



CR | FENCE
& RAIL
SAFETY, MADE EASY.™

Cable Flat Rail Kit Installation Guide

**Need help? Text us the
picture of your problem**

v060324



You made the right choice of railing!



Cost-Effective



Safe & Durable



Quick to Install



**Easily Extendable
(Modular)**



Time Required

Ground attachment:

wood - 20+ minutes

concrete - 60+ minutes



Tools Required

An electric drill/hammer

An impact drill is preferred (although not required) for installing the concrete bolts for concrete steps, lag screws for wooden steps, or other ground attachments.

Means and Methods Disclaimer

In no event shall CR Handrail have any responsibility, control over, charge of, responsibility, or liability for the means, methods, techniques, sequences, or procedures, or for safety precautions in connection with the installation of the railing, since these are solely CM/GC's, Subcontractor's, and Owner's responsibilities.

Each installation site differs widely ranging from the construction & condition of attachment points, local building & safety code, local construction code, and local means & methods.

CR Handrail's installation guide (whether it be in text, illustration, video or in support discussion) constitute for ideal installation condition. There is no ideal installation in real life. There is no substitution for consulting a local licensed contractor, architect, engineer, nor code inspector.

CR Handrail's installation hardware and tools are provided as building material and does NOT constitute as the specific nor final installation hardware. Once again, you and your installer must make the final on-site determination to the specific means and methods of installation appropriate for your installation.

Following CR Handrail's instruction does NOT constitute as proper installation as you and your installer must make the final means & method determination. Improper installation can lead to failure of rail system which can cause serious injury.



Please make sure the hardware and tools we provided will be right for your install (READ means & methods disclaimer). IT IS POSSIBLE YOU NEED DIFFERENT HARDWARE & METHODS. Please take your time to do your installation. If you are unsure or uncomfortable with the installation, we highly recommend hiring a licensed and bonded contractor.

**We've made it easy for
you to install your post!**



**Scan this QR code
for a detailed video
explanation of how
to install your new
handrail correctly.**

Masonry Tools & Hardware Explained

FOR CONCRETE

**5/16" (8mm)
Anchor Bolt**



**5/16" (8mm)
Masonry Drill Bit**



**SDS+ available
upon request*

**Diamond Core
Drill Bit**



*For hard stone
available upon request

Note: This will be a tight fit. In fact, the specification calls for the drill bit and anchors to be the same size. Some installers use a 3/8" drill bit to make the installation easier, and other installers wiggle the drill bit to bore the top of the hole slightly bigger. (We are aware of the tight fit and we must only recommend using our masonry drillbit without wiggling).

WARNING

The strength of the anchor is dependent on the hole size & concrete integrity. A hole that's too big or concrete that's not up to standard grade can make the anchor wiggle or possibly come out. This is what can cause a rail to fail & fall over.

What's in your Kit?

ANCHOR KIT



8 Wedge Anchors



10 Flat Washers



8 Lag Screws



2 Metal
Post Cover

CORE KIT



1 Wood Pilot Hole Drill Bit



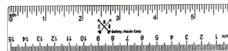
1 Masonry Drill Bit



1 Drill Bit Extender
(for Hex Bit and Nut Holder)



1 Depth Measuring Pencil



1 Ruler



1 H4 Hex Bit



1 Hex Nut/
Bolt Driver



1 Bubble
Leveler

MAIN PARTS



1 Post A



1 Post B



1 Top Rail

ITEM SPECIFIC ACCESSORIES



2 Brackets



2 End Caps



4 Flat-end screws



2 Self-Drilling screws

CABLE PARTS



1 Wire Rope Clamp



1 H5 Hex Bit



1 Gloves



10 1/8" Cable Swage Tensioner



10 Cable with Terminals attached



Installing Your Handrail in 1-2-3 Parts

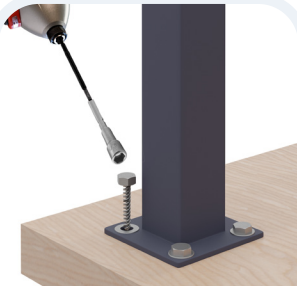
1

**Assemble
Handrail**



2

**Post to Ground
Attachment**



3

**Install
Cables**



PART

1



Assemble Handrail

Your kit includes posts labeled “Post A” and “Post B”. When positioning them, ensure the cable holes are facing in the correct direction.

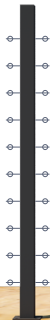
Determine Post Position

1.1



Cable holes

Post A



Post B

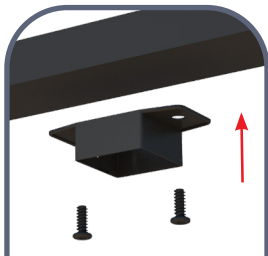


Note that this side of the Post B has significantly larger holes to fit the Cable Swage Tensioner.

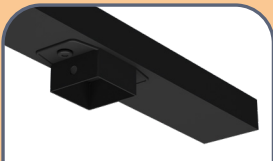
1.2

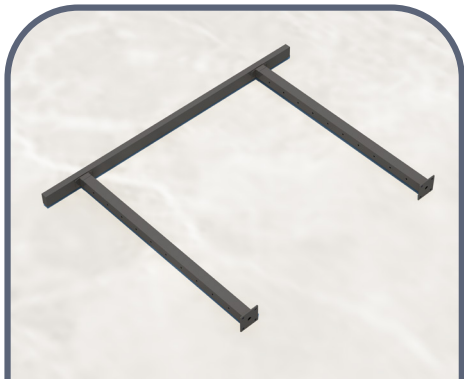
Assemble Top Rail

Attach the Brackets to the Top Rail using 4x Flat-end screws, utilizing two screws per bracket for secure fastening. Then attach end caps.



Make sure the hole is facing inwards.





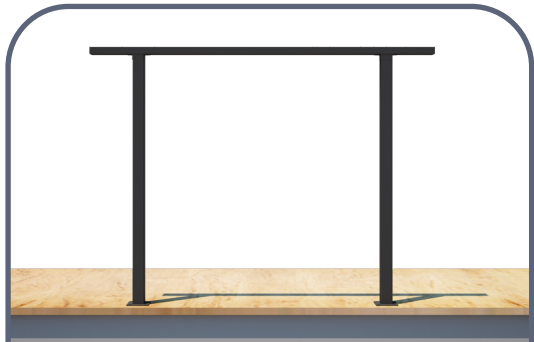
Loosely Assemble Handrail Flat on Ground.

The handrail will stay unsecured until the post is properly mounted. We will loosely position the handrail first to mark holes for post-installation.

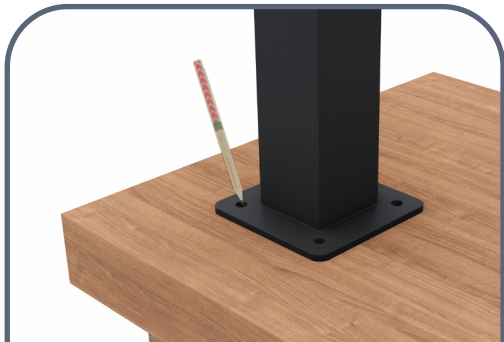
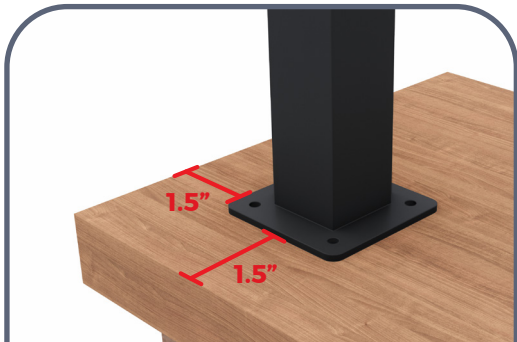
1.4

Position and Mark the Holes

Position the Handrail making sure that the baseplate is parallel to the edges.

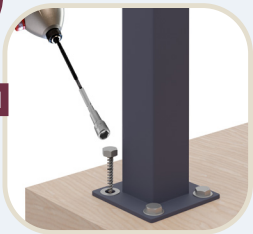


Ensure that the baseplate is 1.5" (4 cm) away from the edges. Once properly aligned, mark the locations of the baseplate holes on the surface.



PART

2



Post to Ground Attachment

FOR CONCRETE

Please adhere to local & statewide building code. Recommended distance from the edge is based on standard-grade concrete (2500 psi).

If your concrete is 'high-strength' concrete, the edge distance can be reduced. (See ICC Chapter 19, Table 1908.2)

Drill Holes

2.1

**Smaller drill bit
(Continue to Step 2.4)**

FOR WOOD



**Larger drill bit
(Continue to Step 2.2)**

FOR CONCRETE



2.2

Ensure Correct Depth

FOR CONCRETE

Use the CR Fence & Rail pencil to measure the depth of the hole with the flat end of the pencil.

*Note: This is only for rough measurements.
This is to ensure the hole is deep enough.*

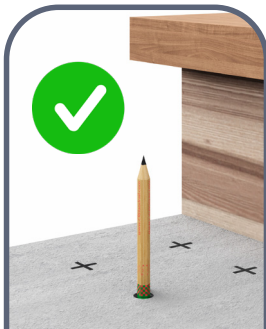
*For Wood,
please go
straight to
Step 2.4*

Ensure that the holes are deep enough to avoid encountering serious issues later on.

Hole NOT deep enough
Keep drilling deeper



PERFECT DEPTH



Hole TOO DEEP!
Careful NOT to insert
Anchor too deep



2.3

Install Anchors

FOR CONCRETE



Once the holes are made and depth verified, hammer the anchors into the holes.



Tip: To avoid pushing the anchor too deep, stack two washers and two nuts at the end of each anchor before hammering.

Periodically Double Check!

Place the post on the anchor and ensure the nut has enough thread for secure tightening.



2.4

Secure Post to Ground

NUT SOCKET



BIT EXTENSION



Use the nut socket & bit extension

FOR WOOD



LAG SCREW

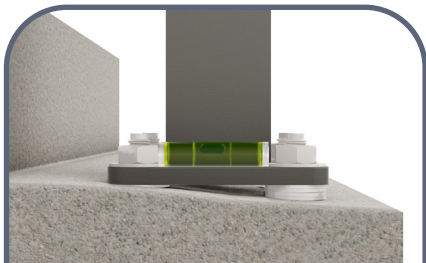
FOR CONCRETE



WEDGE ANCHORS

What if Post Not Level?

If ground is not level, use included extra washers to shim the baseplate



FOR WOOD



1. Align the posts above the pre-drilled holes.

2. Secure each post by installing a washer and lag screw, one at a time.

3. Once all posts are installed, double-check each to confirm they are firmly tightened.

Tip: Turn on your drill's hammer or impact feature for better performance if it has one.

FOR CONCRETE

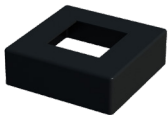


- 1. Remove all nuts and washers, then place the posts on the anchor bolts. Attach a washer and nut to each post, one after the other.**
- 2. Tighten a washer and nut by hand on each anchor bolt for a secure connection.**
- 3. Use an electric drill to firmly tighten the nuts. Make sure the drill's hammer or impact setting is off to prevent damage.**

2.5

Put Post Cap on

**Insert the Metal
Post Cover into the
Post by sliding it in.**



Attach Top Rail

2.6

Use the provided self-drilling screws to attach the brackets securely to the posts.



H4 HEX BIT



BIT EXTENSION



2X SELF-DRILLING SCREWS

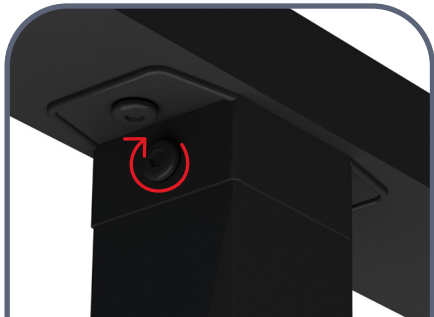


2.6

Attach Top Rail

Use one (1) self-drilling screws per bracket. Apply pressure as needed, taking care to protect your fingers while holding the screws in place.

Tip: Pre-drilling hole is NOT necessary. The self-drilling screw will make a hole when force is applied. If you must, use a small drill bit to make a pilot hole.



Make sure that the handrail is firmly and securely assembled before moving forward with the installation of the cables. This ensures stability and safety throughout the installation process.



PART

3

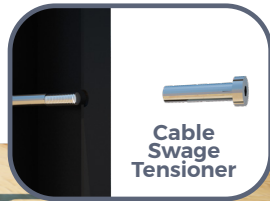
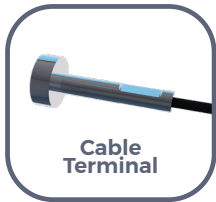


**The Cable Terminal End
will be on Post A while the
Stud Terminal End and
Cable Swage Tensioner
will be on Post B.**

Install Cable Wire

Post A

Post B



3.1

Insert Cable

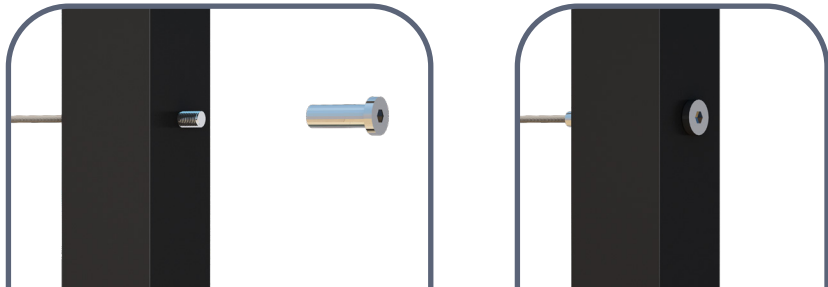
Pass the cable with the stud terminal end through the holes on the post, starting from Post A and moving towards Post B.



Connect Tensioner

3.2

Connect the Cable Swage Tensioner onto the Stud Terminal to initially secure the cables.



3.3

Tighten Cable

H5 HEX BIT



BIT EXTENSION



Tighten the cable terminal using a hex bit and a bit extension. Tighten the cable until there is no slack remaining.



Prevent Cable Twisting

Use the wire rope clamp to prevent the rotation or twisting of the Cable while it's being tightened.

Attach as close to the stud as possible.



3.4

Equalize Tension



After installing all cables, make slight adjustments to each tensioner to ensure balanced tension across all cables.

Press on each cable to ensure they all feel equally firm, making further adjustments as needed for uniform tension.



**Great
JOB!**

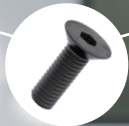


Congratulations on
successfully completing
the installation of your
Cable Flat Rail Kit!

A family of four is enjoying a modern outdoor deck. In the background, a man and a young girl sit on a grey wicker sofa. In the foreground, a woman and a young boy are walking down a set of wooden stairs. The deck is surrounded by a black metal railing with a light-colored wooden handrail. The scene is set against a backdrop of lush green trees and a clear sky, with sunlight filtering through the foliage.

**Rail kits for your
home's every need!**

**For BGR4R and
BGR6R Guardrails**



**Ensure the top and bottom
rail has just the right spacing
between posts**

**CR Fence & Rail's
Specialty Post**



Included



NOT included

TRConCA



TRConSA



TRConSF



TRConCF-Slm



SCAN ME

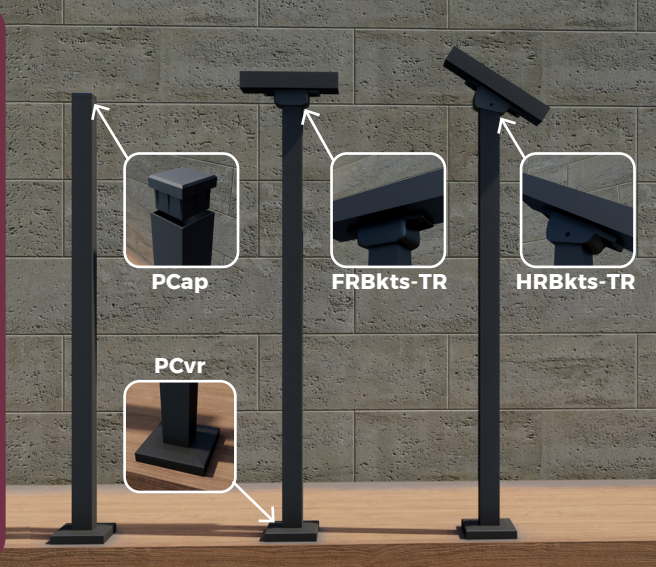


Connect your CR Fence & Rail
Kits using our wide variety of
Top Rail Connectors

Explore CR Fence & Rail's
Brackets and Covers



SCAN ME



10 Years' Free Warranty

We've doubled our support from 5 years to 10, showing our commitment to you and the trust we have in our railings for outdoor steps.

To view our full warranty policy, visit:
www.fencerail.com/warranty





Need help?

- Connect Multiple Railings
- Technical Drawings
- Complicated Installations
- Installation Error
- Missing Parts

Text with Photos
(800) 420-0432





Chi & Richard with family at San Diego Safari Park

A heartfelt message from the owners of **CR Fence & Rail**

Chi is an architect and Richard is in real estate construction. With the combined knowledge and expertise, Chi & Richard believe they can provide the best commercial grade railing product that can be installed by anyone. They want to take the time to say thank you. If you got the time, Chi, Richard & the **CR Fence & Rail** team love to see a photo or video of your installation!

- Chi & Richard from CR Fence & Rail

**Your picture and
video post helps those
who are worried about
the installation.**



Susanna P.



I was worried

Reviewed in Canada on October 12, 2020

Size: 4 Steps **Verified Purchase**

I was a little worried that the handrail would be difficult to install. It comes with everything you could possibly need to install the railing. Hats off to the peo-

2 people found this useful



**SAFETY
FOR ALL!**



**Help Us Make
a Difference.**

**How can we
make it easier
for you?**



Missing Parts?
www.fencrail.com/parts

Support



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