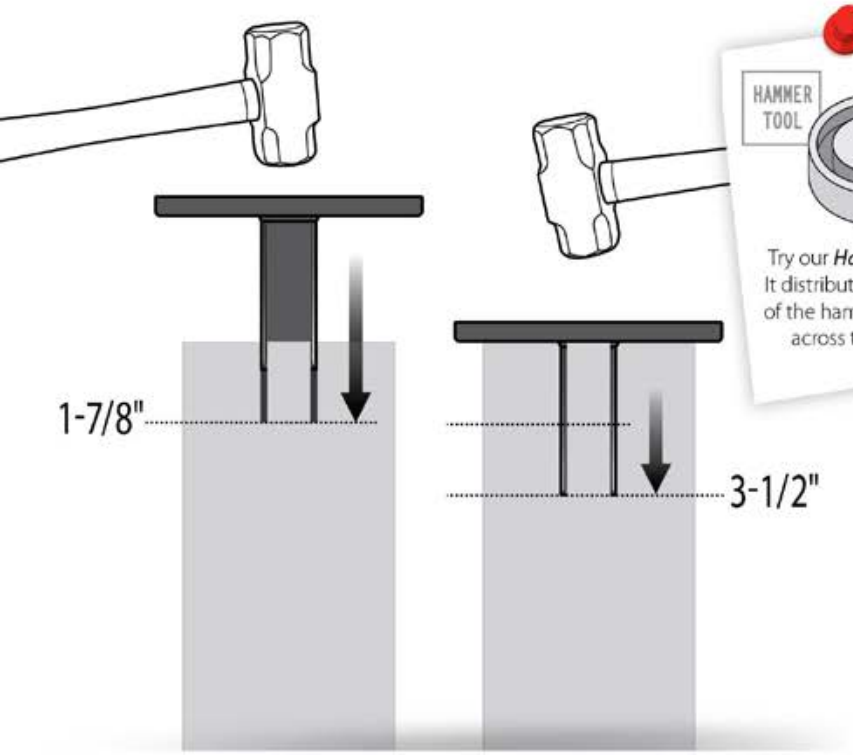
IMPORTANT NOTE: it will only work accurately if the post is 3-1/2" square.

HOLE SAW



Right away you will notice that the hole saw is ***shorter than the tube*** which is at least ***3-1/2" long***. That is just fine because you are going to ***plunge the hole saw straight down as far as it can go.*** Pull the hole saw out and notice the circular ***kerf*** cut that is left behind and the ***wood plug remains in place.***

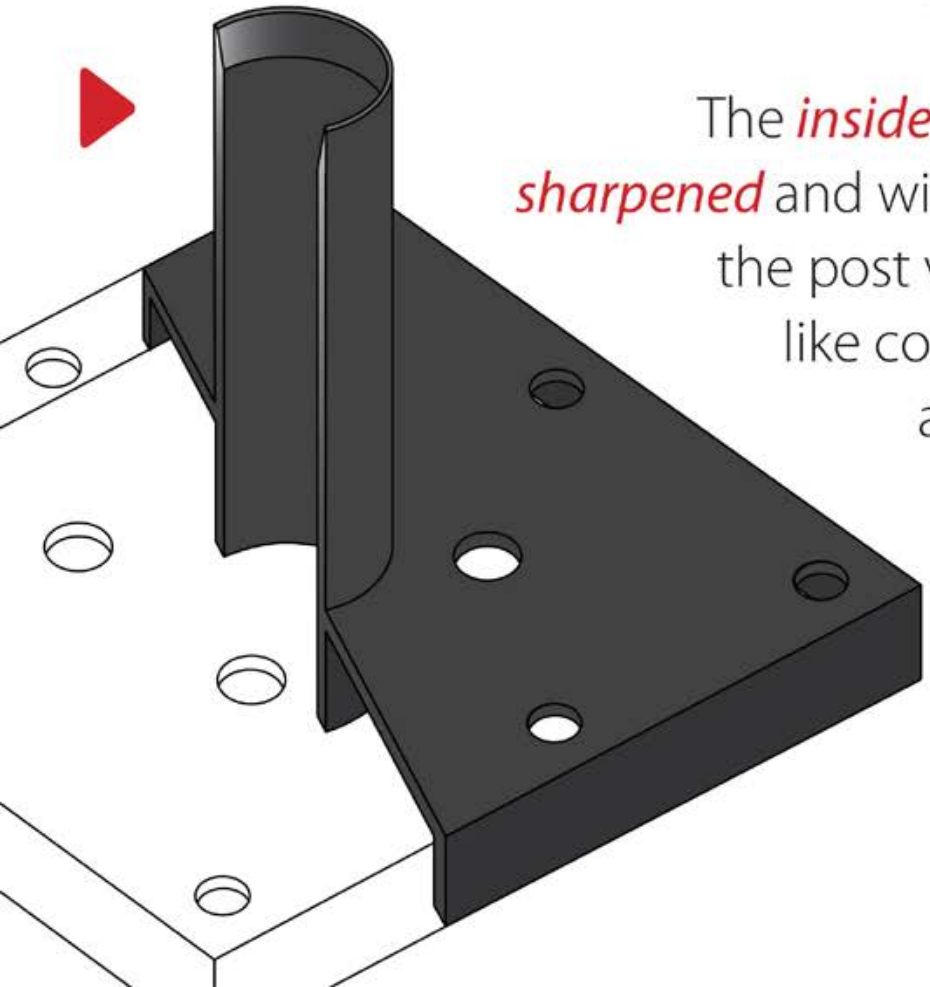
SET THE TUBE INTO THE POST



Try our ***Hammer Tool***
It distributes the force of the hammer evenly across the tube.

RICH'S PRO TIPS

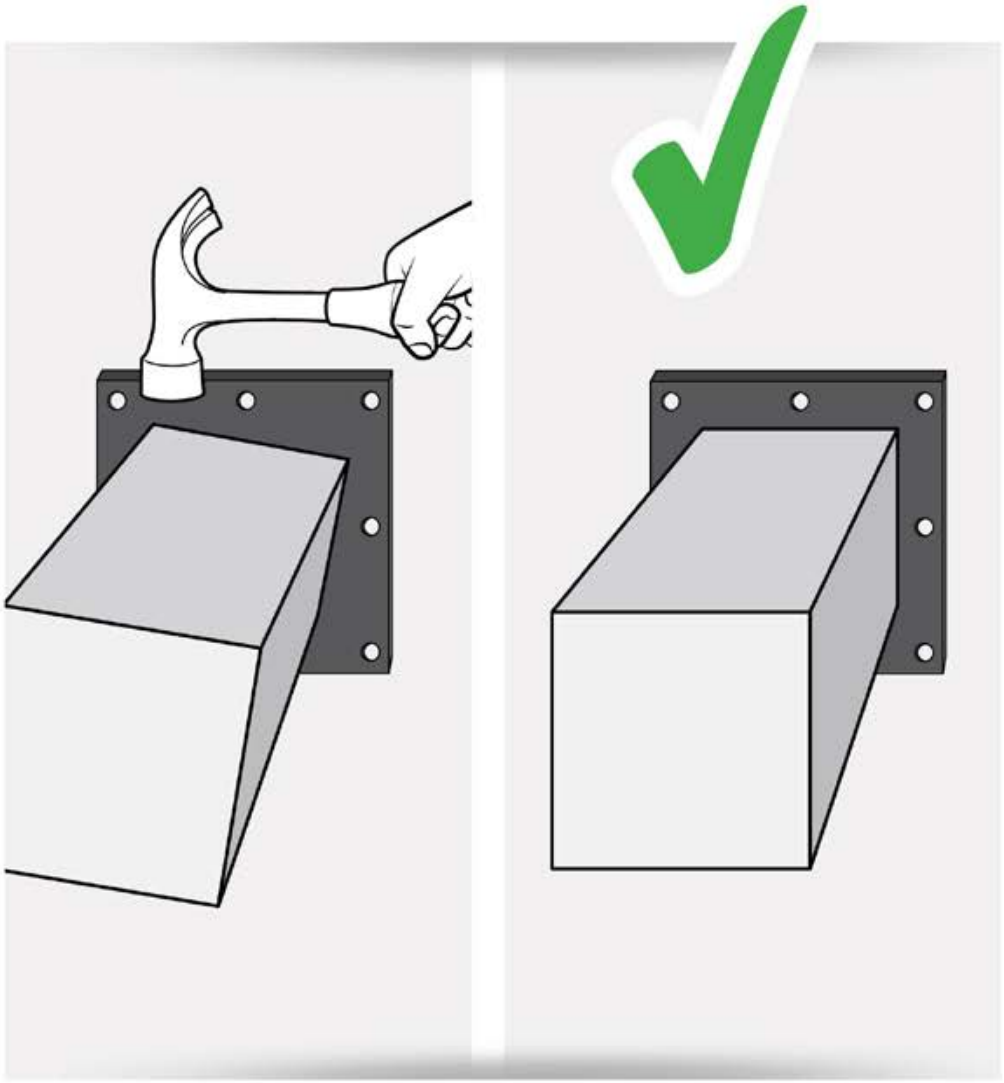
By sighting the post anchor from two adjacent 90° angles. You can see if the tube is perpendicular to the post. If you are off by a little bit, that can easily be corrected by hammering a bit more on one side of the tube to drive it into perpendicular alignment. If you really messed up the pilot cut, take the hole saw and re-do the pilot cut.



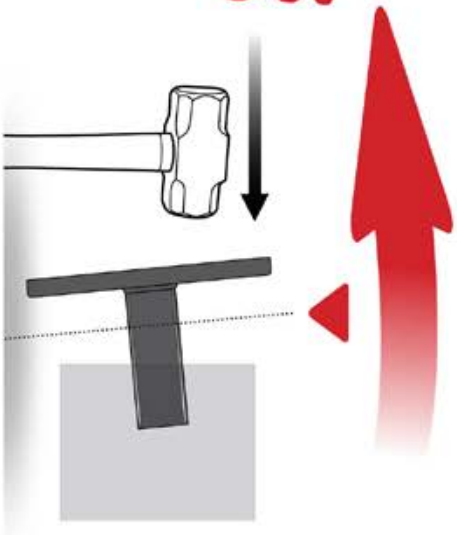
The *inside edge* of the *tube has been sharpened* and will cut into the wood. Stand the post vertically on a hard surface like concrete. ***Line up the tube*** of a post anchor with the kerf and ***tap the tube down***. It will follow the kerf cut and eventually stop at the bottom of the hole saw cut. Strike the tube to ***lightly set it*** into the post.

FLIP THE POST UPSIDE DOWN.

Set the post anchor on the floor so you can sight down the post and see if the post anchor is square to the post. If it is misaligned, a little bit, ***tap one corner*** of the post to square the post and the anchor.

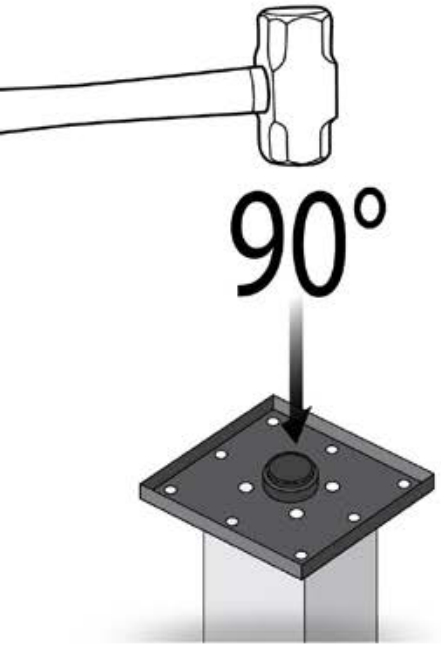


FLIP THE POST BACK UP



Double check the attitude of the post anchor in the post and get ready to drive it home.

HAMMER THE ANCHOR HOME.

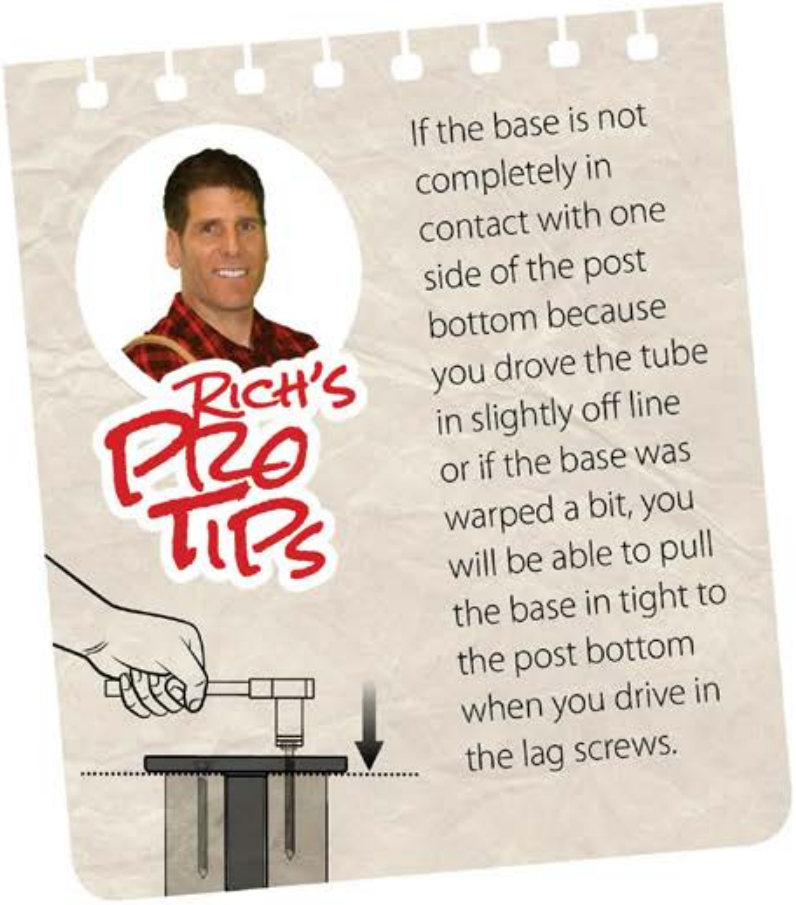


Use short handled 3 lbs sledge hammer. It has just the right weight and the head is larger than a regular framing hammer.

Strike the tube directly on the center and allow the weight of the hammer to do the work.

Crouch down and check that you drove the tube in straight. If not strike the tube on the opposite side to draw it back into a perpendicular line.

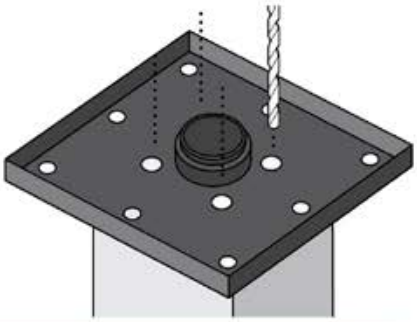
Check the tube again and do this for the ***first four or five hammer strikes*** just to make sure you are driving it straight. After the first four or five strikes, the post anchor is on its final alignment. ***You can't change its course after that.*** But during the initial stages you have enough leeway to set it up much like driving in a nail. ***Drive the tube down until the base is flush with the bottom of the post.***



If the base is not completely in contact with one side of the post bottom because you drove the tube in slightly off line or if the base was warped a bit, you will be able to pull the base in tight to the post bottom when you drive in the lag screws.

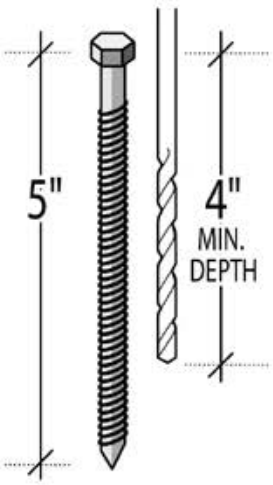
Drilling into softwood **for lag screws.**

Drilling holes for the lag screws is important. The lag screws provided are the same ones that we use in our engineering tests. So, if ***our engineering guidelines state a certain specification, follow it.*** We get a lot of performance with these post anchors because of the fastener combinations we use. ***This is the way we recommend building your deck railing.***



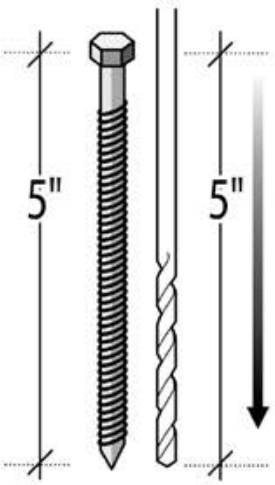
SOFTWOOD POST

LAG SCREW / DRILL BIT GUIDE		
3/8" LAG SCREW	▶	5/16" DRILL BIT
1/2" LAG SCREW	▶	7/16" DRILL BIT



For ***3/8" lag screws***, use a ***5/16" speed bit*** and make sure it extends at least 80% of the length of the screw. For a ***5" screw***, pre drill to a minimum ***depth of 4".***

If you're finding that the wood is particularly ***hard to screw into*** once the lag reaches the 4" depth, drill the next hole a ***full 5".***



TAKE A BREAK

Pat Yourself on the Back !

You just ***installed a Titan Wood Post Anchor™*** and you will become ***even more proficient*** and ***skilled*** with ***each anchor that you install. Builders using the post anchor*** can cut a post and install an anchor in ***three to five minutes.***

What about really
Dry Softwoods?

"I told you I was going to come back to this question."

Sometimes people like to use ***common*** construction ***grade lumber*** like ***cedar*** or ***redwood***. Now, I have been up and down many of the highways of ***Central*** and ***Northern California*** meeting with lumberyard owners, so I know how hot it gets in the summer. And ***redwood*** is a beautiful ***local natural resource***.

Lumber is typically stored outside under a lean-to type structure. If the lumber has been sitting outside with very ***low humidity*** at ***100°F for three months*** it is going to be ***as dry as a match stick***.

So with lumber like this, it can be ***more prone to cracking*** if you don't ***pre drill properly*** or if you ***do not drive the anchor straight into the post.***

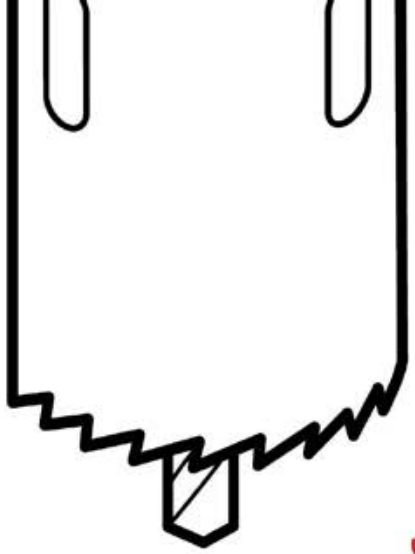
Wood is like a straw and *it will absorb the water* bringing the moisture content back up to *12% - 15%* which can make *all the difference in the world.*

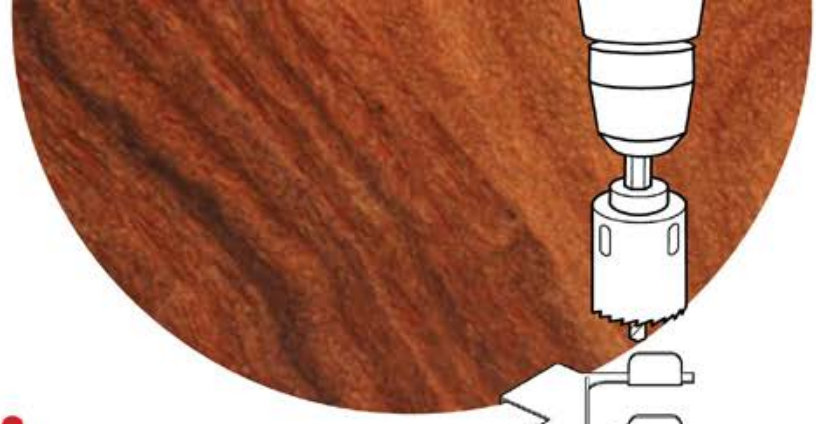
When using redwood that is particularly dry, here is a suggestion to prevent cracking a post during installation of the Titan Wood Post Anchor™. Soak the ends of the posts with water and let them sit overnight and dry before working with them. This brings the wood back to life.

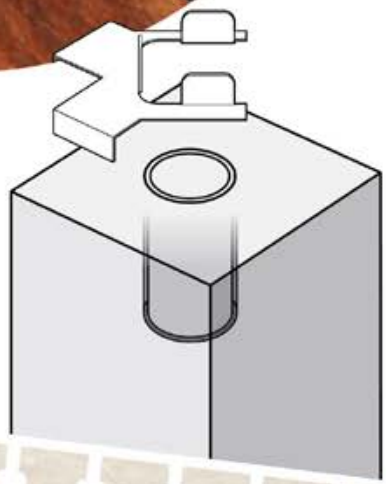
Installing the Post Anchor
in hardwoods.

The Titan Wood Post Anchor™ can be used with hardwoods like ***Ipe, Cumaru***, ***Tiger wood*** and others. But installation is ***more difficult*** given that it is not possible to drive the tube or into hardwood.

There are a few ***tricks of the trade*** that I am going to show you that will make it ***possible*** and give you a ***super strong result***.







Hole Saw

Use the ***same hole saw*** like you would use for ***softer woods.*** Line up the ***drill bit of the hole saw on the center of the post.*** ***Try our Hole Saw Center Guide - It's perfect for this!***

Plunge the hole saw down to its ***maximum depth*** which is about *1-7/8"* for common hole saws on the market. If the ***kerf*** of the hole saw pilot cut is ***smaller than the diameter of the tube, enlarge the diameter of the hole saw cut a little bit.*** Otherwise you might ***split the post*** as the tube is wedged into the wood.

How to enlarge the hole saw diameter cut? *IT'S EASY...*

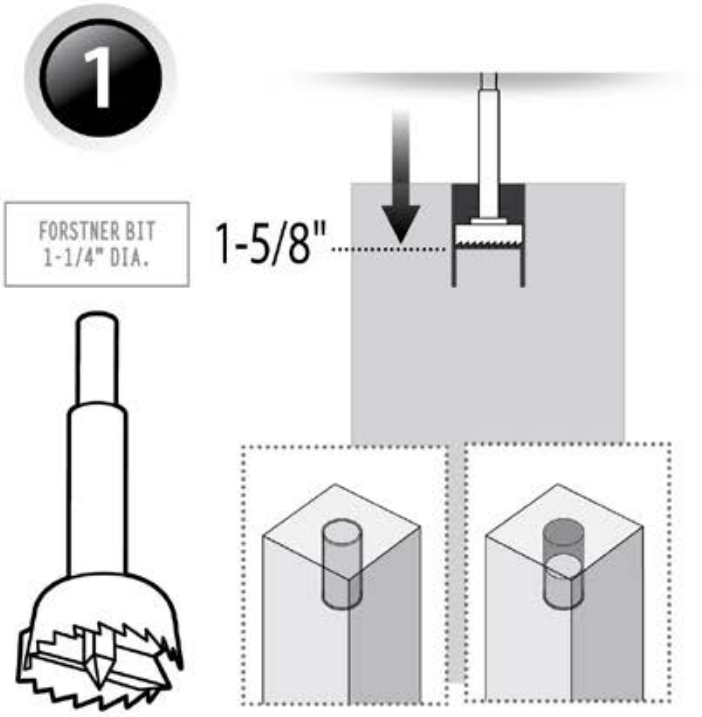
How to adjust hole saw diameter:

Take a small nail set and using a vice clamp to hold the saw blade.

Tap a few of the teeth outwards - a tiny bit. Now re-cut the hole with the saw's larger diameter and the tube should fit perfectly.

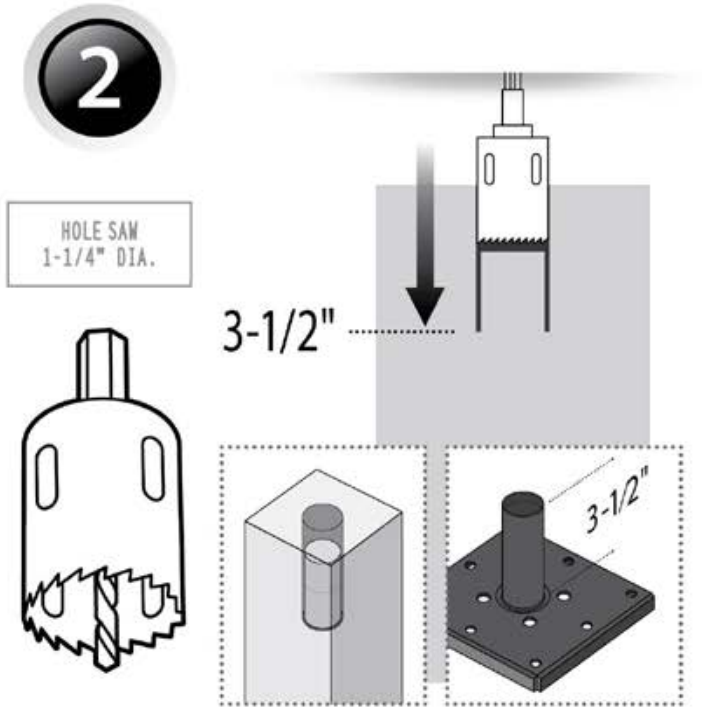
Rich's Pro Tips

TIME TO USE A FORSTNER BIT



After the first pass with the hole saw, use a ***1-1/4" dia. Forstner bit*** to remove the core left behind and drill down to a ***depth of 1-5/8" from the bottom of the post.*** Be sure to ***clamp*** the post into a ***vice*** or against a ***bench*** when using the Forstner bit and go ***slow*** and ***carefully*** as the Forstner bit can ***kick back i***n hardwood.

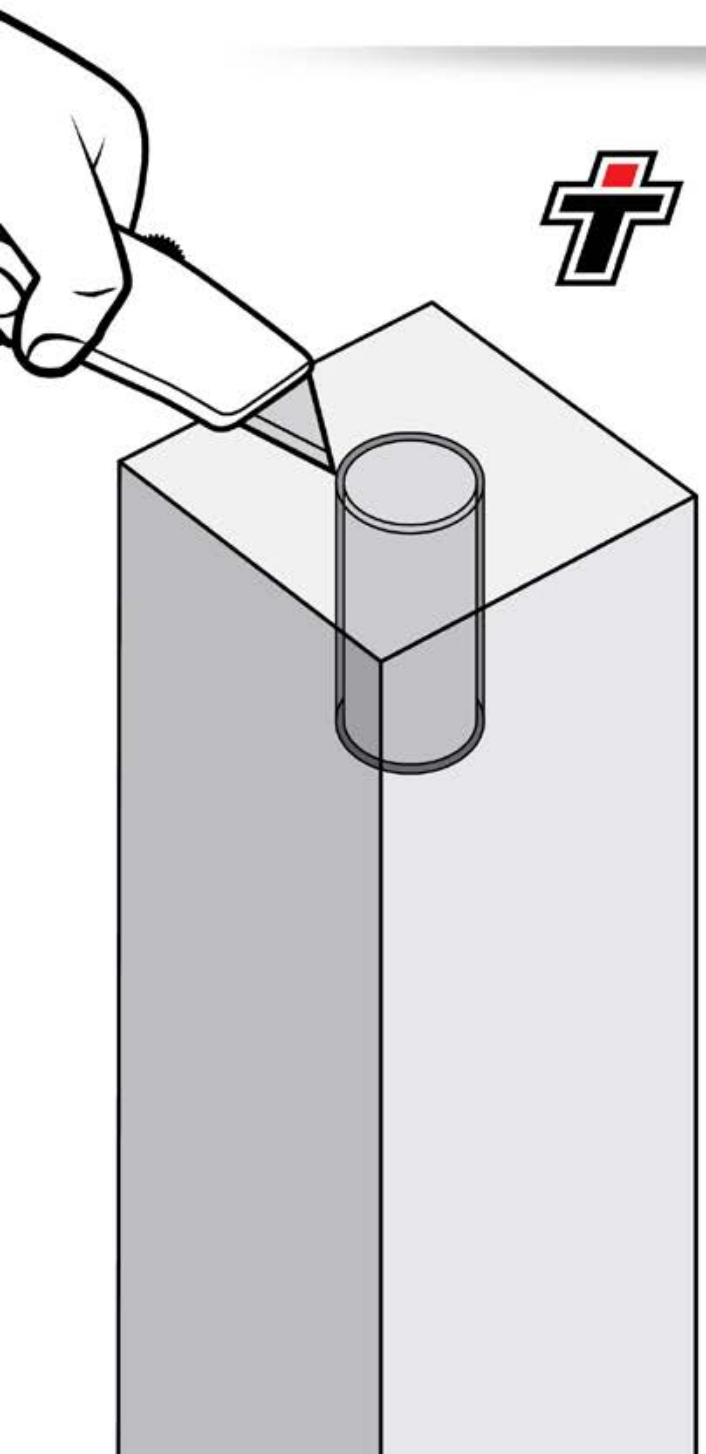
FINAL PLUNGE OF THE HOLE SAW



Now use the ***hole saw one more time*** and ***drive it down until it bottoms out.*** The depth of the cut should be ***3-1/2"*** which is the ***same as the tube length.*** You will not be able to drive the tube into the post very effectively so that is ***why you cut the hole deeper.***

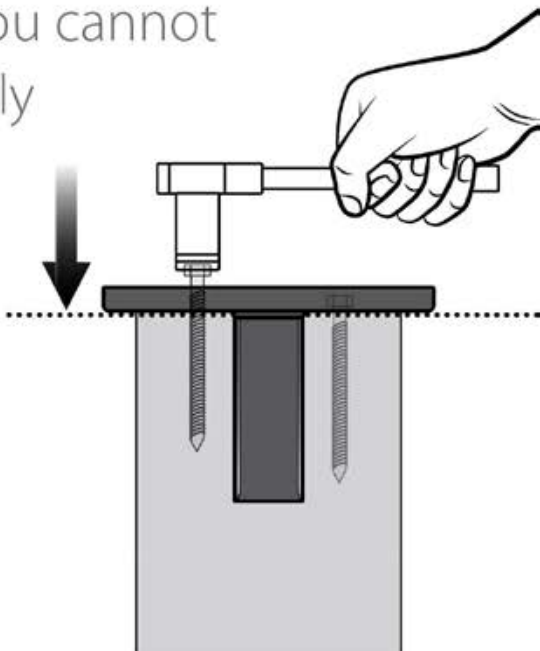
Installing the
Post Anchor.

Drive the tube into the ***pilot cut*** until it ***sits flush*** with the ***bottom of the post.***

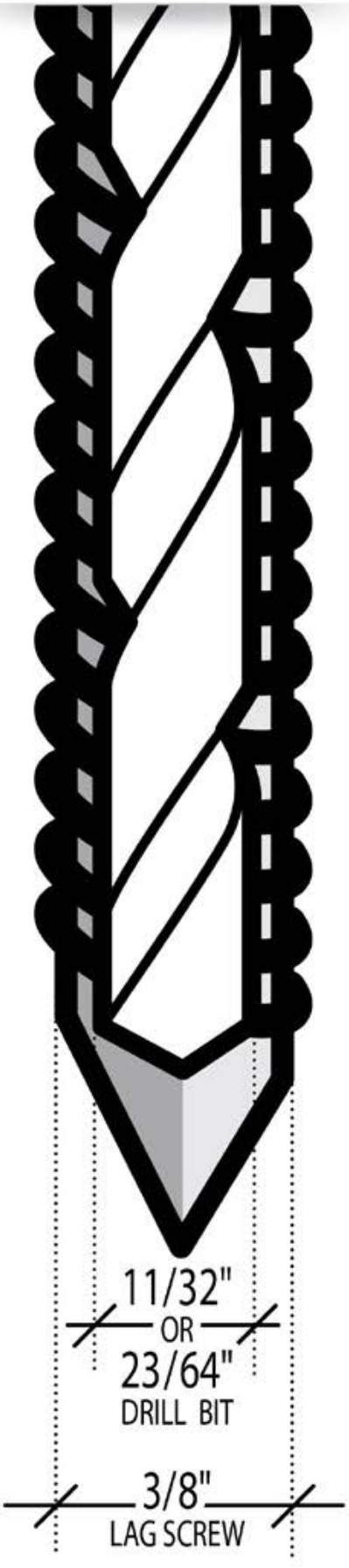


If the weld against the tube ***prevents the base from sitting flush*** with the post you can ***trim away*** the inside edge of the cut ***using a blade*** to allow the anchor to sit a bit closer.

But even if you cannot get it perfectly seated ***do not worry*** because the lag screws will ***pull it in tight.***



Drilling into hardwood for lag screws.



HARDWOOD POST

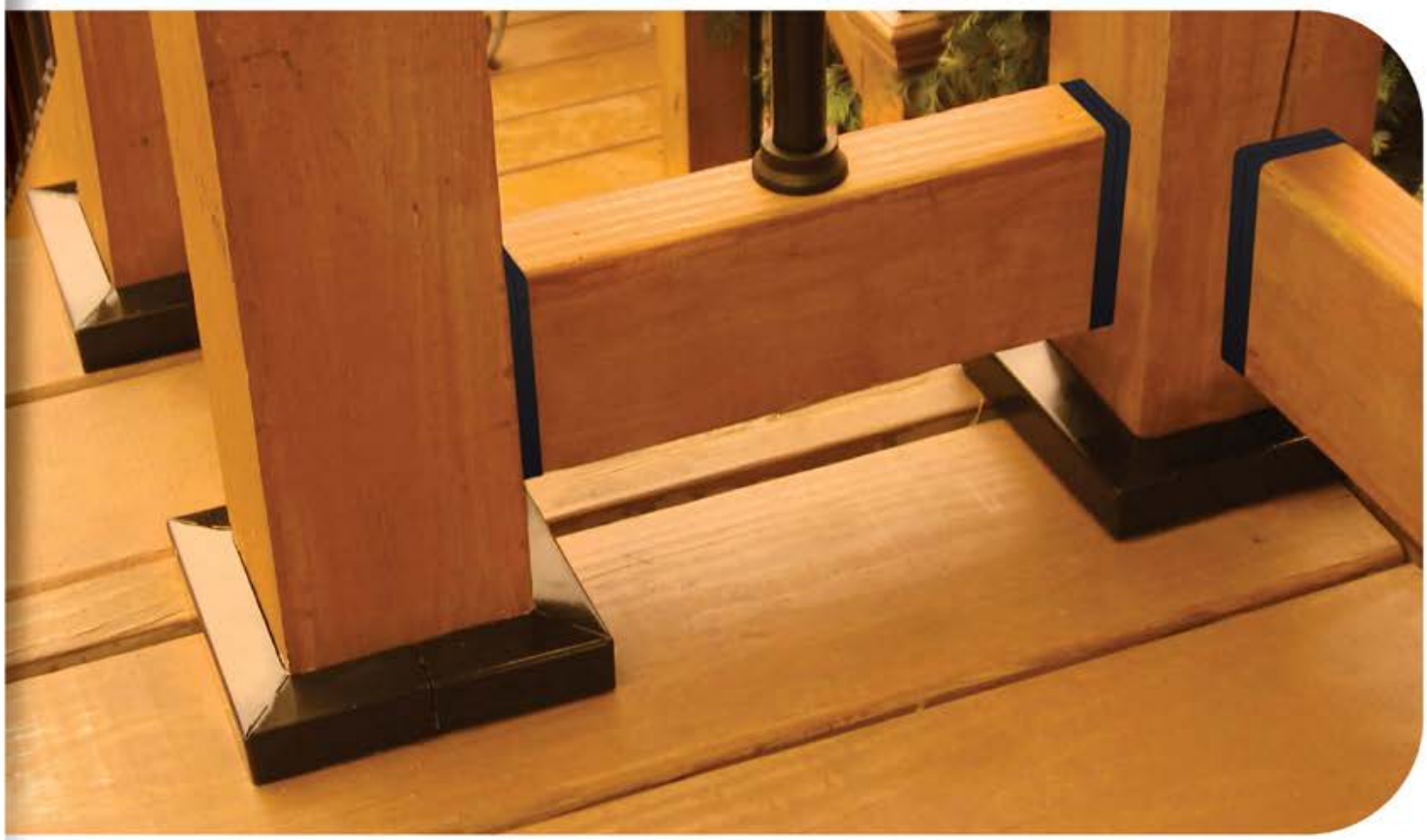
LAG SCREW / DRILL BIT GUIDE		
3/8" LAG SCREW	▶	11/32" DRILL BIT
1/2" LAG SCREW	▶	15/32" DRILL BIT

Very important!

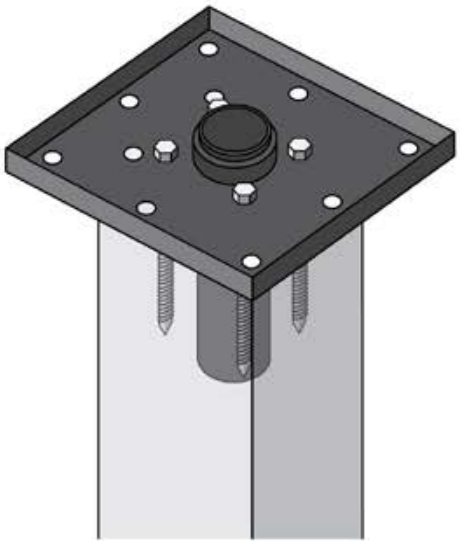
You must use a drill bit that is ***smaller*** than the thread diameter. Tolerances are very close. If you are using a ***3/8" lag screw*** then pre drill with an ***11/32"*** or possibly a ***23/64"*** bit. You might have to ***test this*** because lag screws vary depending on how thick the zinc coating is. It can't be too big but it can't be too small or you will ***not be able to drive the screw.***

Installing the post and anchor on a

wood framed structure.



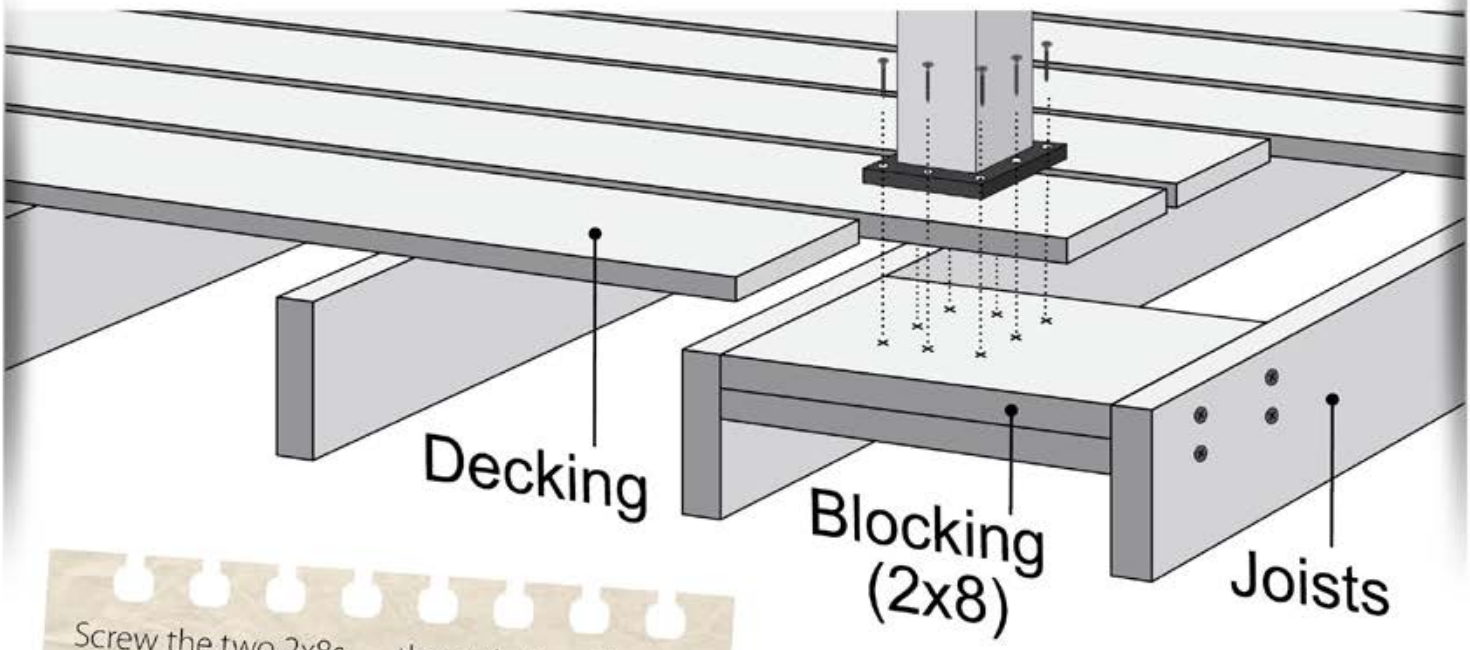
Although you can just as easily install it on ***stone*** or ***concrete,*** a wood framed structure is the most common application. Let me show you how to properly ***prepare your deck...***




The railing and pergola posts on this deck all use the Titan Wood Post Anchor™. They are rock solid, high and dry and will last a lifetime.

Blocking the **joist bay.**

You will have to install ***two flat (stacked) 2x8s in the joist bay below the decking*** where you ***plan to install a post***. This is because screwing the post anchor down onto ***a 5/4" deck board will not provide enough pull out resistance***.



RICH'S PRO TIPS

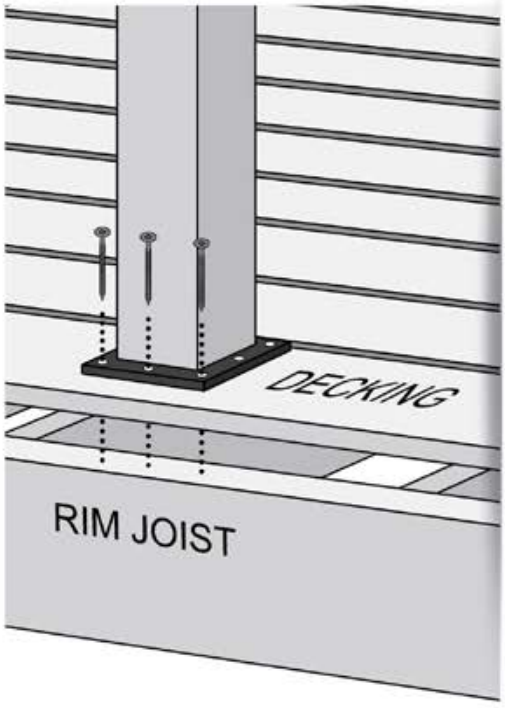
Screw the two 2x8s together using #10x3" ACQ compatible wood screws. And then use #10x3-½" wood screws to go through the sides of the joists into each blocking piece. If you are worried about water ponding in between the deck boards and the blocking, use some G-Tape and cover the top surface of the blocking before you overlay the decking. G-Tape is great stuff. ***Click here and check it out! Watch the video in the gallery.***

A ***2x8 is a nice size*** because it easily exceeds the ***5" dimension of the 4x4 post anchor*** and also that of the ***6x6 post anchor***. ***Furthermore most decks are framed with 2x8 joists*** so there is usually lots of scrap lying around to use for blocking.

More beautiful decks... Real easy.

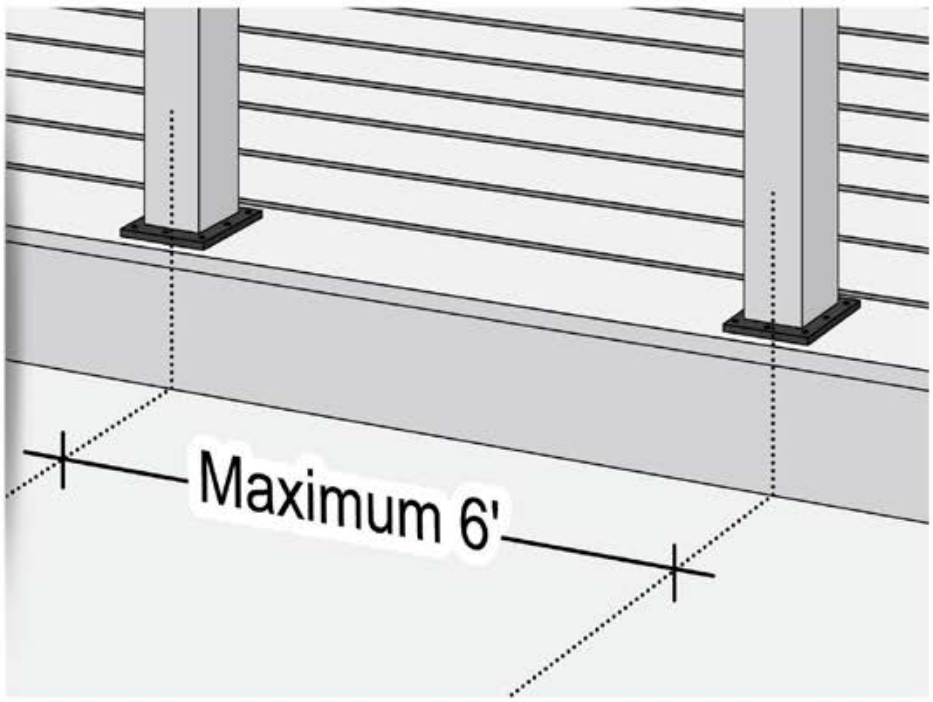
Locate posts **along deck surface.**

Set your posts ***around the perimeter of your deck*** at a ***maximum of 6' on center.*** They can be closer than 6' on center if you wish. However, if you want to conform to our engineering guidelines for ***residential code compliance,*** you must follow that recommendation.



⚠ Use the screws ***provided in the kit*** to secure the post anchor to the decking.

If possible, ***align the screw holes in the post anchor*** with the ***perimeter joist*** of the framing. Usually the deck ***board extends*** beyond the rim joist or fascia board by ***1".***



SOFTWOOD DECKING

With softwood decking like treated ***pine, cedar*** or ***redwood*** you do not have to pre drill the decking for the screws. However, if the screws are ***within 1/4" from the edge*** of a deck board ***be sure to pre drill*** so the screws ***do not split the edge*** of the board.

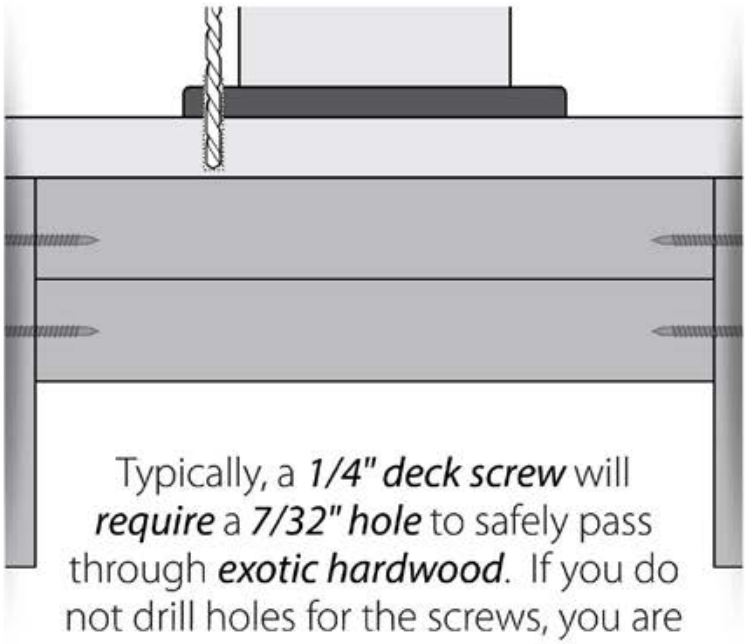
Make sure you practice on a scrap board and try driving a deck screw through.

RICH'S PRO TIPS

If it gets stuck or you snap the screw, you know you need more clearance so use a slightly larger drill bit until you can drive the screw through the board easily. Today's composite decking is also very dense and should be treated like hardwood in this respect.

HARDWOOD DECKING

For hardwood or ***composite decking*** you ***must pre drill holes*** through the deck board to ensure the screw can be easily driven through. ***Drill through the deck board only.*** Do not drill all the way into the blocking below.



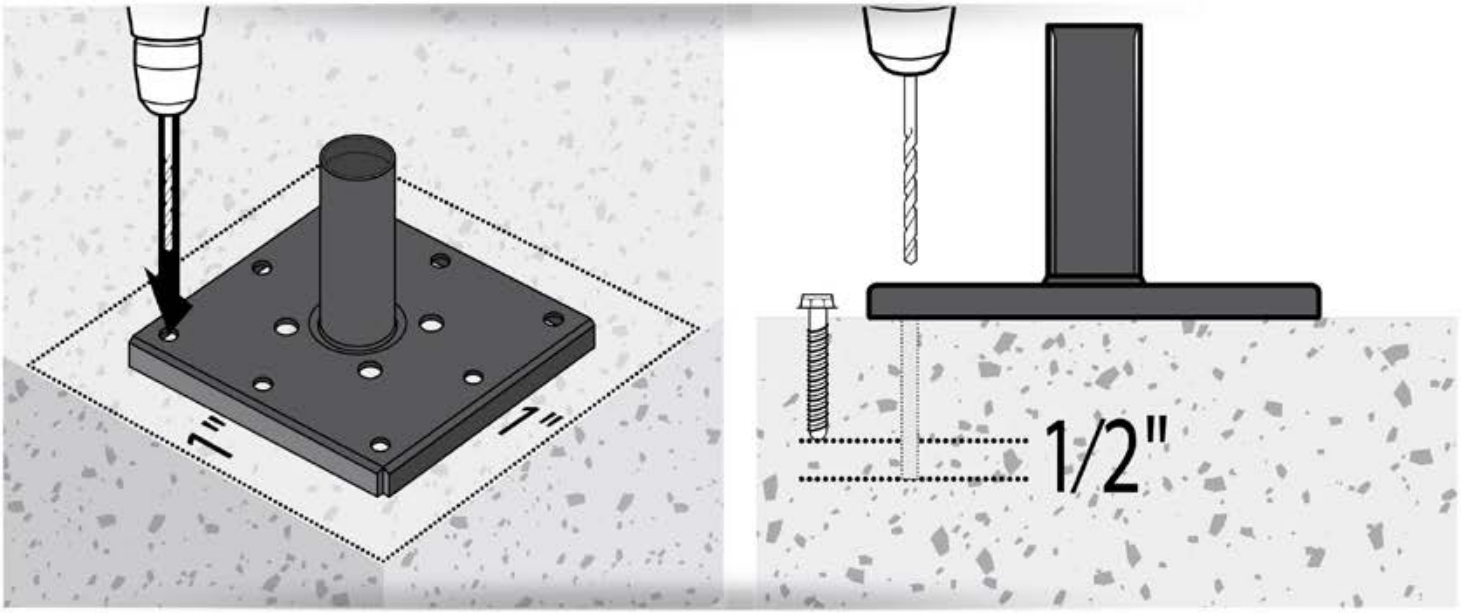
Typically, a ***1/4" deck screw*** will ***require*** a ***7/32" hole*** to safely pass through ***exotic hardwood***. If you do not drill holes for the screws, you are likely to ***snap the screw***. hardwood and composite deck boards are more dense than common softwood decking.

Aluminum *decking.*

Aluminum extruded decking boards are a very ***long lasting solution***. They often snap together to create a waterproof surface. But they have ***varying profiles*** and you must ensure that the deck screws have a place where they can ***go through the extrusion*** cleanly and into the decking ***below.***

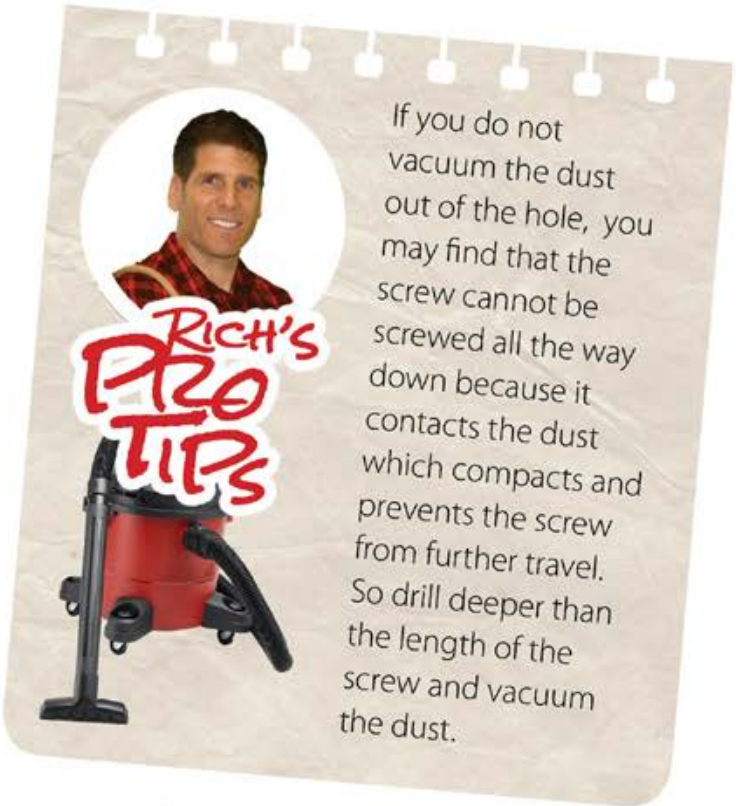
You must use stainless screws to secure the post anchor with aluminum decking. The common metal screws will react with the aluminum and corrode.

Installing the post and anchor on **concrete *or* stone.**



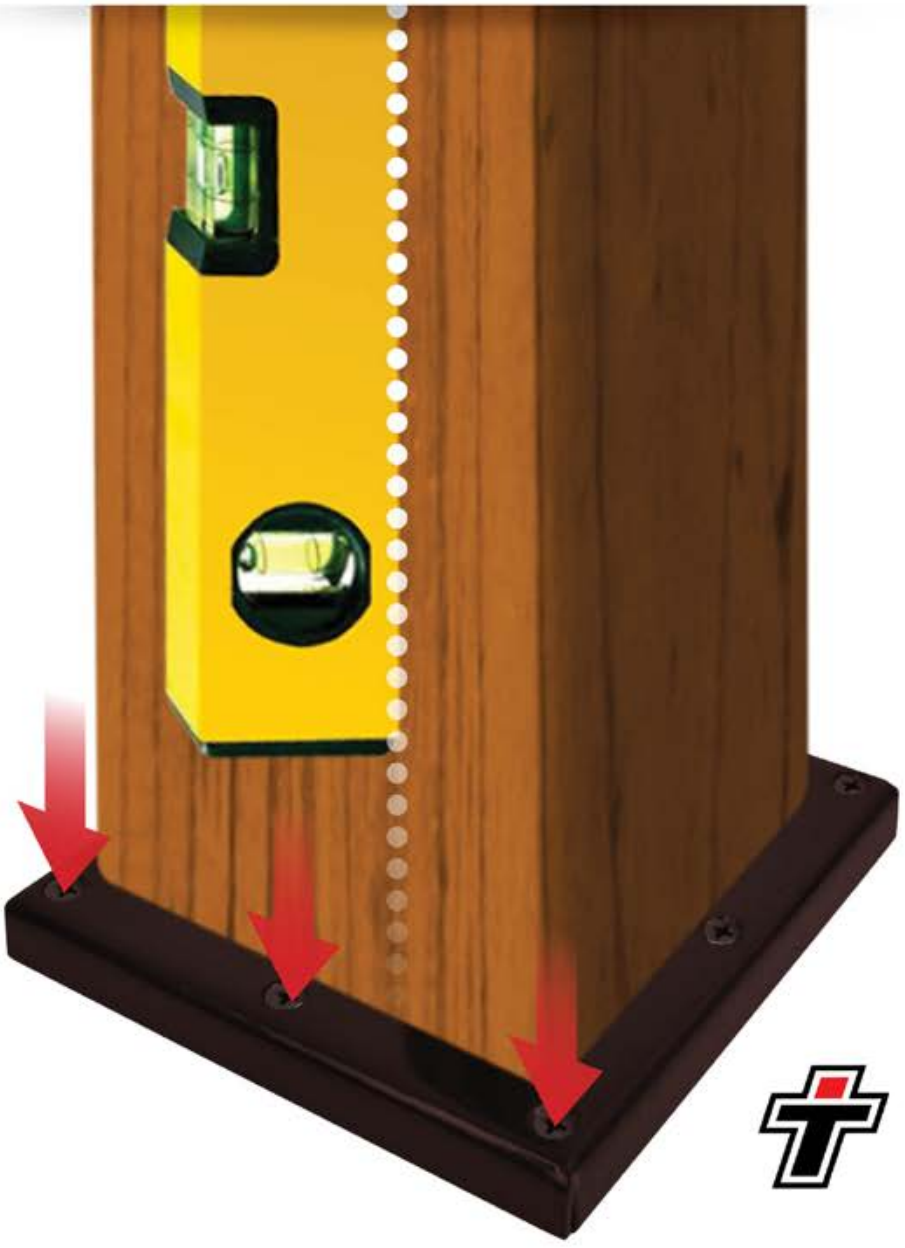
Use a post anchor as a ***template*** and ***pre drill*** the four corner holes being careful to ***not move the anchor*** and misalign one of the drill holes. Use at least *1/4" x 2-1/4"* screw ***or longer***. *GRK* and *Tapcon* both make good concrete screws. Although I prefer ***GRK.***

The hole must be at least 1/2" deeper than the screw length and ***be sure to vacuum out the dust.*** To be safe, keep the drill holes at least ***1" away from the edge*** of the concrete pad. This reduces the risk that the concrete may ***weaken and crack.***



Plumbing a post on **wood.**

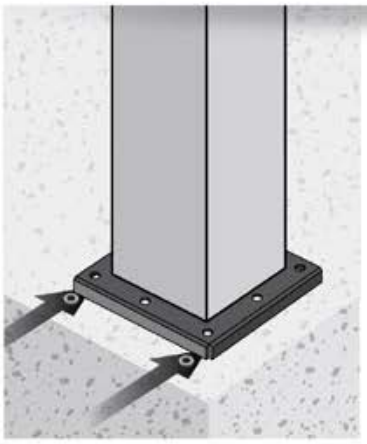
To plumb a post on a ***wood framed deck*** simply place your ***level against the post*** in a ***vertical orientation*** and drive the screws ***down a bit further on one side*** or the ***other*** to ***tilt the post slightly back*** into a ***perpendicular*** position.

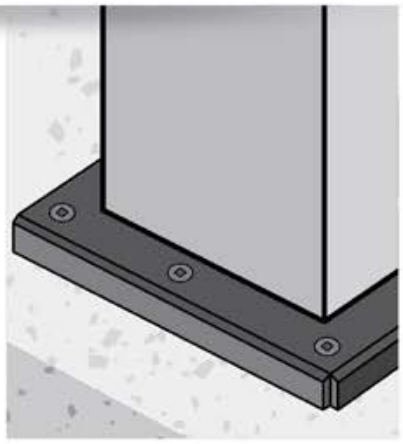


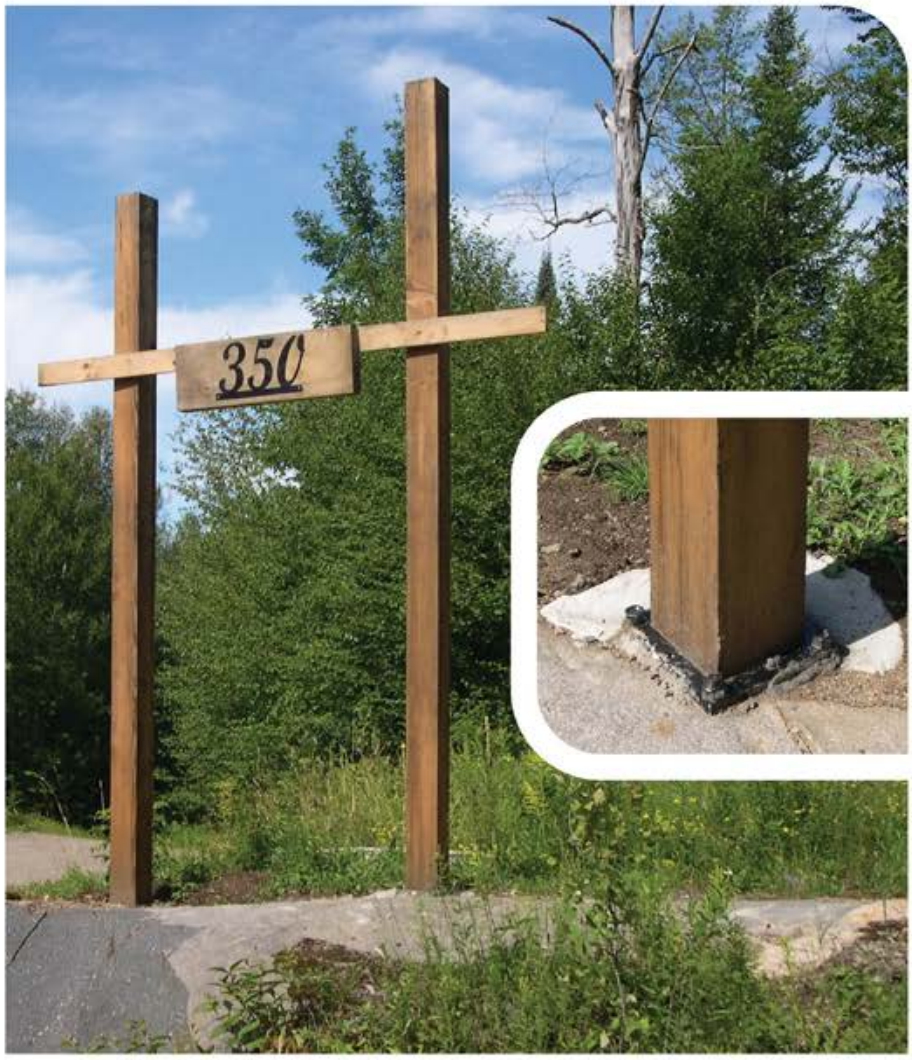
⚠ On a ***composite board*** there is usually ***enough compression that you can pull the anchor base a bit deeper*** into the plastic capping of the board.

Plumbing a post on **stone** *or* **concrete.**

To plumb a post on a ***stone*** or ***concrete surface*** requires a ***different technique.*** Place a small ***flat washer*** under the two ***corner holes*** of the ***side of the anchor that needs to be elevated***. The washer will catch the sidewalls of the post anchor and be ***almost invisible.***







The ***alternative*** to this simple method is ***more intensive.*** You can ***grind away*** part of the concrete or stone if you really want a ***perfectly flat surface.*** This requires using ***diamond grinders and requires water to keep the dust down.*** It is a ***significant amount of work compared to the washer technique*** but is used by some people in some situations.

Building a residential
wood railing.

One of the most ***common applications*** of the post anchor are common ***residential railings*** for ***one*** and ***two*** family dwellings. The ***benefits*** of the post anchor ***are:***

1

Convenience of surface mounting

From a practical perspective, it offers people convenience as a surface mount application versus a joist mounted system.

2

Works on all hard substrates

A surface mounted system allows posts to be installed in more situations where joist access is not possible, such as when you wish to build a railing over a concrete or stone surface.

3

Code compliant if necessary

Many homeowners appreciate that it can be used to build residential railings which are code compliant when installed according to the engineering guidelines provided with each post anchor kit.

4

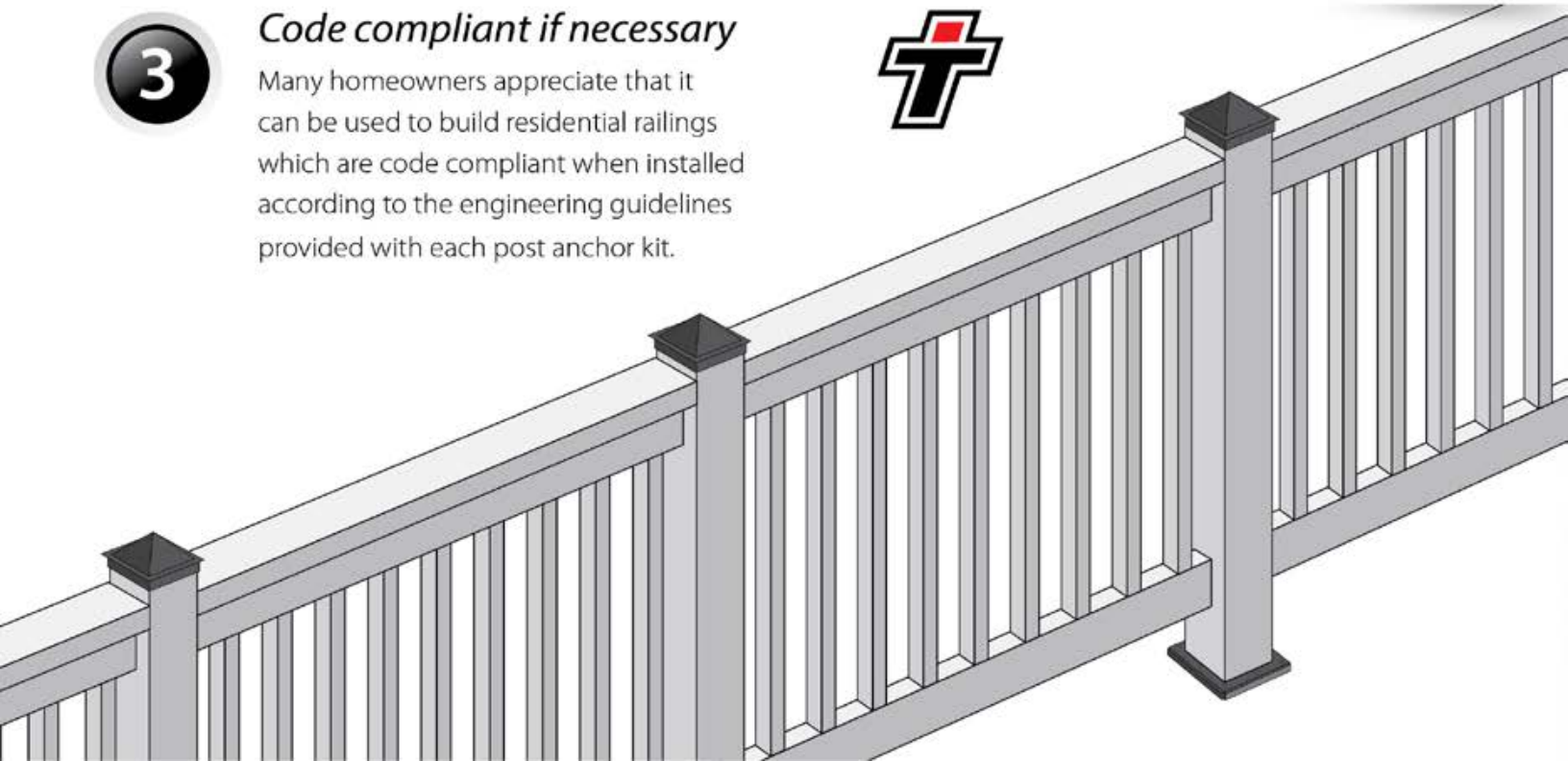
Low profile appearance

The unique design of the anchor greatly improves the appearance of the installed post by eliminating the common bulky side panels associated with most other surface mounted anchors.

5

Affordable & Simple

These benefits combine to offer great value to builders and DIYers particularly since the post anchor kit typically sells for around $25.



Upgrade your **Wood Railings** **Faster** *and* **Easier** *with an* **Elegant Aluminum Baluster System.**

Aluminum balusters are a ***low maintenance*** and ***stylish option for any wood deck***. Unfortunately installing the traditional plug style systems are a hassle. But I have a sideways installed system called the ***Snap 'n Lock™ Baluster Kit*** that installs twice as fast, looks luxurious and makes future maintenance a breeze. Be sure to check it out.

Easiest INSTALLATION

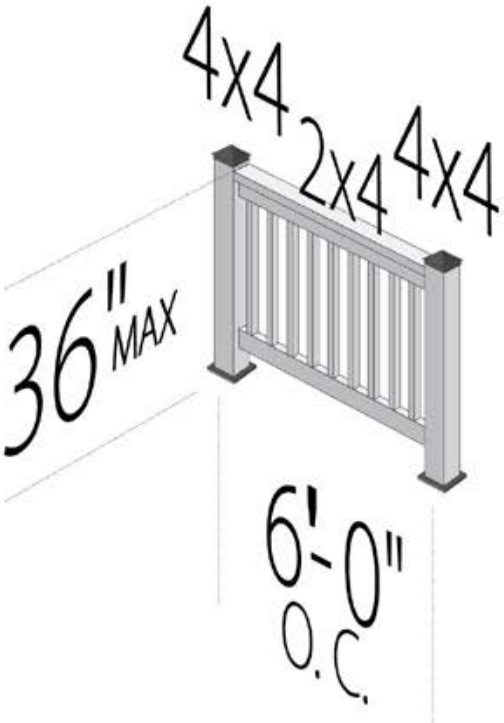
More beautiful decks... *Real easy.*

International Residential Code (IRC)

The IRC dictates the code standards for railings in one or two-family dwellings. The test procedures that apply for components of railings are specified by AC273. We have testing reports from Intertek based on the 2015 and the 2017 standards. Some jurisdictions will accept 2012 standards while others may require 2017 standards.

AC 273 2015

4X4 POST, 36" HIGH, 6'-0" O.C.

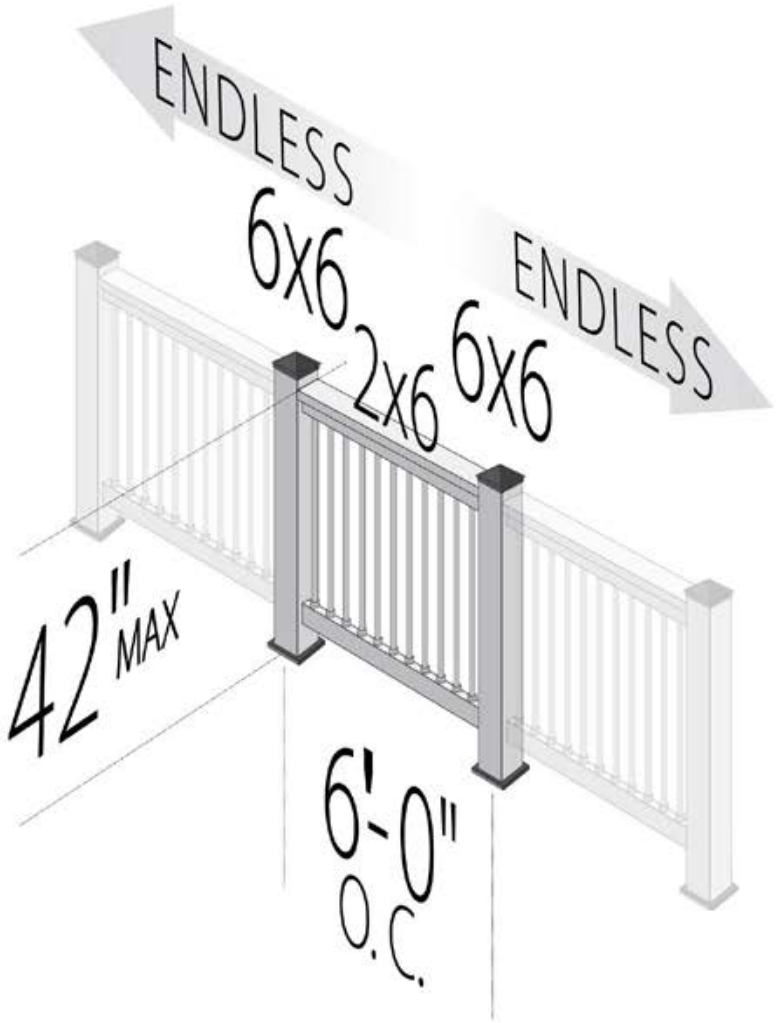


6X6 POST, 36" HIGH, 8'-0" O.C.

International Residential Code (IRC)

AC 273 2017

6X6 POST, 42" HIGH, 6'-0" O.C.

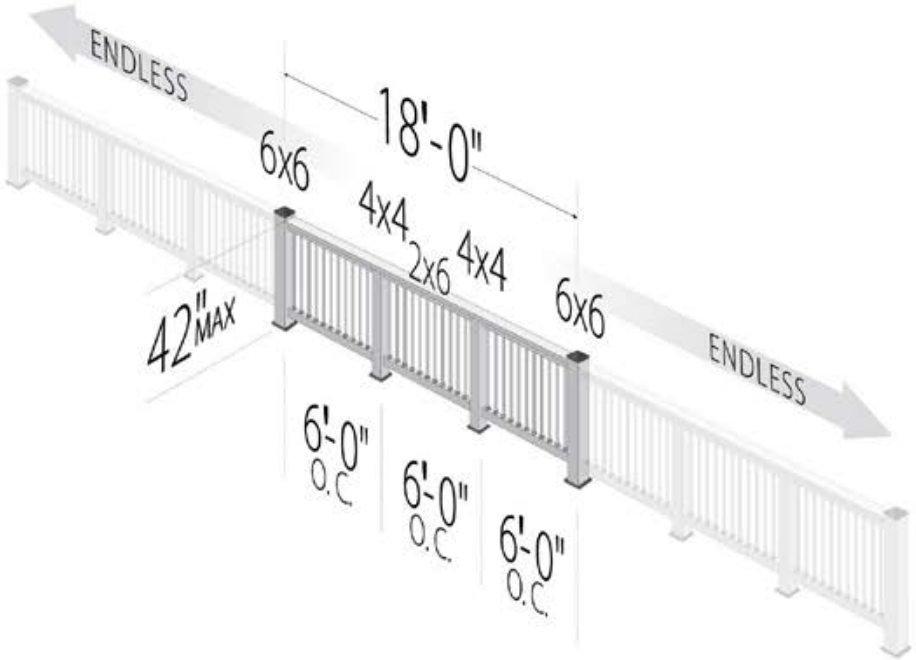


International Residential Code (IRC)

These illustrations cover off the key installation guidelines you must follow if you wish to build a railing using the Titan Wood Post Anchor that will comply with either the 2015 or 2017 residential codes.

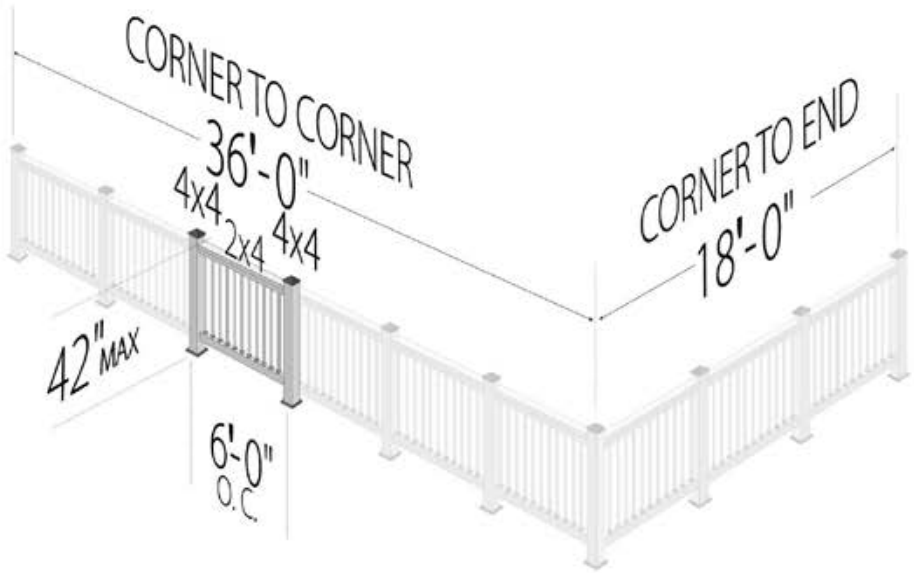
AC 273 2017

6X6 WITH 4X4, 42" HIGH, 6'-0" O.C.



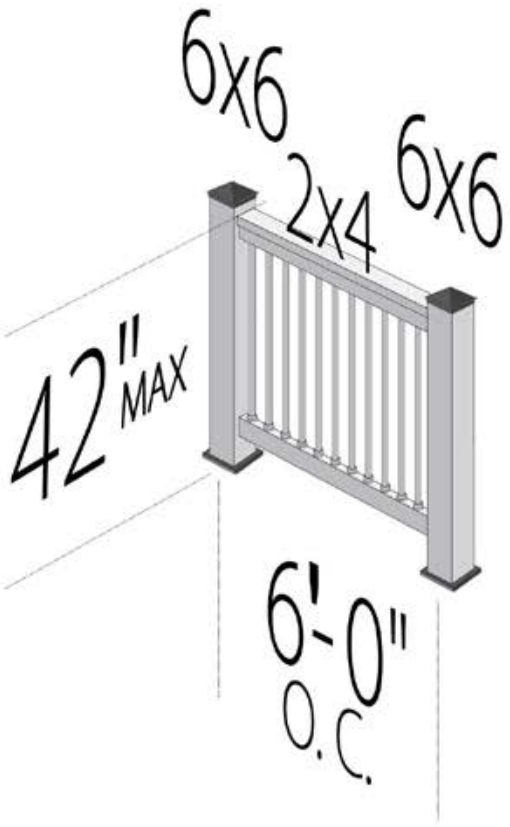
National Building Code of Canada (NBC)

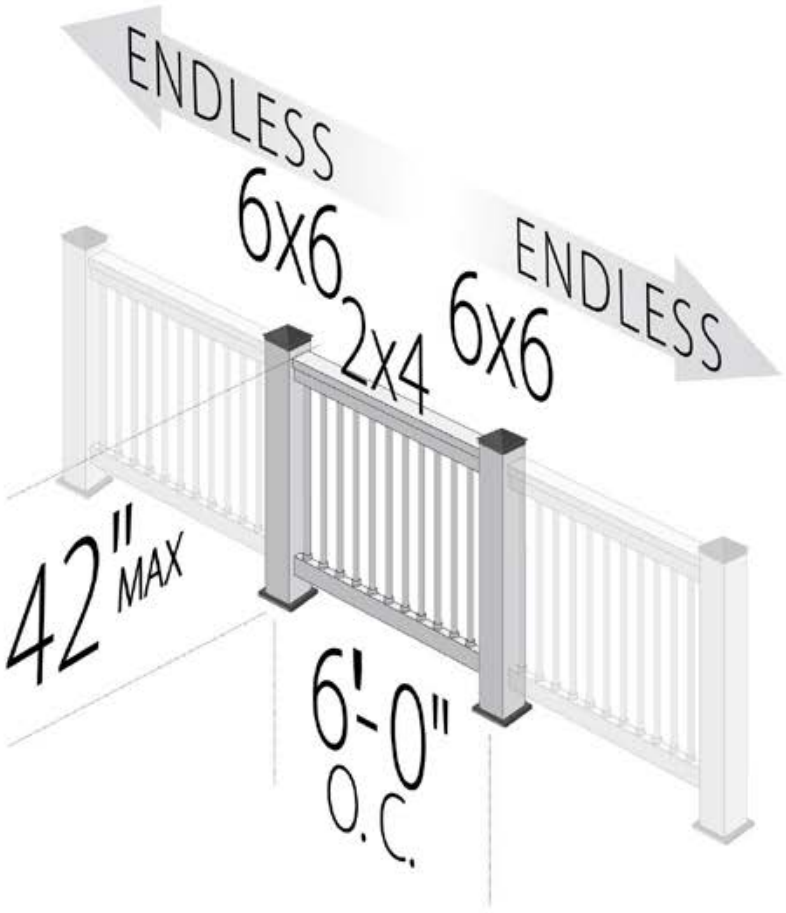
4X4 POST, 42" MAX HEIGHT, 6'-0" O.C.



National Building Code of Canada (NBC)

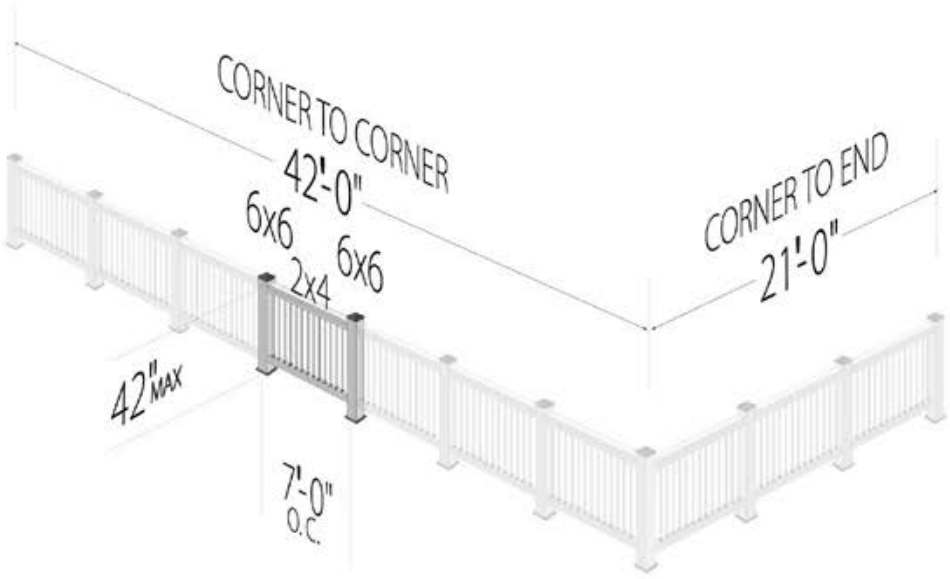
6X6 POST, 42" HIGH, 6'-0" O.C.





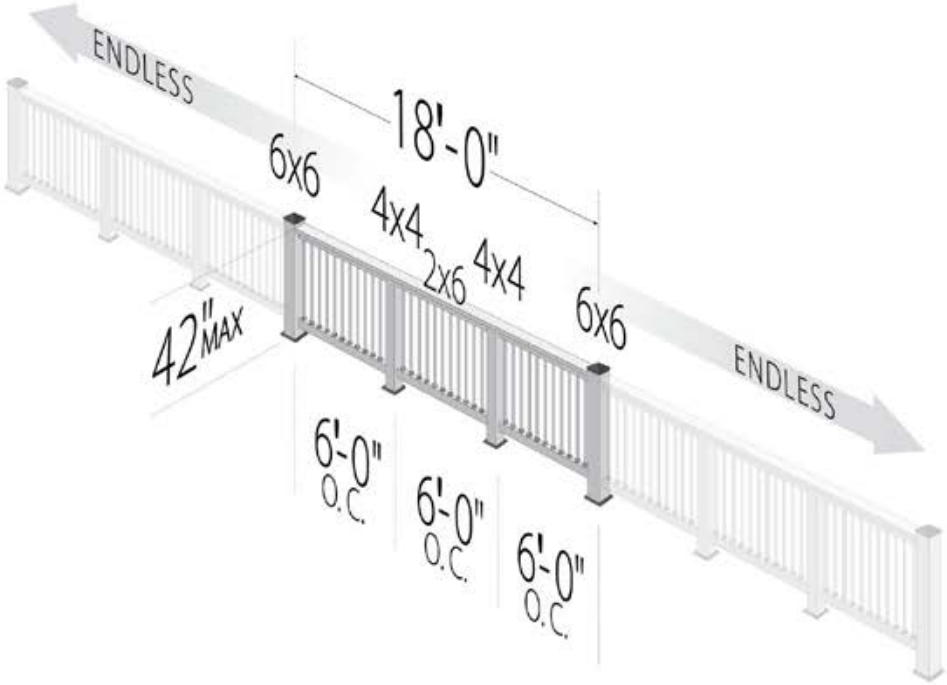
National Building Code of Canada (NBC)

6X6 POST, 42" HIGH, 7'-0" O.C.



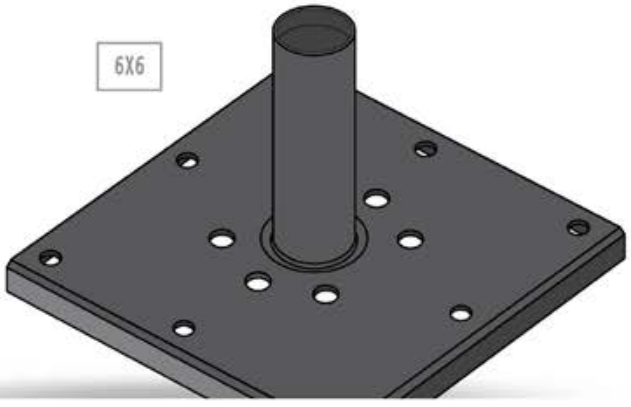
National Building Code of Canada (NBC)

6X6 WITH 4X4, 42" HIGH, 6'-0" O.C.



Building a **pergola** *or* **gazebo?**

Whether you want a ***pergola*** or ***gazebo*** type structure on a ***concrete slab*** or a ***wood framed*** deck, the ***6x6 Titan Wood Post Anchor™*** works perfectly for the job.



More beautiful decks... *Real easy.*

TITAN WOOD POST ANCHOR™

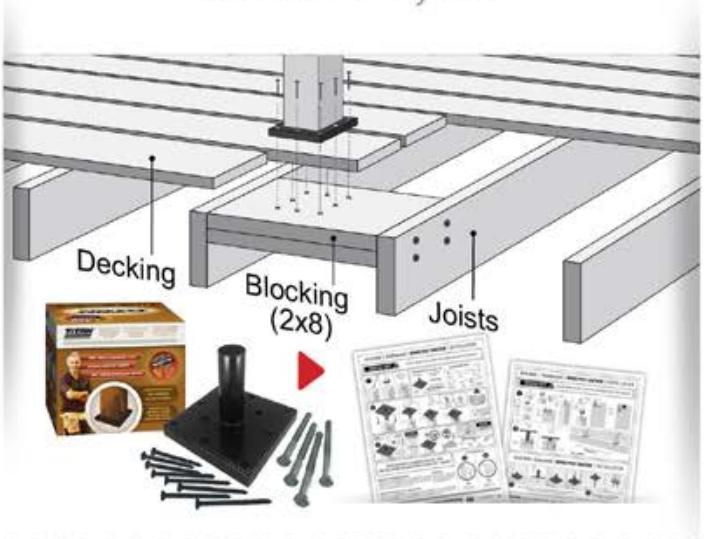
CONCRETE SURFACES

Use ***concrete fasteners*** such as Wedge-Bolt ¼" x 3", ***GRK*** Caliburn 19/64" x 3-½"or even a ¼" x 3" ***expansion bolt.*** For ease of use, ***Wedge-Bolts*** or ***concrete screws are preferred. You only need to install one in each corner.*** But if you wish, you can add more.

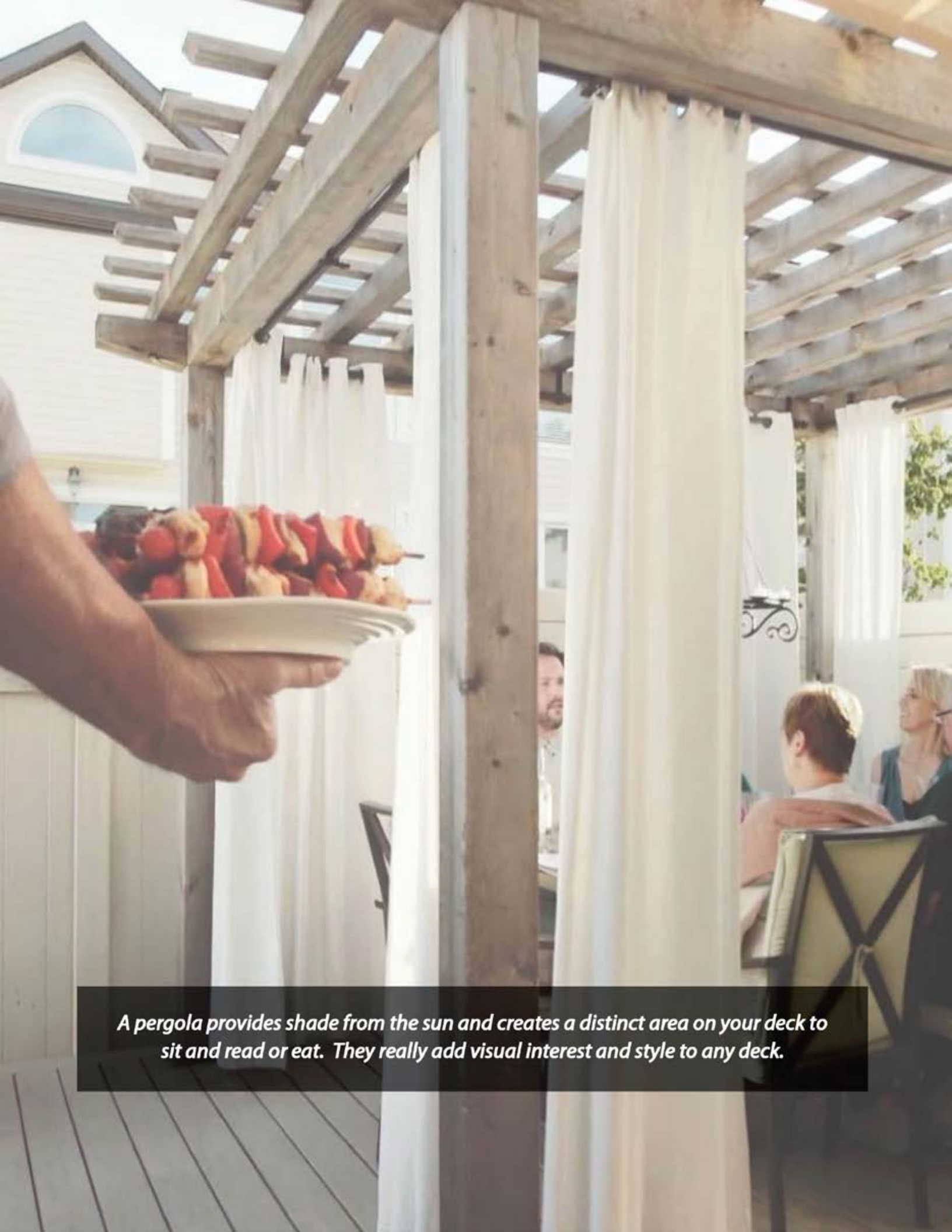
⚠ Follow the tips on installing the post anchor on concrete. Remember that the post anchor will ***not be providing all the lateral resistance at the top of the pergola.*** That will come from the way you build the structure and secure the rafters and beams to the posts.

WOOD FRAMED SURFACES

Use the fasteners included in your kit for securing the post anchor to the decking. ***Blocking is required*** in the joist bay between the joists.



⚠ ***Follow the instructions provided*** with your kit for installing the ***post anchor to the posts. Bracing between the posts and rafters is recommended*** to stop the pergola from racking. Some construction designs may be sufficient and not require bracing.



A pergola provides shade from the sun and creates a distinct area on your deck to sit and read or eat. They really add visual interest and style to any deck.

WOOD AND METAL POST ANCHOR SKIRTS

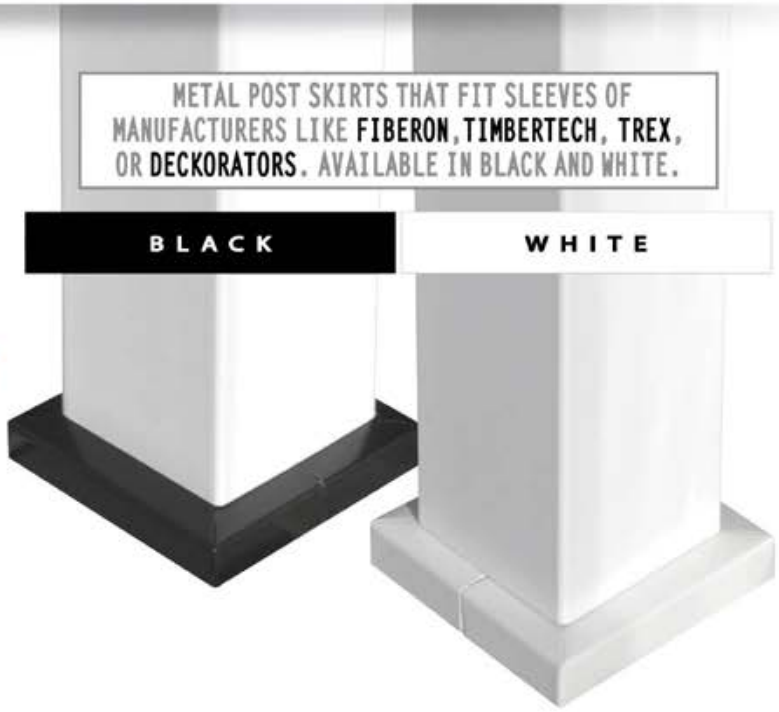
Align it, click it... **Done.**

More beautiful decks... *Real easy.*

The finishing touch to **any post!**

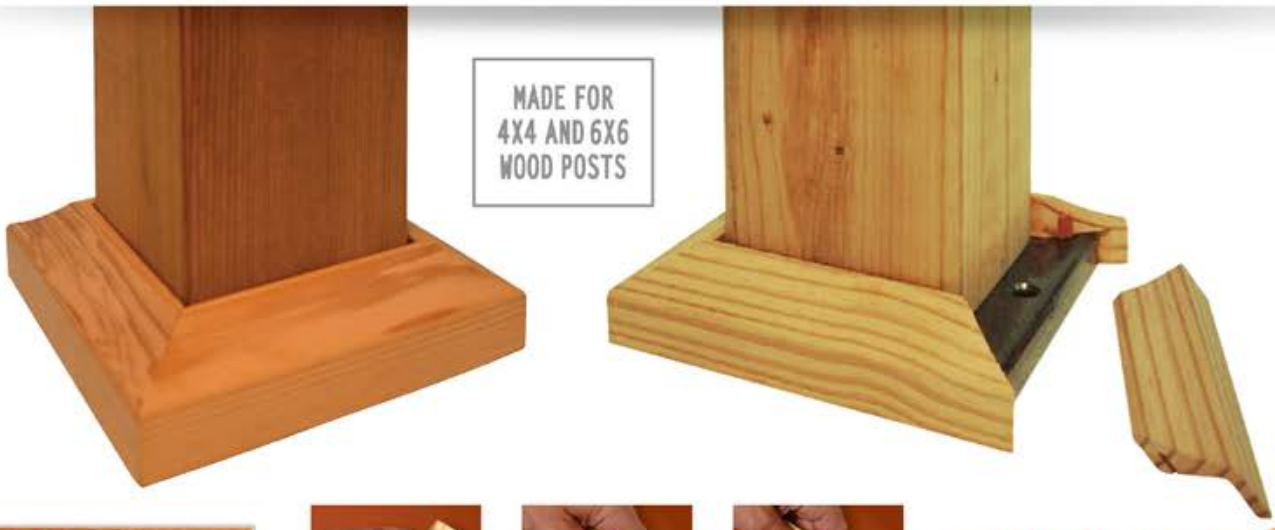
6 OPTIONS OF METAL SKIRTS AVAILABLE FOR 4X4 AND 6X6 WOOD POSTS

METAL POST SKIRTS THAT FIT SLEEVES OF MANUFACTURERS LIKE **FIBERON**, **TIMBERTECH**, **TREX**, OR **DECKORATORS**. AVAILABLE IN BLACK AND WHITE.



GRAY	BROWN	COPPER
BLACK	WHITE	STAINLESS

MADE FOR 4X4 AND 6X6 WOOD POSTS



CEDAR

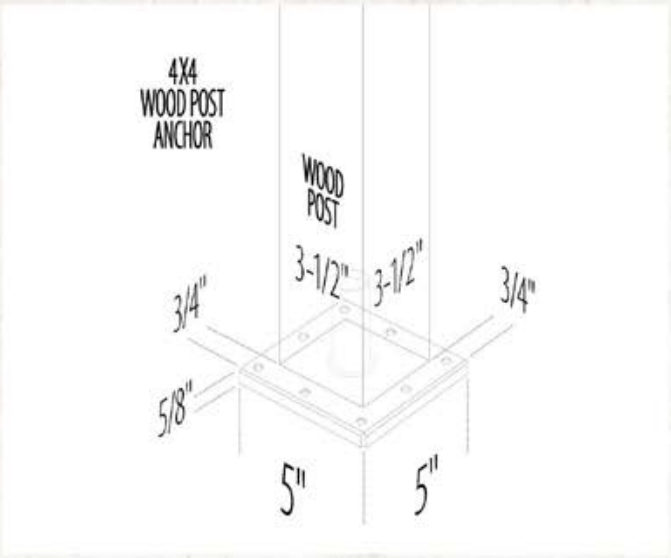
TREATED PINE

INSTALLATION IS A **'SNAP'**

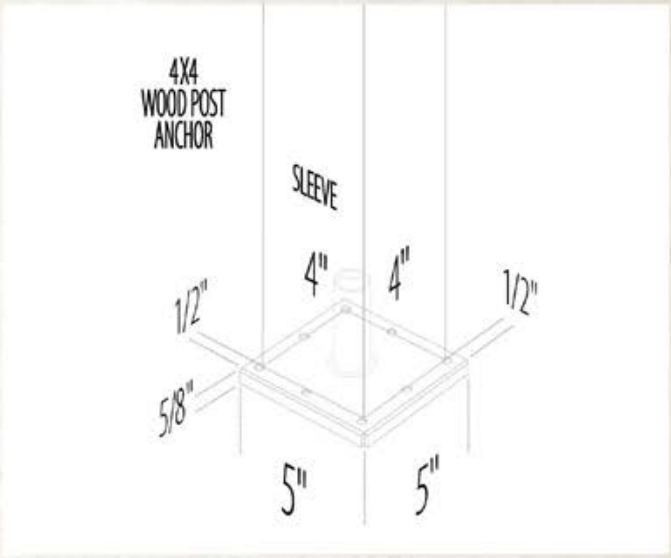
Wood post and metal sleeve
common sizes.

Here are ***4 common post and sleeve sizes***. Our Post Anchor Skirts are ***designed to fit these common sizes*** they slide around and over wood posts and manufactured sleeves for a beautiful finish.

1



2



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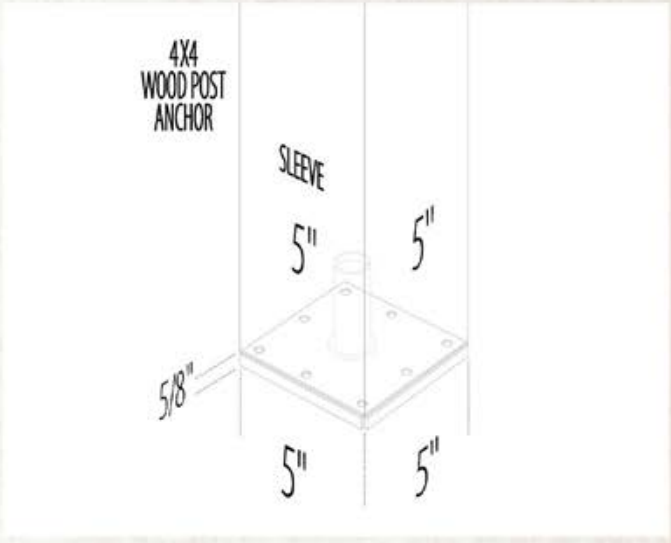


4

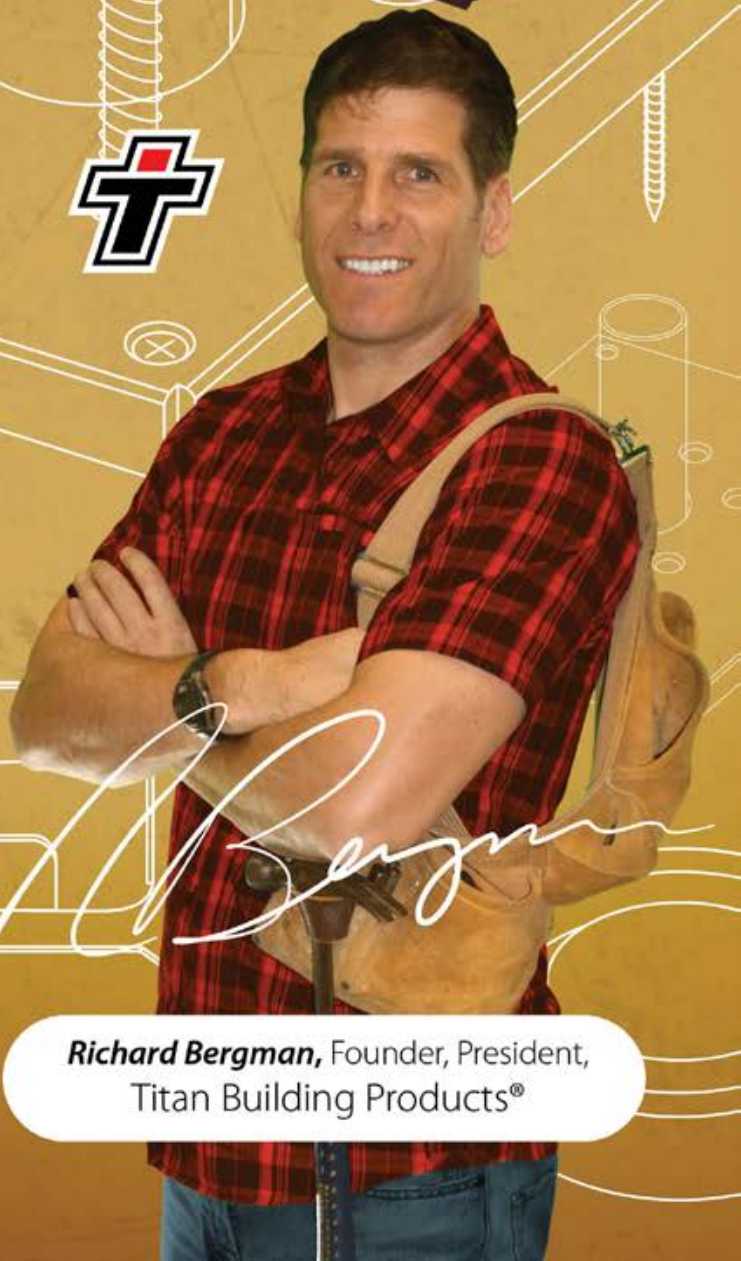
I Get It... I Build Too.

WOOD POST ANCHOR

Great for *residential deck railings, pergolas, gazebos* and more.

Save time and effort not having to notch decking around posts.

Avoid complicated joist hardware and carpentry techniques while keeping your wood posts high and dry for super long life.



Richard Bergman, Founder, President, Titan Building Products®

e·GUIDE