

ATLANTIS[®]

RAIL SYSTEMS

ATLANTIS RAIL Contact Information:

Atlantis Rail Systems

70 Armstrong Road
Plymouth, MA 02360

3900 Civic Center Drive
North Las Vegas, NV 89030

(800) 541-6829 or (508) 732-9191

(508) 732-9798

www.atlantisrail.com

Latitude Cable Railing Installation Instructions

Atlantis Rail's Latitude System features prefabricated 316L stainless steel posts and horizontal cable infill, utilizing RailEasy™ round base tensioners/swivel ends and top rail mounting plates. These top rail mounting plates offer easy installation with no hardware obstruction and allow a wide variety of top rail options. The Latitude System is sold in off-the-shelf kits, allowing for easy ordering and fast delivery.



Warning



Note



Requirement



Hint

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Tools

Required & Recommended



Power Drill



#2, #3 & #4
Phillips Driver



3/8", 5/16 & 7/16"
Open Wrenches



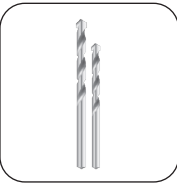
Cable Cutters



Pencil



Drill Extension



1/4" & 1/8"
Drill Bits



25' Tape Measure



Chalk Line



Work Gloves



Level



Loctite 326



Safety Glasses



Grommet Install
Tool

Tips for a Successful Installation

- Read the instructions completely before beginning the installation.
- Plan your railing project. Sketch your project with the actual measurements of your deck or balcony complete with post locations.
- Check carton(s) to determine part count is complete.
- Installation is best accomplished with two (2) people.
- Always wear personal protection equipment; safety glasses, work gloves, etc.
- Use care not to over-torque the screws. Pre-drilling is recommended.



STORE YOUR ORDER INDOORS TO KEEP DRY!
Some items in your order have been shrink wrapped with a protective poly film. Avoid exposing these items to harsh weather and moisture to avoid damaging stainless steel surfaces. When you're ready to install product, remove the protective shrink wrap before or immediately after installation.



ALWAYS USE WORK GLOVES AND WEAR SAFETY GLASSES TO PROTECT YOUR HANDS AND EYES WHILE WORKING WITH CABLE. DO NOT OVER-TENSION.

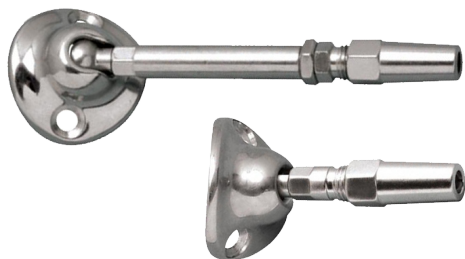


ATLANTIS RAIL SYSTEMS PROVIDES A VARIETY OF MOUNTING OPTIONS FOR POSTS AND RAILS USED IN OUR SYSTEMS. PRODUCTS OF THIS NATURE REQUIRE THAT MOUNTING SURFACES ARE CONSTRUCTED TO BE CONSIDERED STRUCTURAL PER BUILDING CODE DEFINITION FOR THE SURFACE MATERIAL USED. STRUCTURAL INTEGRITY AND BUILDING CODE COMPLIANCE OF MOUNTING SURFACES ARE THE RESPONSIBILITY OF THE END USER AND / OR INSTALLER. THE USE OF ANY OF OUR MOUNTING METHODS ARE AT THE OPTION AND DECISION OF THE END USER AND / OR INSTALLER AND SHOULD BE SELECTED TO MATCH THE STRUCTURAL MATERIAL USED TO CREATE THE MOUNTING SURFACE.



ALWAYS REFER TO YOUR LOCAL BUILDING CODE OFFICIALS PRIOR TO INSTALLING ANY ATLANTIS RAIL SYSTEM TO ENSURE ALL CODE AND SAFETY REQUIREMENTS ARE MET. ATLANTIS RAIL SYSTEMS IS NOT RESPONSIBLE FOR IMPROPER OR NON-RECOMMENDED INSTALLATIONS.

RailEasy™ Components



S0982-0004

RailEasy™ Tensioner Round 5/32"

S0982-S004

RailEasy™ Swivel End Round 5/32"

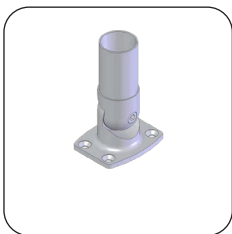
Additional Components



Stabilizer and SunRail™ Cable Grommets



Adjustable Stair Fitting



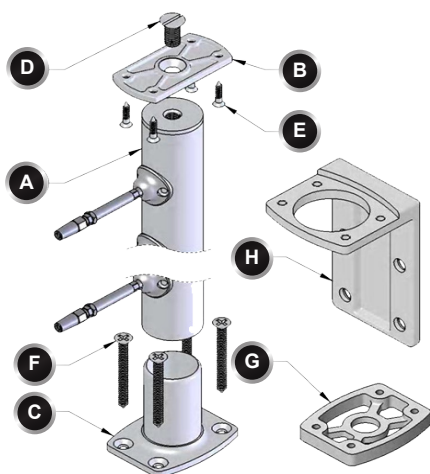
Rail Adjustable Base



Fascia Mount Bracket



Concrete Mounting Base



- A Latitude Post
- B Top Mounting Plate
- C Rail Mounting Base*
- D 1/2"-13 FH Machine Screw Slotted
- E #12 x 1" Wood Screw (quantity: 4)
- F 5/16" x 3" Base Wood Screw (not in kit)
- G Concrete Mounting Base (not in kit)**
- H Fascia Mount Bracket (not in kit)***

*Base assembly requires Loctite 326® Brand Adhesive.

**See "Concrete Mounting Base Installation Instructions" for mounting details.

***See "Fascia Mount Bracket Installation Instructions" for mounting details.

Installing the Posts

Latitude Kits

The Latitude standard post kits contain the post, mounting base, top mounting plate and top rail fasteners. Fasteners to mount the base to the decking surface are sold separately. Speak with your Atlantis Rail Sales Representative about the various mounting options. The following section will show you how to install the posts on straight sections of your deck.

Measure & Mark the Centerlines

Use a tape measure to find the centerline of your railing system. Measure from the edge of the deck to the center of the structure or blocking below (See Figure A). This is typically 3-1/2". It is important that all the fasteners are secured to the structure or appropriate blocking. With the centerline measured, carefully snap a chalk line around the perimeter of the deck. This will be your centerline throughout the project. Make sure that the center of all of your bases fall along this line.

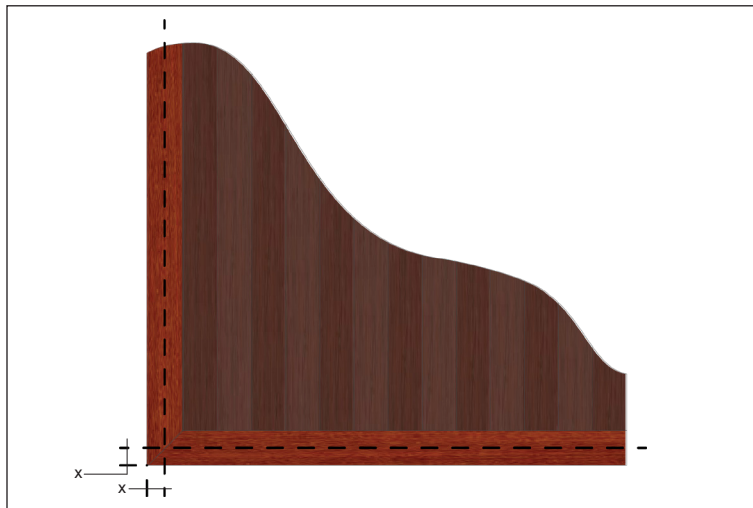


Figure A. Measure to the center of your structure or blocking and snap a chalk line to mark the centers. Do this around the perimeter of the deck.

Install the Post Bases

Begin with the end posts and corner posts. Place the base along the centerline being careful to make sure the base is properly oriented. Using the base as a template, mark the 4 holes for the screws. Use a 1/4" drill bit to drill a pilot hole for the base screws. It is important to drill a proper pilot hole as this will help prevent the base screws from stripping. Use a #4 screwdriver or driver bit (not included) to fasten the base to the deck (See Figure B). Simply slide the end and corner posts onto the base and orient the tensioners the proper way. Check for level.

Install the Mid Post Bases

Measure the distance between each section. Divide the section evenly into the required number of sections. Mark the center locations for the mid post bases once again taking care that the base is located on the centerline and oriented properly. Install the mid post bases as before and slip on each mid post. Check for level.

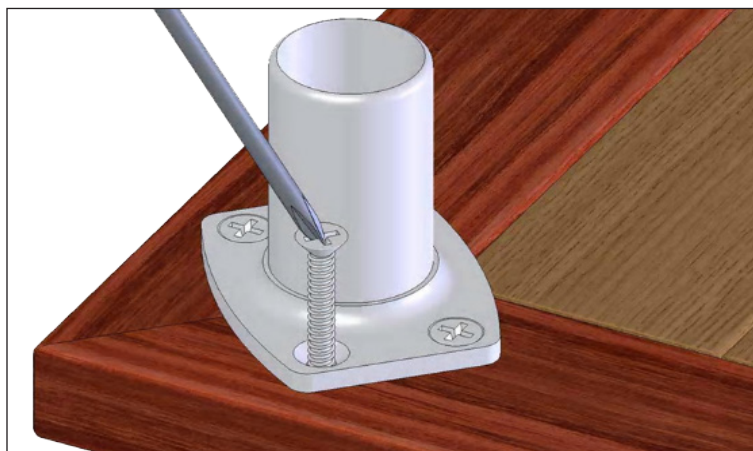


Figure B. Fasten each base to the deck with four (4) screws.



TO ENSURE CODE COMPLIANCE, ATLANTIS RAIL DOES NOT RECOMMEND EXCEEDING 4' (48") ON-CENTER BETWEEN CABLE SUPPORT POSTS.

Use Adhesive

With all the post bases installed securely and the frame built, carefully lift each post off the base enough to place a small bead of adhesive (See Figure C) around the throat of the base. Move the post up and down to spread the adhesive and wipe away any excess before it dries. The adhesive will begin to bond in only a few minutes and will be completely cured in 24 hours. Take care that the tensioners and mid post holes are all lined up and facing the proper direction.



ALL POSTS MUST BE SECURED TO BASES WITH LOCTITE® 326 BRAND ADHESIVE. BE SURE TO WIPE DOWN INSIDE OF POSTS AND OUTSIDE OF BASES BEFORE APPLYING ADHESIVE TO ENSURE THE STRONGEST BOND BETWEEN MATERIALS. DO NOT APPLY LOCTITE PRIMER.

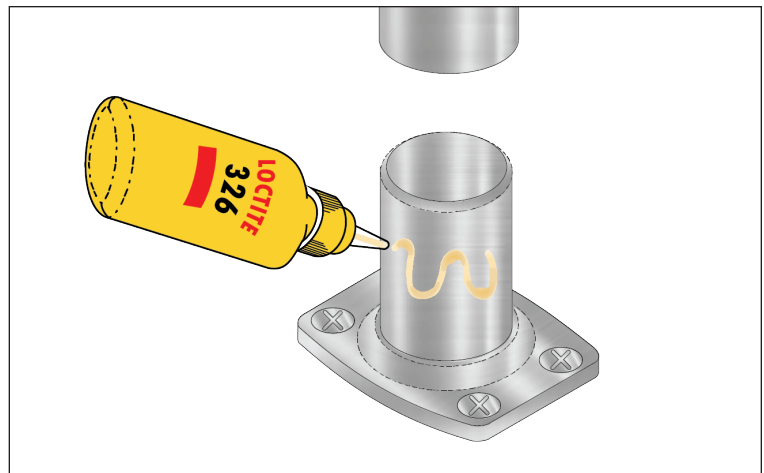


Figure C. Apply a thin bead of Loctite 326 brand adhesive to the bases when you are comfortable that the dry-fit sections are correct.

Installing the Top Rail

Measure, Mark & Cut

As with the bases, measure for the top rail from post to post at the center line. Cut and miter the wood to fit. With the mounting plates secured to the posts using a 1/2"-13 slotted machine screw (supplied) and oriented properly, and the top rail in place, mark the screw holes of the mounting plate onto the top rail. Using a 1/8" bit, pre-drill the top rail for the screws. Take care to drill to a depth of approximately 3/4". Do not drill completely through the top rail. Fasten the top rail with the four (4) included wood screws (See Figure D) using a #3 Phillips Head Driver Bit.



Figure D. Fasten the top rail using the provided wood screws.

Installing the Cable

Preparation

Before tensioning any of the cables, it is important to be sure that the frame for the infill is completed. Make sure the posts are installed securely. Install all top rails. The posts will deflect beyond allowable limits if you attempt to tension the cables on an incomplete guard frame. Begin by removing the shrink tubing from the tensioner head (See Figure E). Be careful not to scratch the cone with a knife as this will open the cone up to corrosion issues. Next, extend the threaded stud outward a minimum of 3/4" for any cable run up to 20 feet. For every 10 feet thereafter, extend the threaded stud an additional 1/4". Maximum recommended cable span is 48 feet.

Install the Cables

Insert the cable into the receiver cone, wedge and spacer until it is fully seated in the threaded stud (See Figure F). Thread the cone assembly onto the threaded stud. Tighten the receiver cone onto the threaded stud using 7/16" and 3/8" open wrenches until the threads are no longer visible (if possible). The wedge may protrude slightly from the front of the cone. With one end successfully terminated, pull the cable the length of the run to the tensioner on the other side. Using the opposite tensioner as a guide, mark and cut the

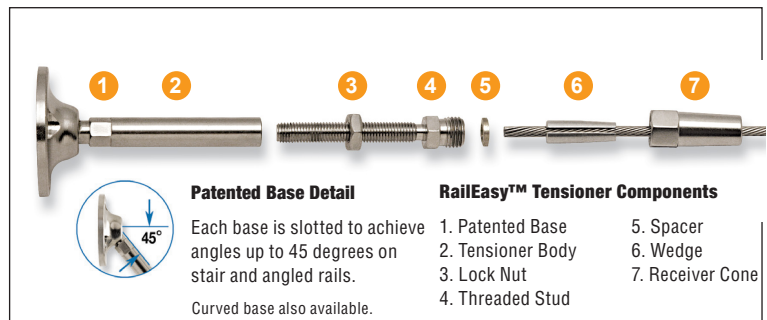


Figure E. Exploded view of the RailEasy™ Tensioner for easy identification of each component.



TO ENSURE THAT THE CABLES WILL RUN STRAIGHT, RUN A SINGLE CABLE FROM END TO END THROUGH THE MID POSTS. THIS WILL HELP YOU SEE IF SOMETHING IS NOT PROPERLY LINED UP. DO NOT TENSION THE CABLE UNTIL THE FRAME IS COMPLETED AS THIS WILL CAUSE THE POSTS TO BEND.

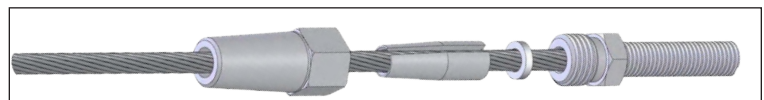


Figure F. Insert the cable into the receiver cone, wedge and spacer until it is fully seated in the threaded stud.

cable (See Figure G) at the hex flats on the threaded stud. Repeat the above process for each end of each cable before proceeding.

Atlantis Rail offers cable cutters (part # C0989-00HD) to aid in the cutting of 5/32" cable. It is important that you use sharp tools to cut the cable, as a dull tool will splay it. Ask your Atlantis Rail Sales Representative for more information.

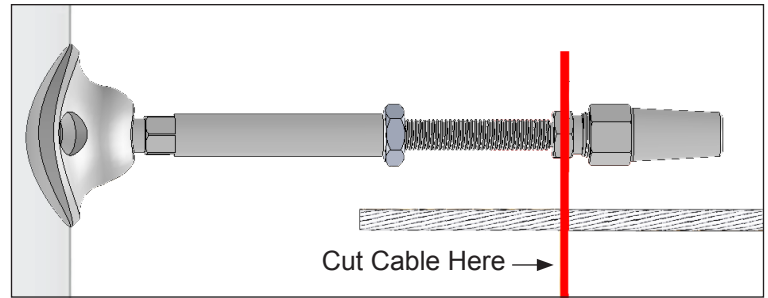


Figure G. Cut the cable at the hex flats on the threaded stud.

Tensioning the Cables



MAKE SURE THE GUARD FRAME IS FINISHED ENTIRELY BEFORE TENSIONING CABLE!

Begin by hand tensioning all the cables. Do this by holding the cable and stud assembly still and rotating the tensioner body. It is important not to rotate the cable, only the tensioner body. Rotating the cable will weaken it and eventually cause it to snap. With all cables hand tight, begin tensioning with the wrenches. Start with the middle run of cable and alternate working above and below the center as if you were tightening the lug nuts of a tire (See Figure H). Hold the hex flats of the threaded stud with a 3/8" wrench and rotate the tensioner body with a 7/16" wrench until cable is taut (See Figure I). Tension the cable equally from both sides.

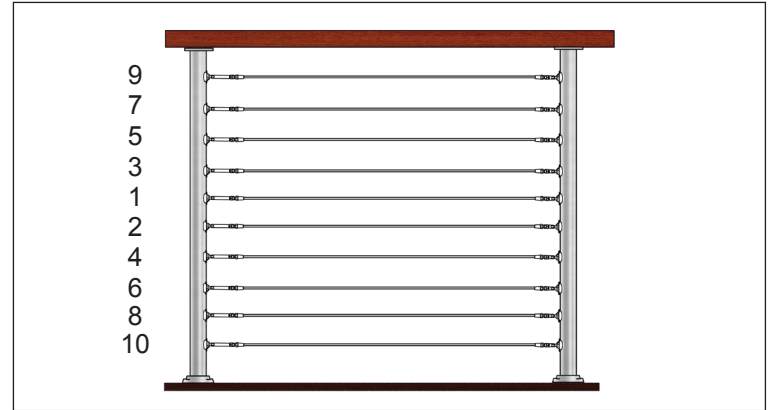


Figure H. Tensioning Diagram - Begin with the center run of cable and alternate working above and below until cables are tight.



DO NOT OVER TENSION.

Tensioning one cable may cause the surrounding cables to lose tension. Simply go back over the cables in the same series getting down to half and quarter turns until all cables are tensioned. Tighten all the lock nuts until they are snug against the tensioner body to ensure the cables don't lose tension.

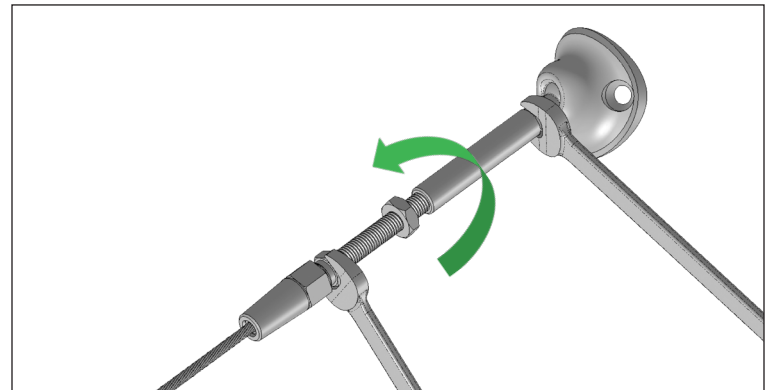


Figure I. Tension by holding the threaded stud in a fixed position with a 3/8" wrench while rotating the tensioner body using a 7/16" wrench.

Installing Cable Grommets

Utilizing the grommet install tool (part # E0916-1000) makes installing cable grommets easy.



THE GROMMET INSTALL TOOL (PART # E0916-1000) ACCOMMODATES BOTH 1/8" AND 5/32" CABLE GROMMET SIZES.

Align the slot of the cable grommet with the slot of the cable grommet install tool (See Figure J).

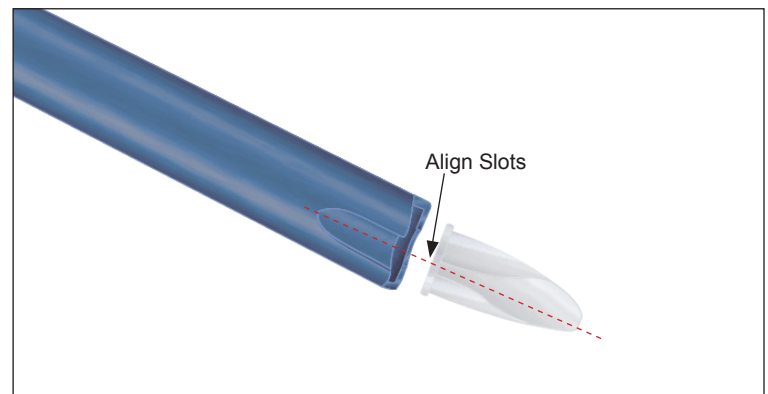


Figure J. Align the slot of the cable grommet with the slot of the tool.



NOT ALIGNING THE SLOTS OF THE CABLE GROMMET AND TOOL WILL NOT ALLOW THE CABLE GROMMET TO BE INSTALLED.

Insert the flange of the cable grommet into the bottom side of the grommet install tool; making sure the slots are still aligned (See Figure K).

Holding the grommet install tool in one hand and placing ones thumb on the top side of the cable grommet, push the cable grommet onto the cable in a downward motion. A little force will need to be applied to fit the cable grommet onto the wire (See Figure L).



ALWAYS POINT THE TIP OF THE CABLE GROMMET INWARDS TO THE POST HOLE AND KEEP THE POSITION OF THE SLOT DOWNWARDS TO ALLOW WATER TO DRAIN.

After the cable grommet is placed onto the cable, remove the grommet install tool from the flange of the cable grommet. Place the grommet install tool on the wire (using the slot in the tool as a guide) push the cable grommet into the cable hole in the post until it fits flush (See Figure M).

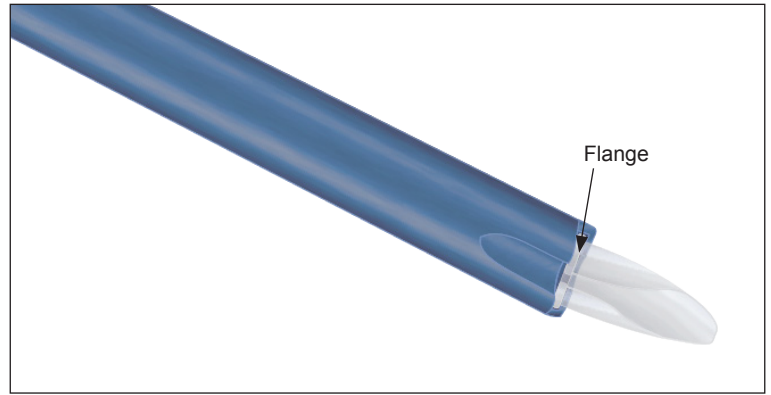


Figure K. Insert flange of cable grommet into the tool.

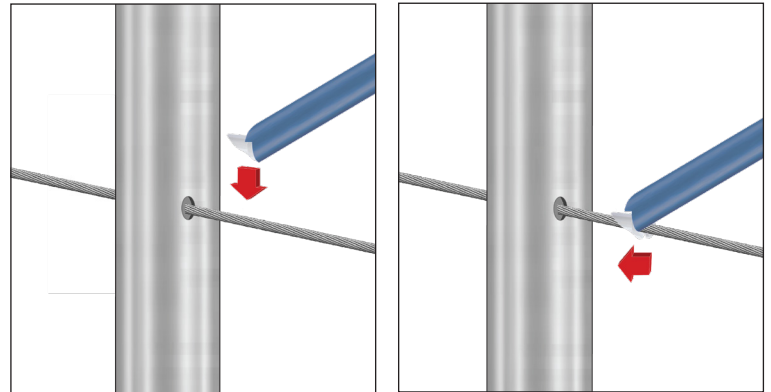


Figure L. (LEFT) With the grommet install tool, push the cable grommet onto the cable in a downward motion.

Figure M. (RIGHT) With the grommet install tool, push the cable grommet into the cable hole in the post until it fits flush.

Additional Components

Stabilizer and SunRail™ Cable Grommets - (C0916-0004-25)

Once the cable has been installed and tensioned, it is time to add the cable grommets (part # C0916-0004-25). The grommet (See Figure N) helps prevent movement and deflection of the cable, as well as, reduces dirt and moisture from getting inside the posts. These grommets are slotted for easy attachment onto the cable. Available in packs of twenty five (25).

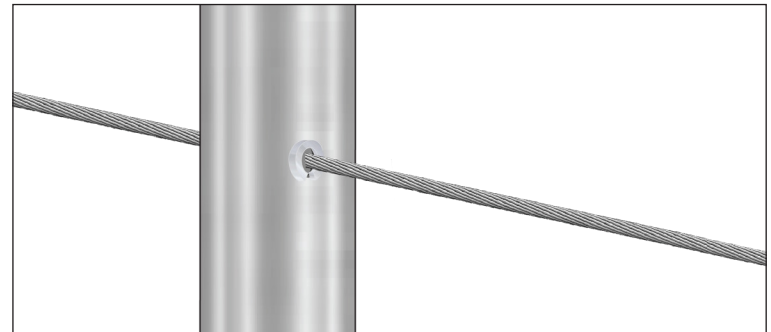


Figure N. The grommet helps prevent movement and deflection of the cable.

Adjustable Components

Atlantis Rail offers an adjustable mounting base (part # S0950-0003) and an adjustable stair fitting (part # S0902-0409) for stair and ramp applications (See Figure O). These fittings will rotate to accommodate most standard stair and ramp pitches. Fasten the stair rail with the four (4) #8 1-1/2" wood screws (included) using a #2 Phillips Head Driver Bit. Ask your Atlantis Rail Sales Representative for more information regarding building a Latitude System for your staircase or ramp.

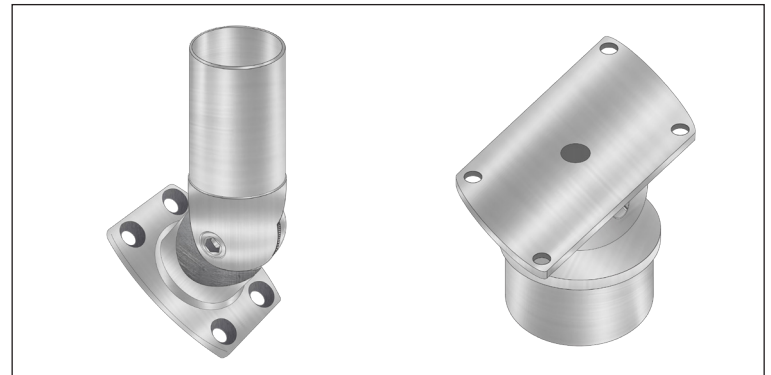


Figure O. The adjustable base and adjustable stair fitting will accommodate most standard stair and ramp pitches.



THESE ADJUSTABLE ASSEMBLIES REQUIRE LOCTITE 326® BRAND ADHESIVE ON THE JOINTS. BE SURE TO WIPE DOWN INSIDE OF POSTS AND OUTSIDE OF BASES/FITTINGS BEFORE APPLYING ADHESIVE TO ENSURE THE STRONGEST BOND BETWEEN MATERIALS. DO NOT APPLY LOCTITE® PRIMER.

Fascia Mount Bracket - S0950-0002

Atlantis Rail offers a fascia mounting option when installing a Latitude System with stainless steel posts (part # S0950-0002). This bracket is designed to be combined with the Atlantis Rail Mounting Base or Rail Adjustable Base. It is used when a fascia mounting system is desired.

There are two methods for fastening the Fascia Mount Bracket. You can use four (4) 1/2" x 4-1/2" lag screws (not included). These screw through the side of the fascia bracket and into the fascia board (See Figure M). If you prefer through-bolting, use four (4) 1/2" x 4-1/2" machine screws, nuts and washers (included). Mark and drill through the fascia screws, nuts and washers until tight.

When the fascia mount is securely fastened, attach the Rail Mounting Base using four (4) 5/16-18 x 3/4" long machine screws (included) into the top of the bracket (See Figure N). Tighten down, shim where necessary and install the rail as outlined in the Fascia Mount Bracket Installation Instructions.

Concrete Mounting Base - S0950-0006

Atlantis Rail offers a Concrete Mounting Base option when installing a Latitude System with stainless steel posts on a concrete surface. A single concrete anchor bolt (not supplied) is used to secure the mount (part # S0950-0006).

Begin by dry fitting the railing section as outlined in the applicable installation instructions. The Concrete Mounting Base (See Figure O) matches the profile of the Rail Mounting Base (part # S0950-0001) and Rail Adjustable Base (part # S0950-0003). For more detailed information please refer to the Concrete Mounting Base Installation Instructions. Ask your Atlantis Rail Sales Representative for more information regarding building a Latitude Cable Railing.



Figure M. (Left) Install four (4) 1/2" lag bolts.

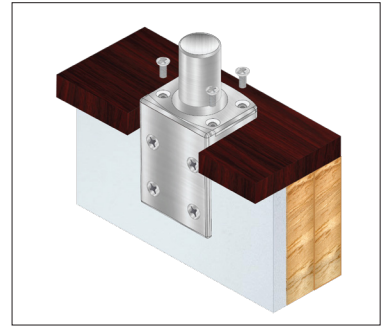


Figure N. (Right) Attach Rail Mounting Base with four (4) 5/16" x 1/2" machine screws.

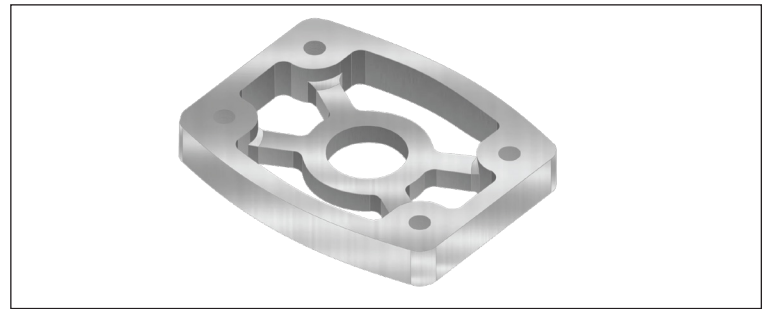


Figure O. Concrete Mounting Base (S0950-0006).

Latitude System Specifications

The Latitude System uses stainless steel posts and fittings with horizontal cable infill. Customers must provide their own handrail. It is advised to observe that tension must be applied to tensioners and cable. Posts should be mounted securely enough to resist detachment and hold under tension.

Straight Sections

The Latitude System is offered in two standard post heights of 36" or 42" for straight sections.

Stair Sections

Rail height for stair sections is available in 36".



RAILING HEIGHTS ARE OFFERED IN THESE DIMENSIONS DUE TO NATIONWIDE BUILDING CODES. HOWEVER, ATLANTIS RAIL CAN SUPPLY CUSTOM HEIGHTS UPON REQUEST.

Between Post Lengths

Atlantis Rail requires staying within 4' section lengths to maintain structural integrity.

Railing Finish

The Latitude System is offered in a highly polished finish. Electro-polishing is an additional finish for ocean vicinity locations.

Cable Spacing

The cable is spaced on posts at less than 3" on-center to comply with nationwide building codes.

Latitude Post Kit Cable Spacing

Post Kits & Cable Spacing

Product	Description	Cable Spacing
S0952-E036	Latitude 36" End Post Kit	2.818"
S0952-M036	Latitude 36" Mid Post Kit	2.818"
S0952-C036	Latitude 36" Corner Post Kit	2.818"
S0952-E042	Latitude 42" End Post Kit	2.833"
S0952-M042	Latitude 42" Mid Post Kit	2.833"
S0952-C042	Latitude 42" Corner Post Kit	2.833"

Latitude Product Specifications

Components

Product	Description	Dimensions	Fasteners	Notes
S0952-E036	Latitude 36" End Post Kit	36" 316L stainless steel	--	Custom posts available
S0952-M036	Latitude 36" Mid Post Kit	36" 316L stainless steel	--	Custom posts available
S0952-C036	Latitude 36" Corner Post Kit	36" 316L stainless steel	--	Custom posts available
S0952-E042	Latitude 42" End Post Kit	42" 316L stainless steel	--	Custom posts available
S0952-M042	Latitude 42" Mid Post Kit	42" 316L stainless steel	--	Custom posts available
S0952-C042	Latitude 42" Corner Post Kit	42" 316L stainless steel	--	Custom posts available
C0978-4025	RailEasy™ 5/32" Cable, 25ft. Spool	5/32" 1x19 316L stainless steel cable	--	--
C0978-4100	RailEasy™ 5/32" Cable, 100ft. Spool	5/32" 1x19 316L stainless steel cable	--	--
C0978-4500	RailEasy™ 5/32" Cable, 500ft. Spool	5/32" 1x19 316L stainless steel cable	--	--
S0982-0004	RailEasy™ Tensioner Round	5.50" length 1/4"-28 RH thread	3/16" rivet	Adjustable
S0982-S004	RailEasy™ Swivel End Round	2.30" length 1/4"-28 RH thread	3/16" rivet	Adjustable
C0989-00HD	RailEasy™ Cable Cutter	--	--	--
C0916-0004-25	Stabilizer and SunRail™ Cable Grommets	--	--	Available in 25 packs
S0950-0003	Rail Adjustable Base	2" 316 stainless steel	--	Adjustable
S0902-0409	Adjustable Stair Fitting	2" 316 stainless steel	--	Adjustable
S0950-0002	Fascia Mount Bracket	2" 316 stainless steel	--	--
S0950-0006	Concrete Mounting Base	2" 316 stainless steel	--	Anchor bolt not supplied
Tool				
E0916-1000	Grommet Install Tool	--	--	Grommet install tool makes installing cable grommets easy