



User guide

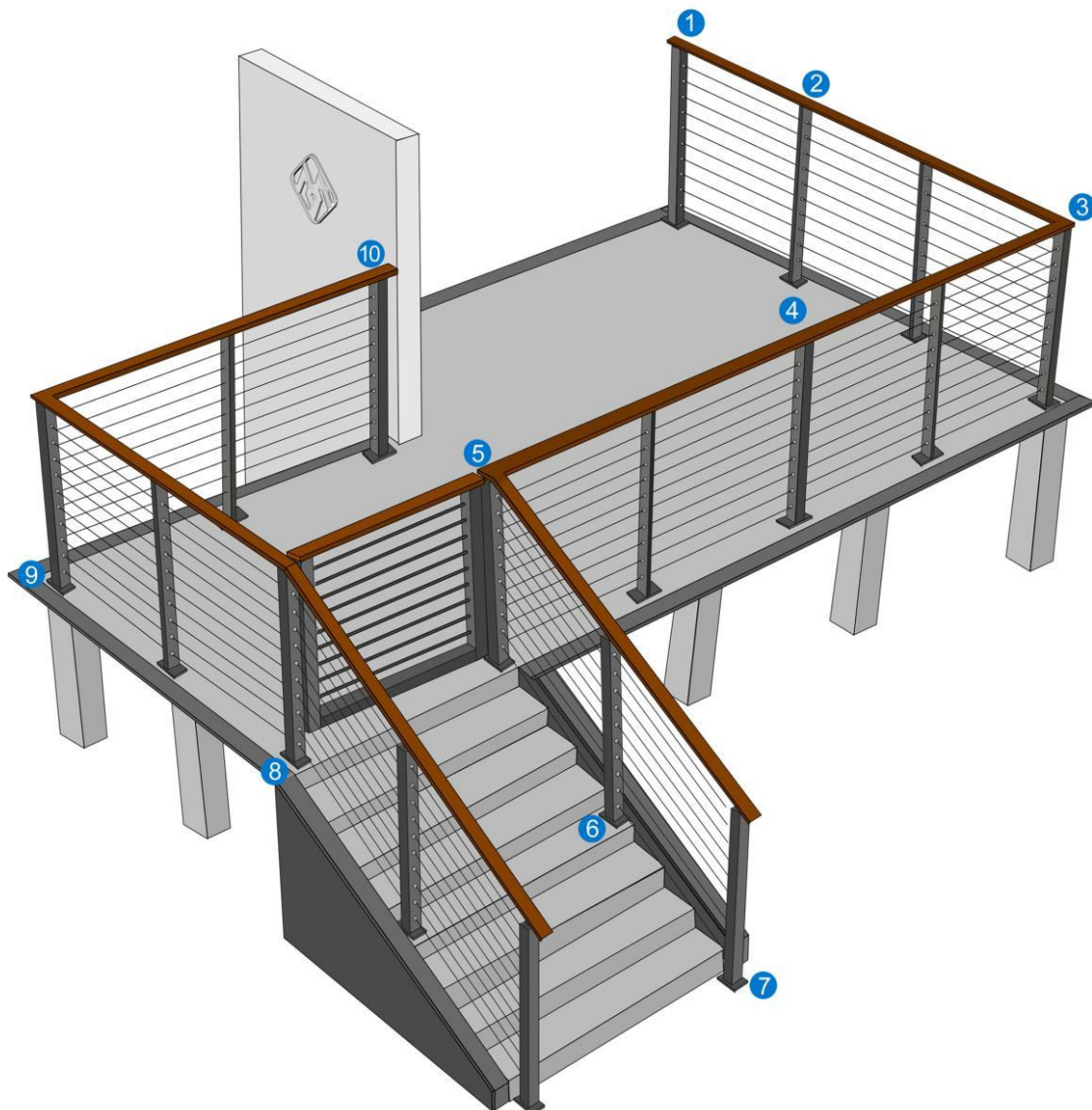
BlackCool

Cable railing system

01

Overview

BlackCool system is designed for a cool modern look. The whole system is based on stainless steel or aluminum materials. Everything is custom made with a black appearance to create a cool and peaceful vibe.





02

Components

02-1 Posts



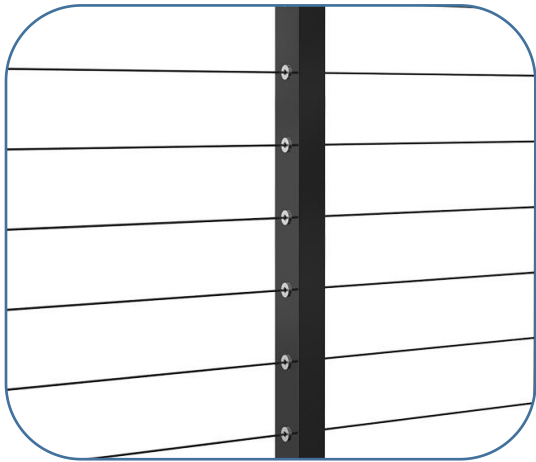
Post selection

Position	36" black	42" black
①	PS02 BH4S	PS02 BH4L
②	PS32 BH4S	PS32 BH4L
③	PS02 B34S	PS02 B34L
④	PS02 BH4S	PS02 BH4L
⑤	PS02 BC4S	PS02 BC4L
⑥	PS01 BA4S	PS11 BA4L
⑦	PS01 BA4S	PS01 BA4L
⑧	PS02 BH4S	PS02 BH4L
⑨	PS02 B34S	PS02 BH4L
⑩	PS02 BS4S	PS02 BS4L

- PS01 - Top mount square posts with angle brackets, work for both level and angle sections.
- PS02 - Top mount square posts with flat brackets, only work for level sections.
- PS32 - Top mount slice posts with flat brackets, work as intermediate posts (level).
- The 6th letter of mode number means hole type. PS01 BA4S the red "A" means angle holes.

Hole types

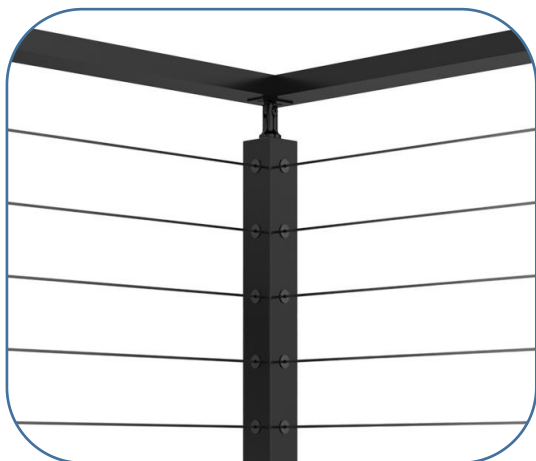
Our pre-drilled posts are designed with several hole types to work for different positions. Hole type selection is also related to the terminal type you decide to use.



Level holes (H)- holes on two opposite planes for terminals and cables to go through in a horizontal direction.



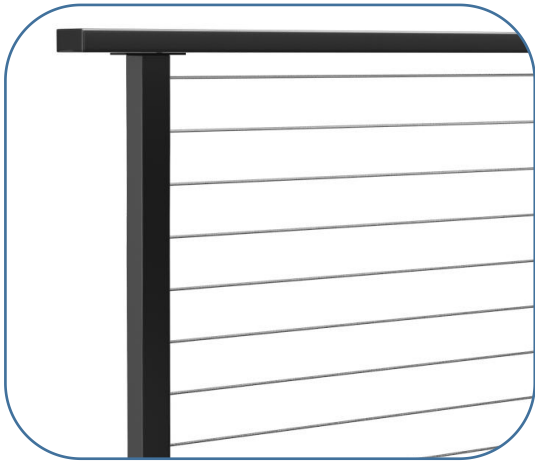
Angle holes (A)- holes on two opposite planes for terminals and cables to go through on an angle direction around 30° . Holes on one side are higher than on the other side.



Neighbor holes (C) - holes on two adjacent planes for one post corner solution.



3 level holes (3)- holes on 3 planes for through-hole terminals to go with inner terminals



Single holes (S)- holes on only one plane for end posts to go with inner terminals.



No holes(N) - there are no pre-drilled holes. You can drill it yourself for any hole type.



Level to angle corner holes (D) - holes on two adjacent planes for one post corner solution from a level section to an angle section. Holes on the level side are higher than on the other side.



Single high holes (T) - holes are on only the higher side for starter posts of stair railing to get a neat look on the other side.

02-2 Handrails



In this system, we recommend HT10 black rectangle handrails, There are two material options.

- HT10 BFA-Aluminum black fluoropolymer coated (works for coastal projects).
- HT10 BP4-T304 Stainless steel black powder coated.

Handrail	End cap	Straight connector	Corner connector	Pivot connector
HT10 BFA	HA10 PB1	HA01 BNP	HA02 BNP	HA23 HA24
HT10 BP4	HA09 BP4	HA01 BNP	HA02 BNP	HA23 HA24



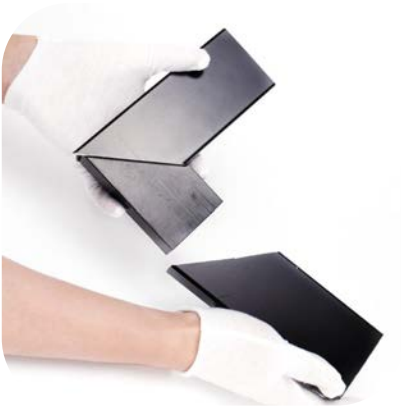
[HA10 PB1](#)



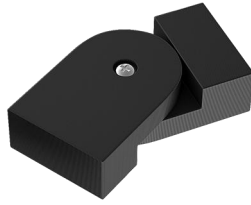
[HA09 BP4](#)



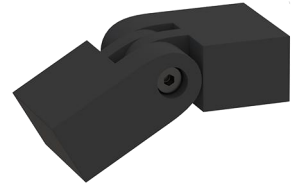
[HA01 BNP](#)



HA02 BNP



HA24



HA23

02-3 Wire ropes

Both of the following cables could work for this system



WR17

Black vinyl coated T304 stainless steel wire rope ID 1/8". For both indoor and outdoor projects.



WR19

Blackened T316 stainless steel wire rope 1/8". Only for indoor projects.

Notes

- We have two ways of packing. Wire rope in reel would be easier to control after you open it while wire rope in roll is cheaper.
- The cable in roll is recommended to open in a bucket, which could help to control the cable as it expands.
- 1/8" are recommended for code compliance in most states.
- We also have wire ropes with 5/32" or 3/16" size, vinyl-coated cables, blacken cables for your choice. Please search "muzata WP1" to find more. And remember that you should use terminals of the same size to go with wire ropes. For example, 1/8" cable should go with 1/8" terminals.

02-4 Cable terminals

Cable terminals will fix the cable on posts and fasten the cable to get enough tension as safeguards. Invisible terminals are recommended to get a neat look at the railing. Please check the following images to see where and how they are used for.



Tensioner

CB07 - Patent swageless invisible tensioner for metal posts.

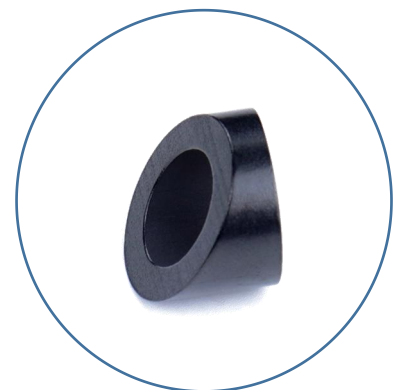
Other options:
CB05 CR26 CR38



Inner terminal

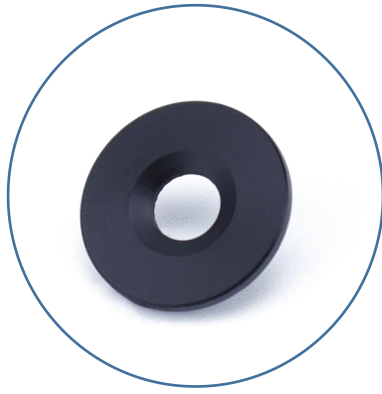
CB17 - Patent swageless invisible terminals for corner posts and one-side drilled end posts

Other option: **CR07**



Angle washer

CR60 - Angle washers for stair railing around 30°



Adhesive sleeve

CR66 - To cover the holes
Other options: CR75 CR65 CR67



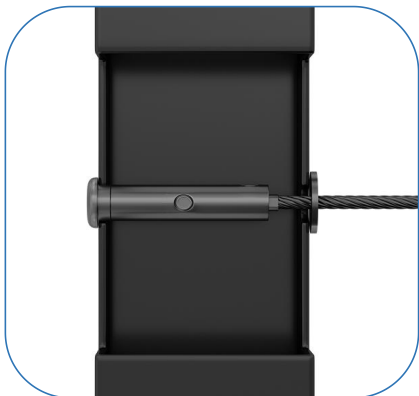
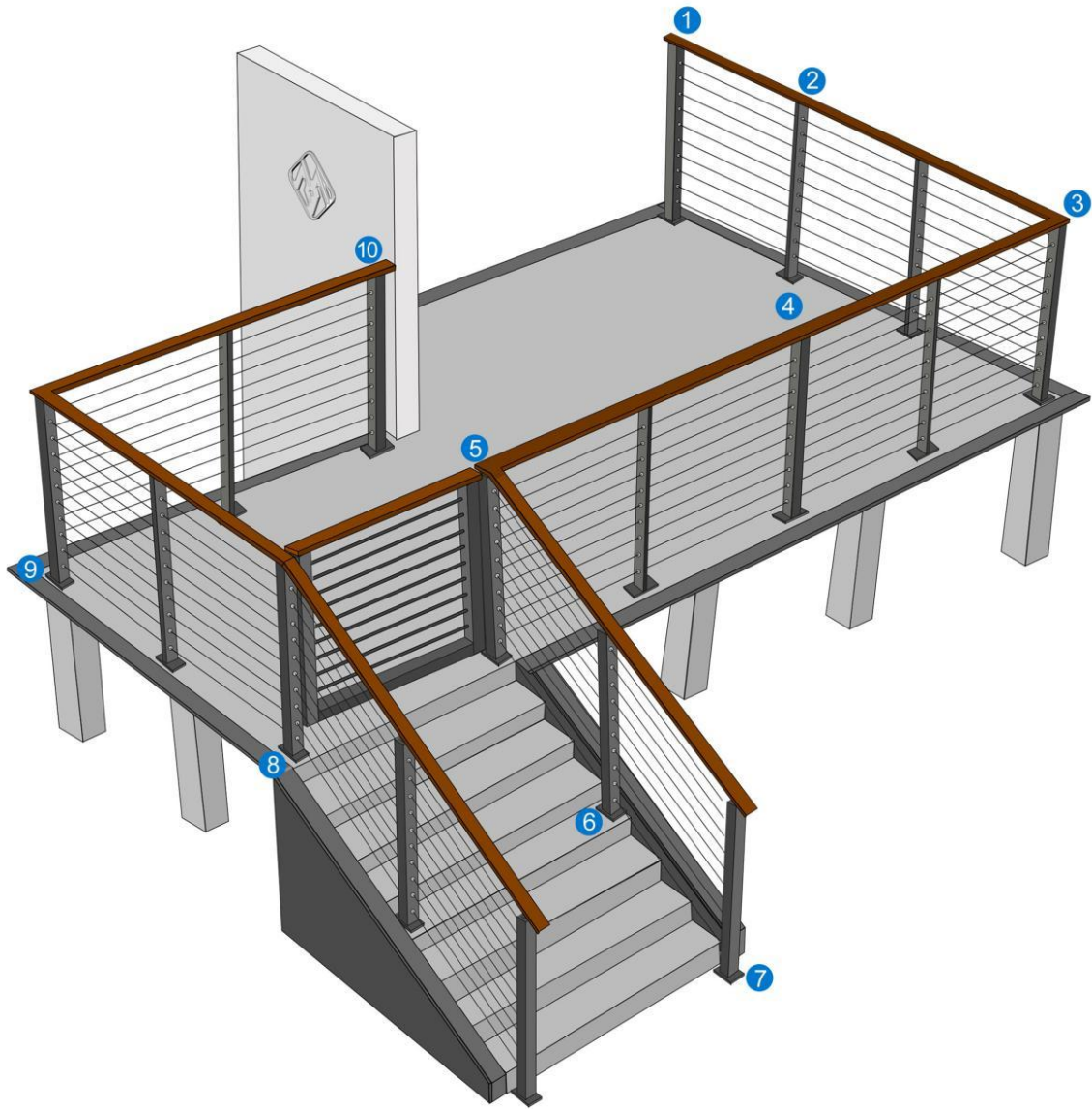
Protector sleeve

CR72 - Pressure bearing
for metal posts

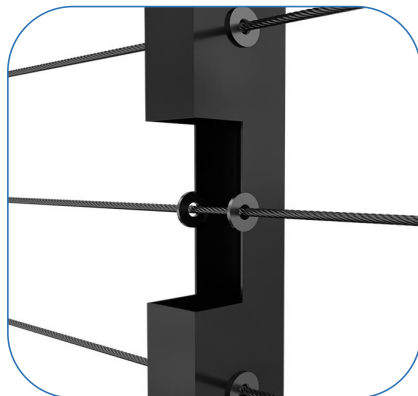
Notes

Concrete wall - if you need to install terminals on concrete/brick/stone walls.

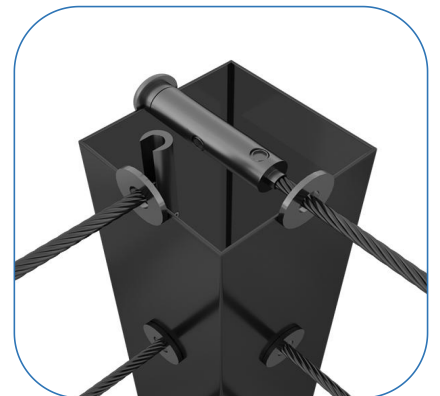
Please use our expansion tensioner [CB25 \(1/8"\)](#) / [CB26\(3/16"\)](#)



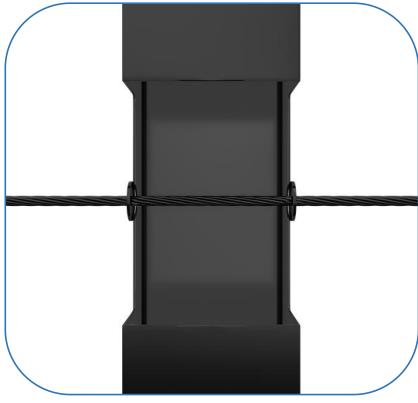
① CB07+CR66



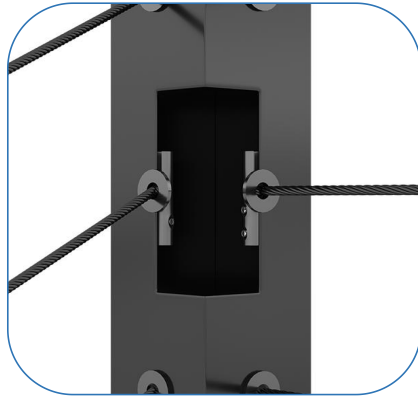
② CR66+CR66



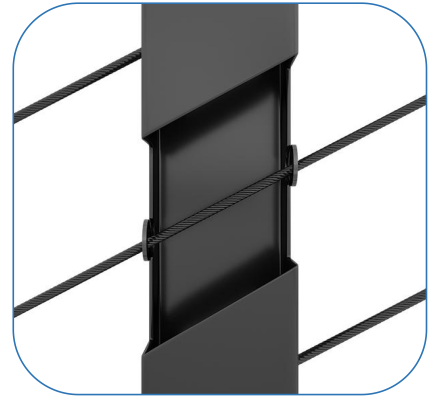
③ CB17+CR66+CB07+CR66



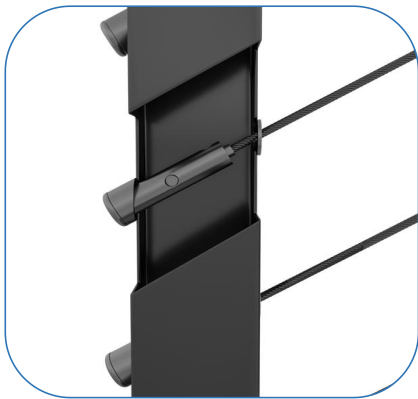
④ CR66+CR66



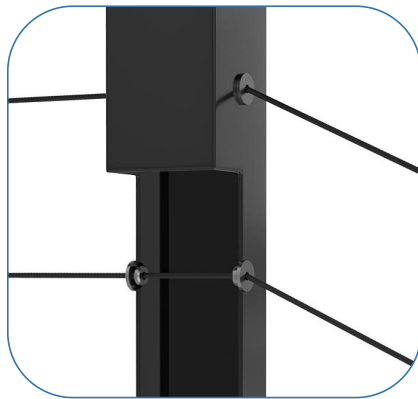
⑤ CB17+CR67+CB17+CR66



⑥ CR67+CR67



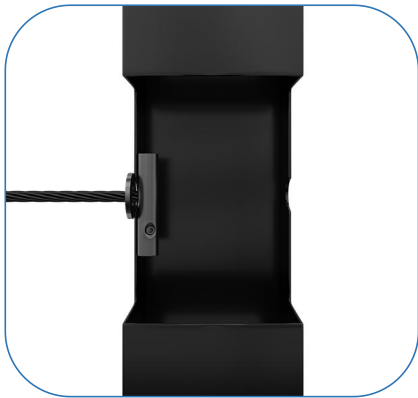
⑦ CB07+CR60+CR67



⑧ CR72+CR72



⑨ CB17+CR66+CB07+CR66



⑩ CB17+CR66

02-5 Tools



Cable cutter CT15

For cable cutting



Custom socket wrench CT16

For terminals tensioning



Adjustable wrench

For installing post screws



Allen wrench

For terminals tensioning and cable fixing. Attached.



Electric miter saw

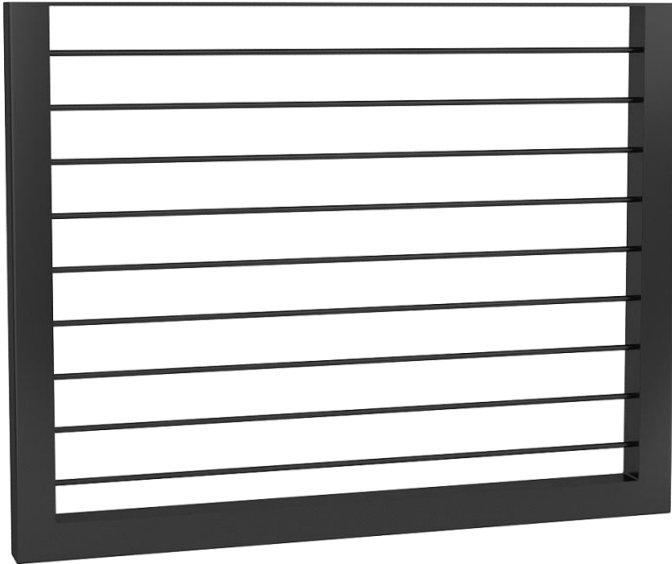
For cutting handrails



Philips driver

For installing handrails

02-6 Optional components



Cable railing Deck gate DG01

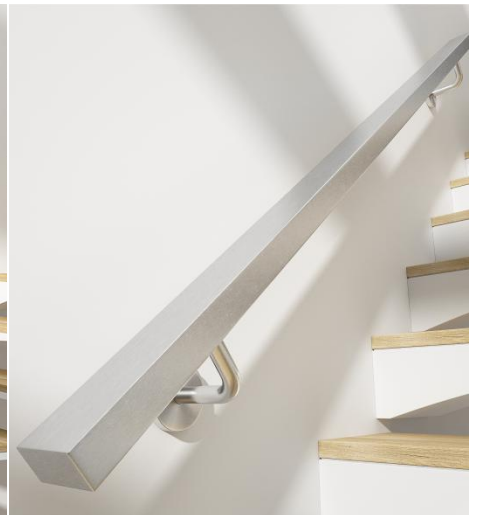
Custom-made deck gates are designed to work with cable railing for consistent appearance.



HK26



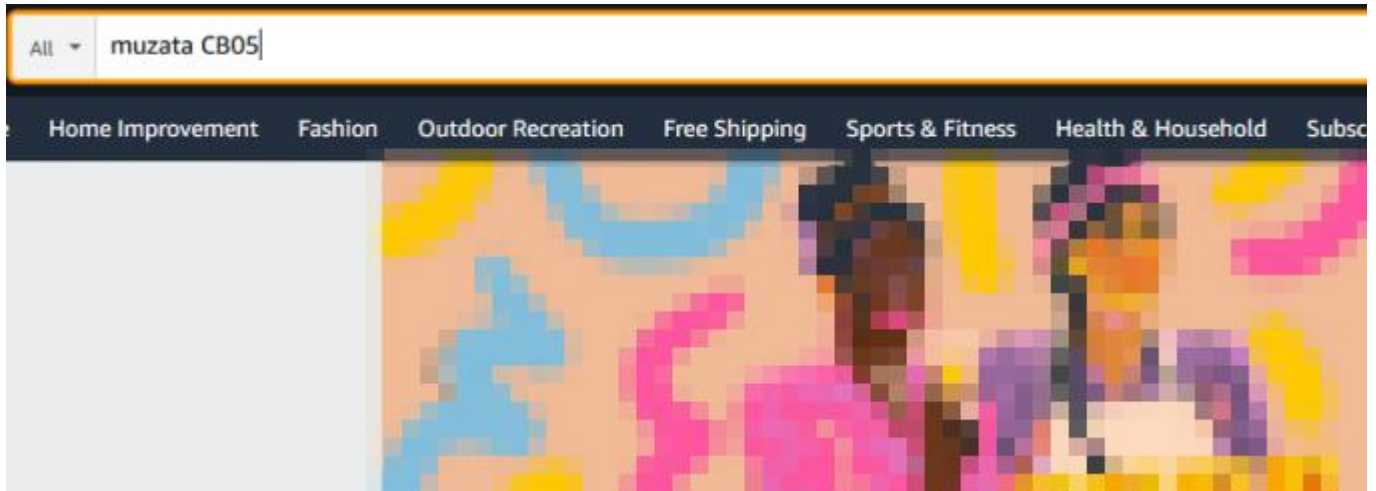
HK27



HK28

Wall mounted handrail kits

02-7 How to find the products?



- (1) Click on the model number with link (blue) on this file to open the web page
- (2) Search "muzata + model number", like muzata CB05

03

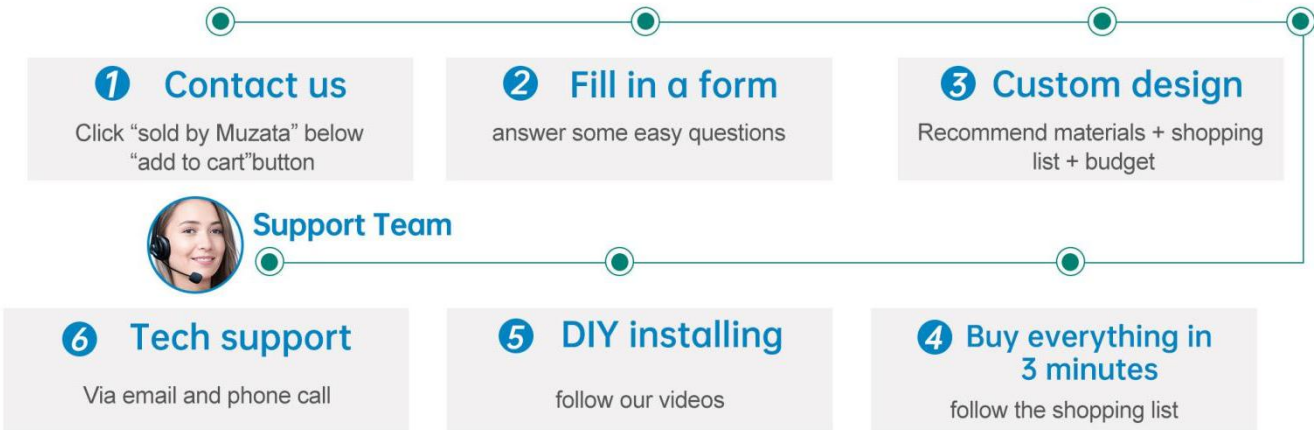
Design

If you are a beginner or not sure about how to do it. Please feel free to contact us. Our experts can do all the planning, designing and budget work for you without extra charging. Then you can follow the shopping list to buy all the materials in 3 minutes.



Expert Team

TEL: 323-975-9828 | TEL: 323-210-4098



04

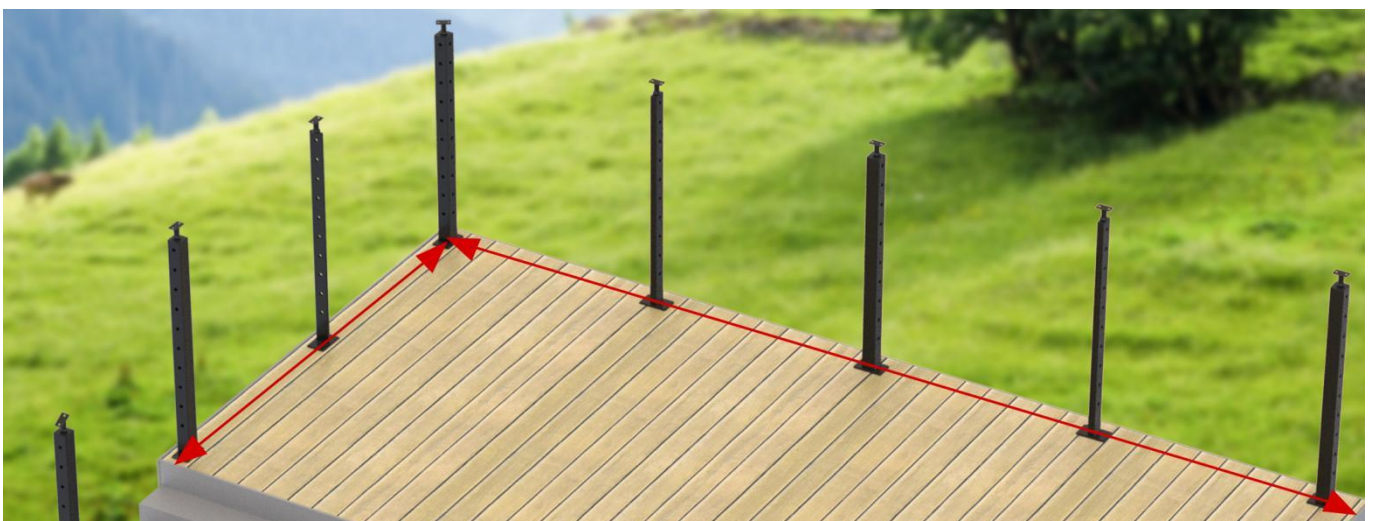
Installation

Things to Know Before You Get Started

- Please consult your local office for building codes and make sure you know all the requirements of the codes. Some states might have special rules of their own. You should choose carefully to comply with them. We can't promise everything to comply with all the codes of every state.
- It is recommended to do some planning work and estimate a budget. Please contact us if you need help with that. You might want to buy a few more materials than expected since some materials could be used by operation mistakes. Especially swage terminals and wire ropes.
- It is suggested to be 2 person project.
- When electric instruments (Electric drill, Cutting Machine) are used in the installation process, Please be careful.
- Please note that products made of T304 stainless steel can't work for projects within 10 miles of sea. They will also get rusty easier than expected when being near salt water or in highly humid conditions.

04-1 Posts installation

04-1-1 General steps



Draw guidelines

1. Draw guidelines along the paths you want. The lines will keep your posts aligned.
2. Mark positions for posts, check the following notes for post distance.



Drill guide holes

- Mark the hole positions.
- Drill guide hole with a 1/4 drill bit for the depth of screw length.



Install lag screws

- Install lag screws with a 13mm wrench or an adjustable wrench.



Level check

- Check with a level tool. Adjust the lag screws to make sure the post is vertical to the ground.

04-1-2 Corner solution

There are two options for corner posts. Please check section 04-3-2 for more details.

Notes

- Remember to install all the structural posts first before installing intermediate posts.
- Make sure your posts are aligned if they are in the same line.
- The guide holes will make it easier for lag screws to go in.
- For concrete/brick/stone surface, please replace the lag screws with expansion bolts .
- We recommend the max span of two structural posts to be 4 feet. If there is a stabilizer post between them, the max span can be up to 7 feet.
- There is a 4-inch sphere test for cable railing in some states. So there should be intermediate posts between structural posts to reduce the deflection. 3-4 feet post space is recommended.
- If you are going to drill holes by yourself please make sure to comply with the codes .3" space between cable lines is recommended for most states.

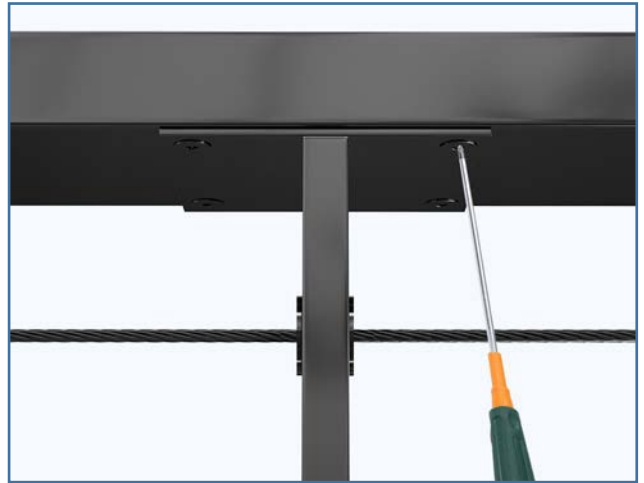
04-2 Handrails installation

04-2-1 General steps



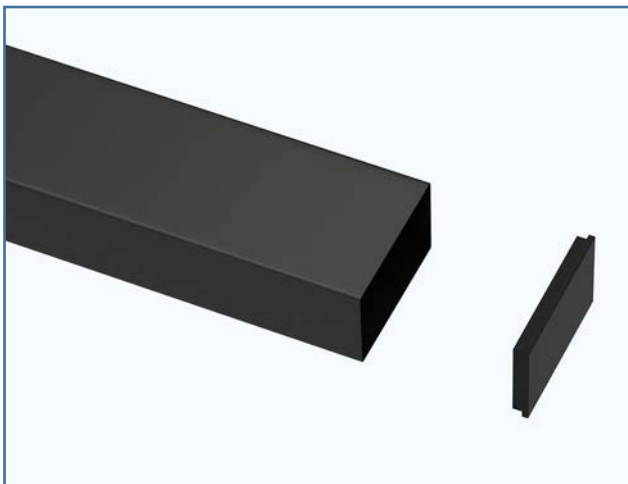
Cut the handrail

Measure and cut the handrails for the length you need with an electric miter saw.



Install

Install the handrails to the bracket of posts.



End cap

Place an end cap at the end of the handrail.

04-2-2 Linear connection



Connect

Connect two handrails with a straight connector



Install

Install the joint on a post for supporting

04-2-3 90° Corner

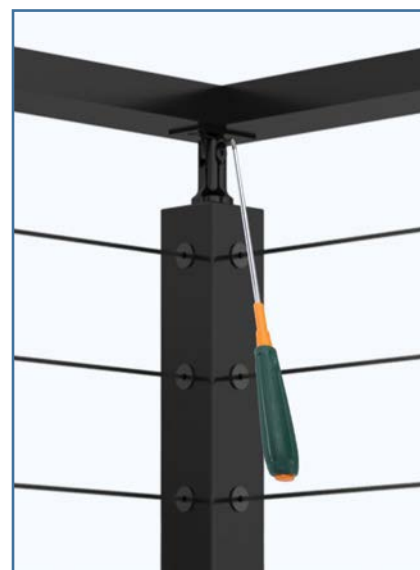
Option 1: Miter cutting



Cut the handrail into 45°end



Connect the two handrails with a corner connector

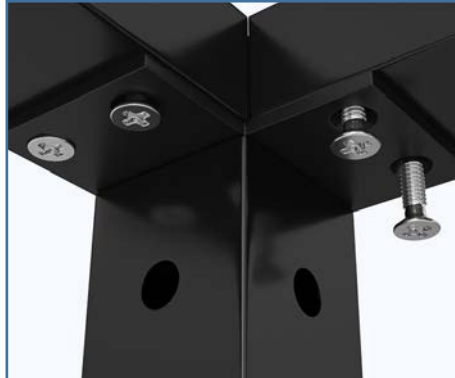


Install them on posts with screws

Option 2: Cover kit



Place the corner bracket first then connect the handrails with the corner connector

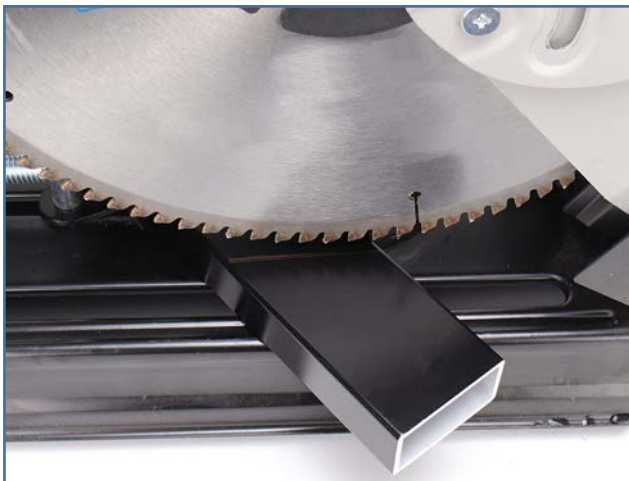


Install them on posts with the screws attached

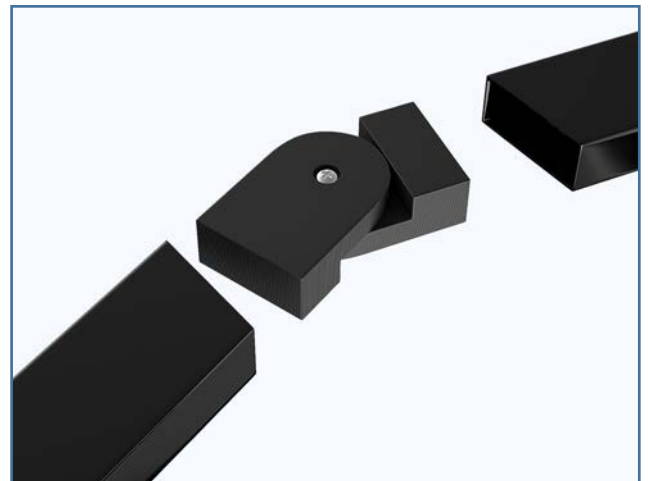


Place the cover. The cover will also help to cover the ugly miter cutting.

04-2-4 Random angle corner



① Cut the handrail end into the angle you want



② Put the pivot connector HA24 in

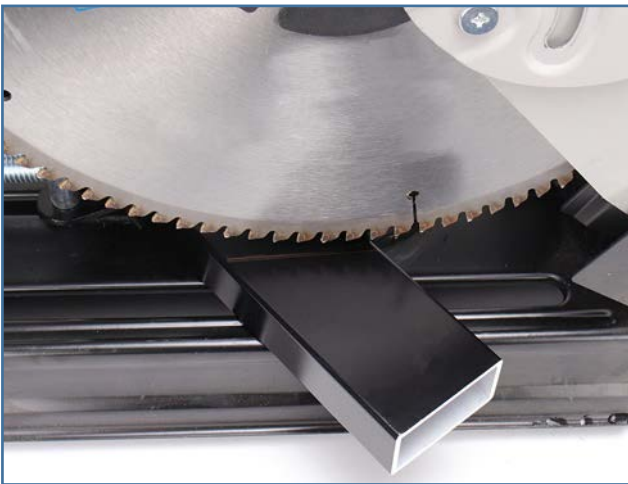


④ Fix the connector and handrails with screws

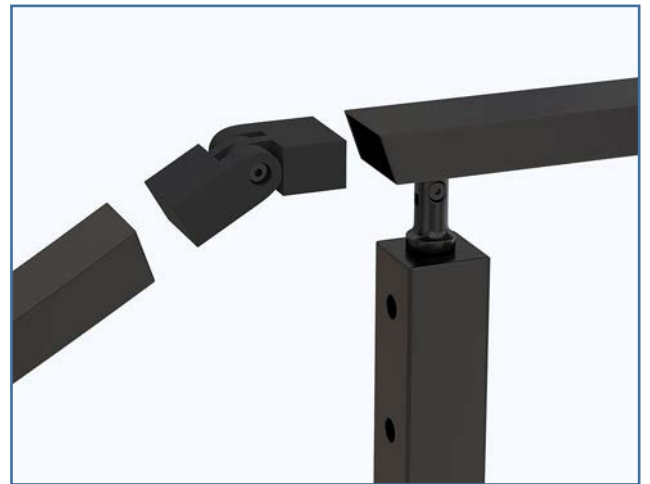


⑤ Install them on posts

04-2-5 Random angle on vertical plane



① Cut the handrail end into the angle you want



② Put the pivot connector HA23 in



③ Fix the connector and handrails with screws



④ Install them on posts

Notes

- You can make a connector for random angles with a straight connector if pivot connectors are not available.
- Please try your best to place a post under each joint to make sure all the joints are supported. If it is not possible in some cases, at least there should be posts nearby to support them.

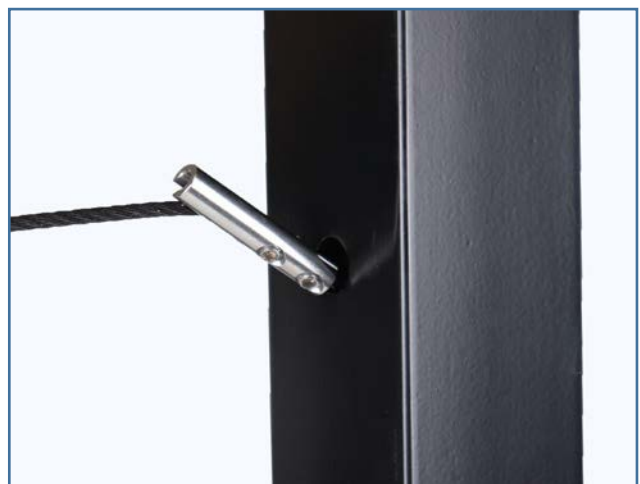
04-3 Cable infilling installation

04-3-1 General steps



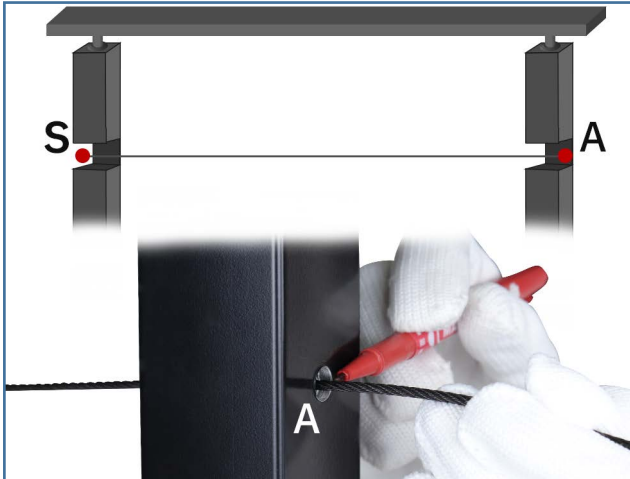
Install the cable

Install the cable end into CB17, Screw the jack bolts tight enough to fix the cable. Make sure the cable won't slip out while tightening. Remember to put the adhesive sleeve in before that.



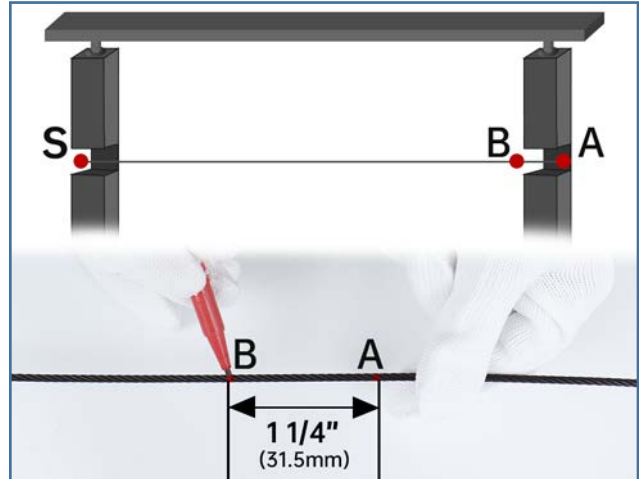
Install fix end terminal

Put CB17 into the post then release it. It will get stuck inside the post and make the cable can not be pulled out.



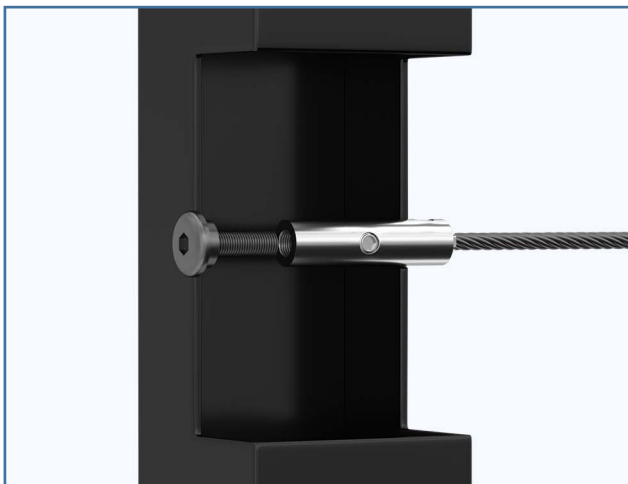
Measure the cable

Draw the cable to the other end and let it go through the post hole. Pull the cable tightly and mark point A.



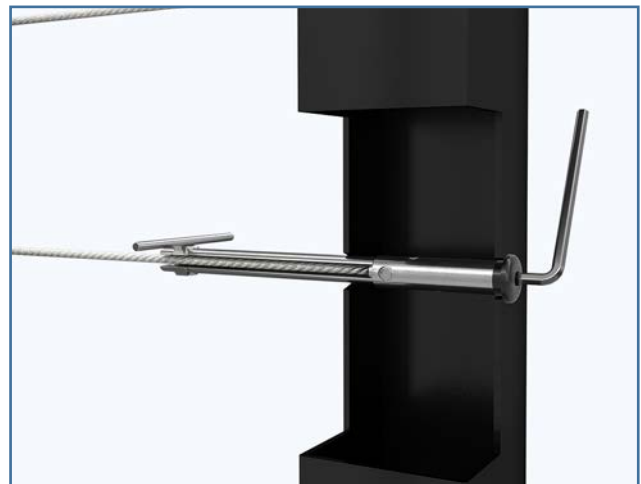
Trim and cut

Subtract the trim length (about 1 1/4 inch) and mark point B. Cut on point B to get the correct length. The trim length is based on general conditions. Sometimes you might need to adjust it according to your project.



Install tensioner

Fix the other cable end on the tensioner as step 1. Then install the tensioner to the post. Remember to put the adhesive sleeves in before that.



Tensioning

Tighten the cable to proper tension with CT16 and an Allen wrench.

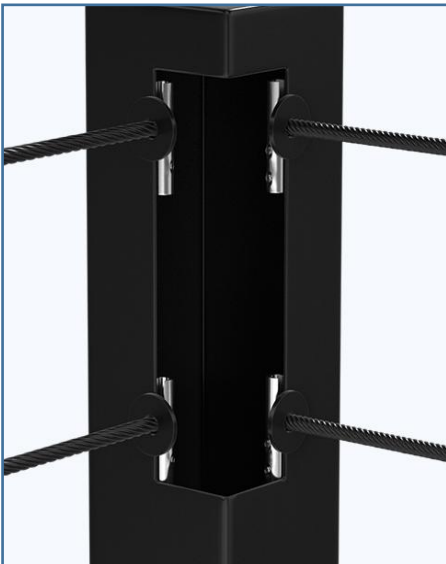


Cover the holes

Cover the holes with adhesive sleeves

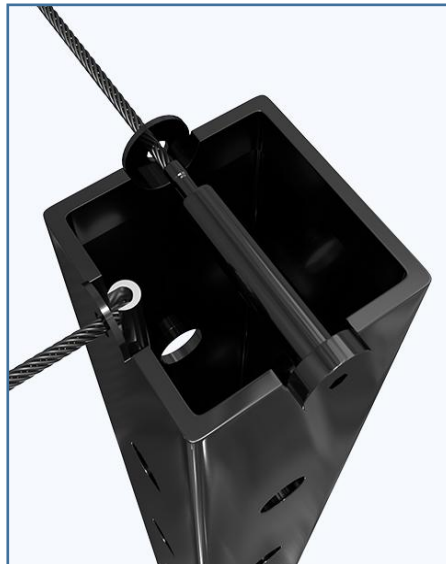
04-3-2 Corner solution

Single post



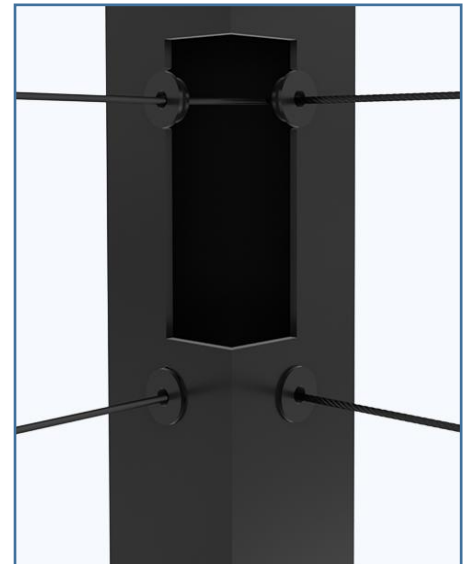
Option 1

A neighbor-hole post to go with 2 inner terminals.



Option 2

A 3-level-hole post to go with 1 inner terminal and 1 tensioner.



Option 3

A neighbor-crhoelwpsost to go with 2 wheel protector sleeves to bear force and let the cable go through the corner.

Two posts



Use wheel protector sleeves CR72 to bear force and let the cable go through two posts and the corner.



The cable end on one post and start with another one, you will need two terminals.

Notes



1. Please follow the sequence to tighten the cables as shown in the left image.
2. For swage tensioners, please preserve some tensioning range in case the cable gets loose due to temperature change in years.
3. Remember to expand the tensioner before measuring to make sure there are room for the tensioner to shrink while tightening.
4. Swageless terminals are reusable, you can always redo the process if you did not do it right at first.

- When using wheel protector sleeves to bear force and let the cable go through the corner. Remember that the cable should not go through corners less than 90°. And it is not recommended to let the cable go through more than one corner continuously since it will be difficult to tighten the cable.
- Install infilling on stairs is pretty much the same as level sections. Only you have to add an angle washer for each terminal that is not multi-angle.



- If your local building code requires 4" sphere test, The tension is recommended to be around 200 lbs to pass the test. You can buy a tension gauge online or local store.

Congratulations ! You're done

Please feel free to contact us via phone call or email if you have any questions.

☎ 323-975-9828
323-210-4098