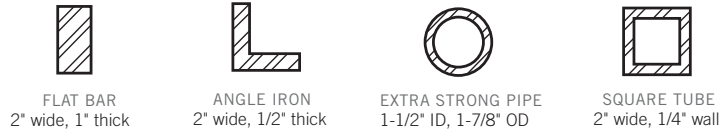


Metal Frame Requirements

Railing frames need to be designed and built strong enough to support the tension of properly installed cables, which is a load in excess of 300 lbs for each cable. Here are some basic guidelines to help you properly prepare your railing frames. These guidelines apply whether you are using 1/8", 3/16" or 1/4" cable.

Minimum sizes for all corner and end posts

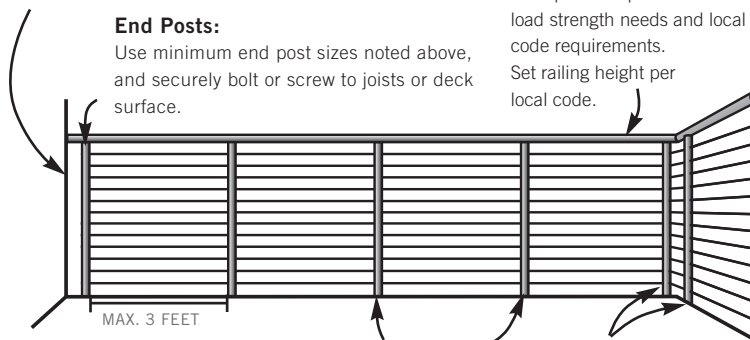
All other posts should be sized as required for cap rail support strength or for code



The Basic Frame Design

Spacing From Walls:

Set end posts 3 to 4 inches away from the house/wall face to allow access for attaching cable end fittings.



Maximum Post Spacing:

Space all posts and vertical spacers (see following page) a maximum of 3 feet apart to minimize any deflection that may occur if the cables are ever forced apart.

Intermediate Posts:

Size all intermediate posts as required for cap rail support strength or for code.

Double Corner Posts:

If possible use double corner posts to allow the cable to run continuously through the corners without terminating (see corner post option on following page). Securely bolt or screw posts to joists or deck surface and use minimum corner post sizes noted above.

IMPORTANT NOTE

For railings we recommend spacing the cables no more than 3 inches apart and placing posts or vertical members no more than 3 feet apart.

Please note that since building codes vary by state, county and city, our recommendations may not comply with code requirements in all areas.

Always consult with your local building department before starting your project.

CABLE ASSEMBLY CARE & MAINTENANCE

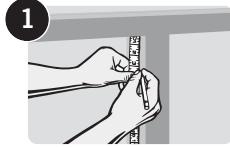
The protective chromium oxide film on the surface of stainless steel gives it superior corrosion resistance. Properly maintained stainless steel provides excellent luster, strength, and durability. In most applications stainless steel will not rust or stain even after many years of service, but it is NOT rust or stain proof. When stainless comes in contact with chloride salts, sulfides, or other rusting metals, it can discolor or even rust and corrode. With proper care and maintenance, however, stainless steel can remain beautiful and functional for years to come.

- Clean stainless with soap and warm water. Never clean with mineral acids or bleaches.
- Never use coarse abrasives like sandpaper or steel wool on stainless. Use synthetic Scotch pads instead.
- Never leave stainless in contact with iron, steel, or other metals. This can cause rust spots or corrosion.
- Always remove stains or rust spots as soon as possible with either soap and water or a brass, silver, stainless, or chrome cleaner.
- Periodically inspect cable assemblies for proper tension and re-tension as necessary. This is important.



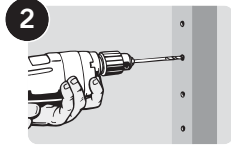
Step-by-Step Installation for Metal Frames

Installing the Standard 1/8" Cable System is easy. Just follow these simple steps:



Mark drill hole locations on posts.

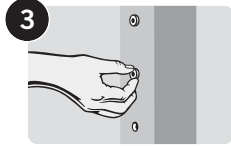
To minimize cable deflection, space cables no more than 3 inches apart and have a post or vertical spacer at least every 3 feet. Also, straight runs of cable (no turns/dips) should not exceed 70 feet. Runs with corners (2 bends at most) should not exceed 40 feet. (See Frame Requirements on previous page.)



Drill holes in posts. Hole diameter depends on cable size and type of fitting. See chart below.

Cable Size	Threaded Term. Post	Intermediate Posts	Quick-Connect Post
1/8"	5/16"	1/4"	3/8"
3/16"	3/8"	1/4"	9/16"
1/4"	7/16"	5/16"	9/16"

If desired, Quick-Connect®SS posts may be through drilled at 5/16" and then counter-bored with the recommended Quick-Connect®SS drill to countersink the fitting.



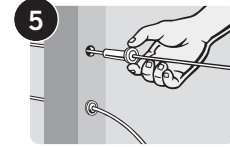
If using Isolation Bushings or Grommets (optional), insert them into their corresponding post holes.

Note: If using Isolation Bushings, call for special drill hole sizes.



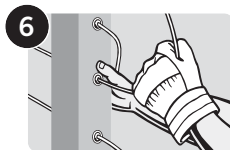
Insert the Threaded Terminal through the Terminal end post and attach a flat washer and Snug-Grip® Washer-Nut. Spin the nut 2 full turns. Strong resistance will be felt as the Snug-Grip® threads engage; so hold the Terminal shaft with pliers.

Use Beveled Washers for stair termination posts with angled holes. Available for Threaded Terminal and Quick-Connect®SS fittings.

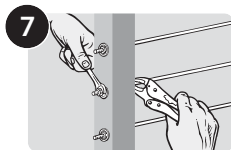


Lace the free end of the cable through the intermediate posts and Quick-Connect®SS end post. Slide-on a flat washer and Quick-Connect®SS fitting until they rest against the face of the post.

Use a Lacing Needle if snagging becomes a problem.

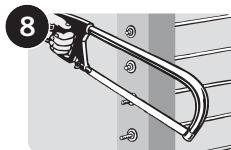


Hold the Quick-Connect®SS fitting with one hand and pull the cable tight with the other. The fitting automatically locks when you release the cable.



Tighten Snug-Grip® Washer-Nuts until you can't flex the cables more than 4 inches apart using your thumb and fingers on one hand. See diagram to the left for tensioning sequence.

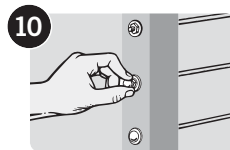
Important Note: If using electric or pneumatic tools to tighten the Washer Nuts, spin the nuts very slowly otherwise they will heat-up causing the threads to seize.



Saw off the excess threads as close to the Snug-Grip® Washer-Nut as possible. Touch-up with electric grinder. The special Snug-Grip® threads prevent the nut from loosening.



Use cable cutters or cut-off disk to trim the excess cable. Grind flush the exposed cable ends with an electric grinder.



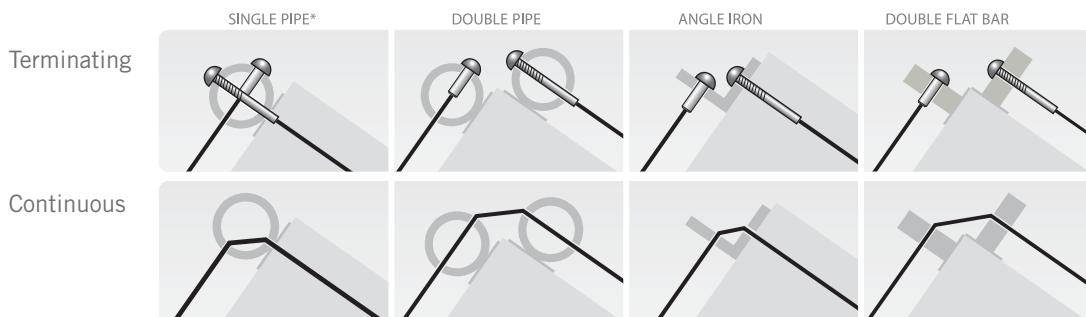
Snap on end caps over the exposed Quick-Connect®SS fittings and the Snug-Grip® Washer-Nuts. You're done.

SteelRenewal™ & SteelProtect™ can be used to clean and provide lasting protection of stainless steel cable and parts.



Recommended cable tensioning sequence

Cables can terminate or run through corner posts



Offset drill holes at least 1/2" if you choose to have cable terminating at a single pipe post.