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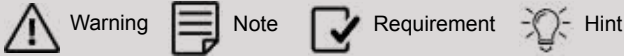
www.atlantisrail.com

SunRail™ Latitude Installation Instructions

Atlantis Rail's SunRail 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 SunRail Latitude System is sold in off-the-shelf kits, allowing for easy ordering and fast delivery.

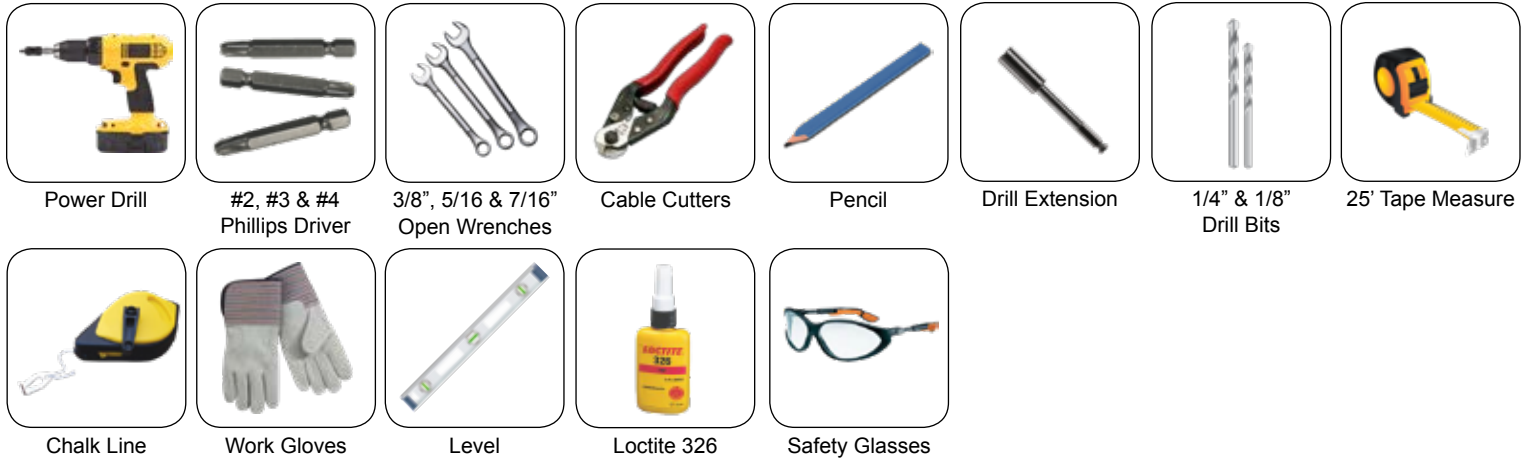
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Tools

Required & Recommended



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.



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.



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

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

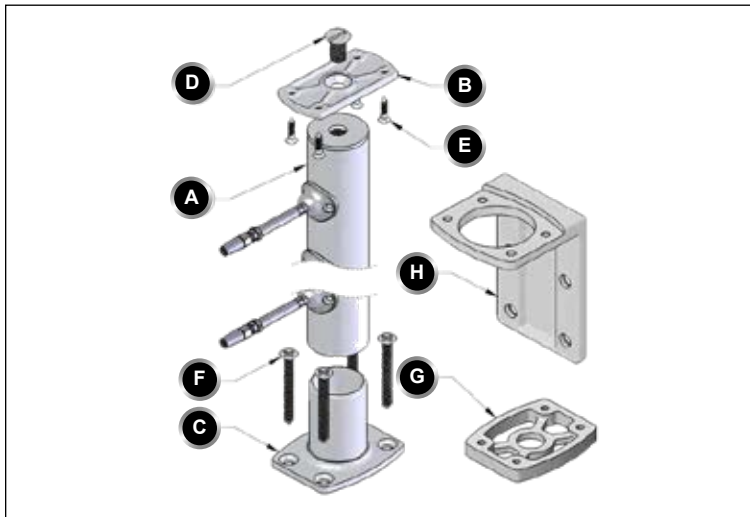


Fascia Mount Bracket



Concrete Mounting Base

SunRail Latitude Post Kit Components



- A SunRail 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

SunRail Latitude Kits

The SunRail 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.

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 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.

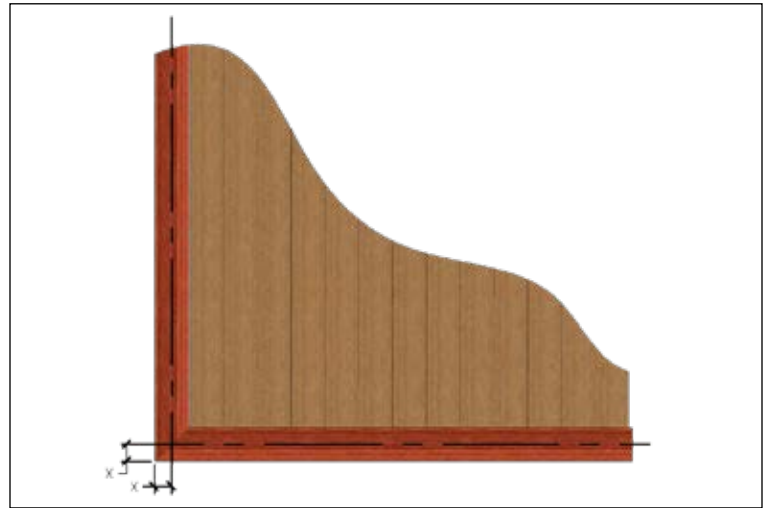


Figure A. Measure to the center of your structure or blocking and snap a chalk line to mark the centers. Do this around the perimeter of the deck.



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.

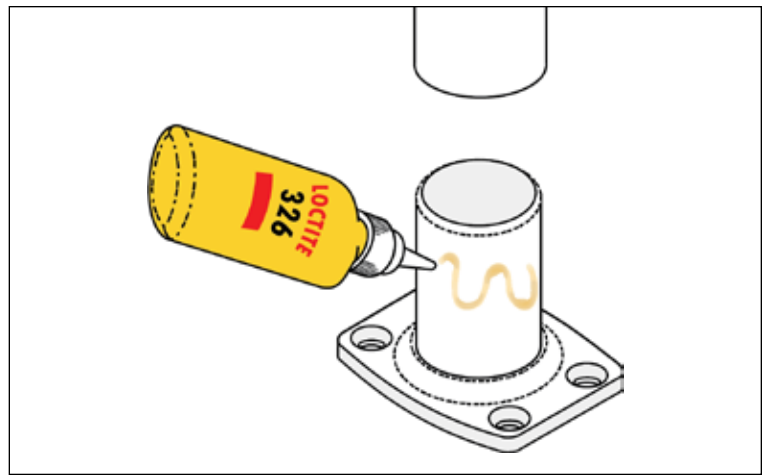


Figure C. Apply a thin bead of Loctite 326 brand adhesive to the bases when you are comfortable that the dry-fit sections are correct.

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

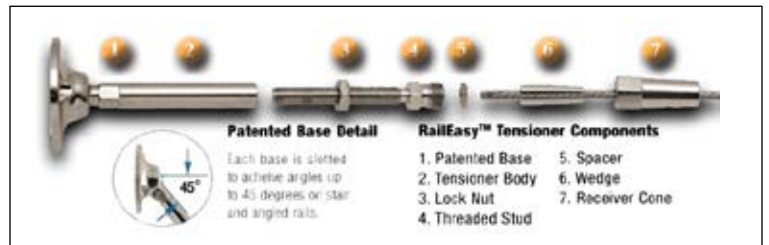


Figure E. Exploded view of the RailEasy™ Tensioner for easy identification of each component.



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.

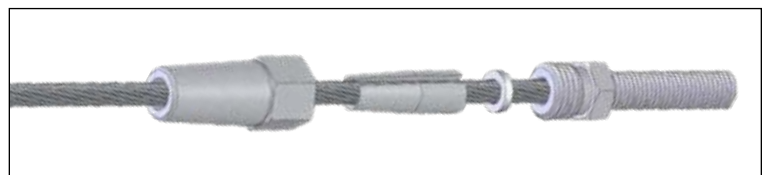


Figure F. Insert the cable into the receiver cone, wedge and spacer until it is fully seated in the threaded stud.

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 (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.

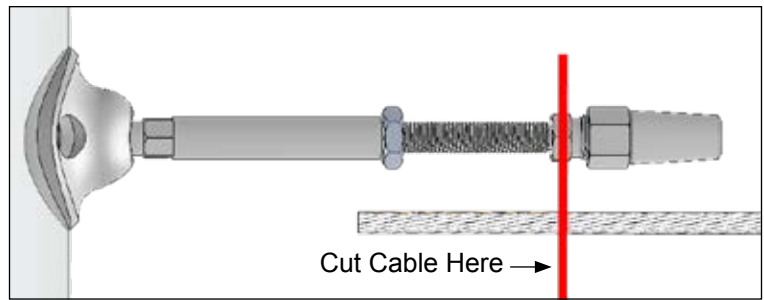


Figure G. Cut the cable at the hex flats on the threaded stud.

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.



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

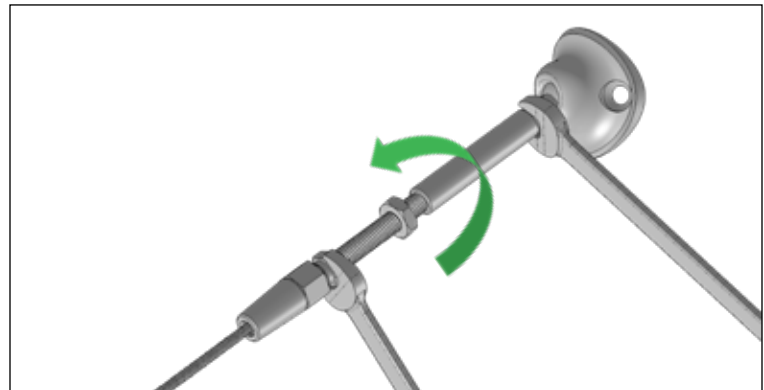


Figure I. Tension by holding the threaded stud in a fixed position with a 3/8" wrench while rotating the tensioner body using a 7/16" wrench.

Additional Components

Stabilizer and SunRail Cable Grommets - (C0196-0004-25)

Once the cable has been installed and tensioned, it is time to add the cable grommets (part # C0196-0004-25). These grommets are slotted for easy attachment onto the cable. Snap the grommet onto the cable (See Figure J). Slide it into the post cable hole (cable already installed) until it snaps into place and sits snug (See Figure K). Available in packs of 25.

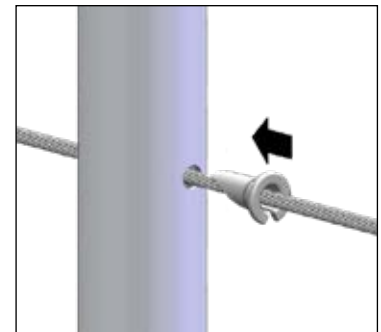
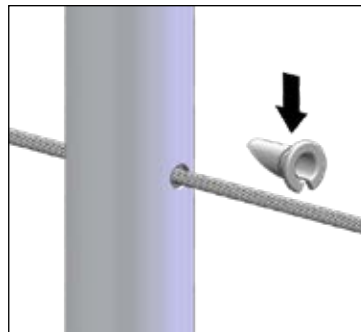


Figure J. (LEFT) Place the slotted side on the cable and push down.
Figure K. (RIGHT) Push the tapered end into the mid post hole.

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 L*). 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 SunRail Latitude for your staircase or ramp.



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.

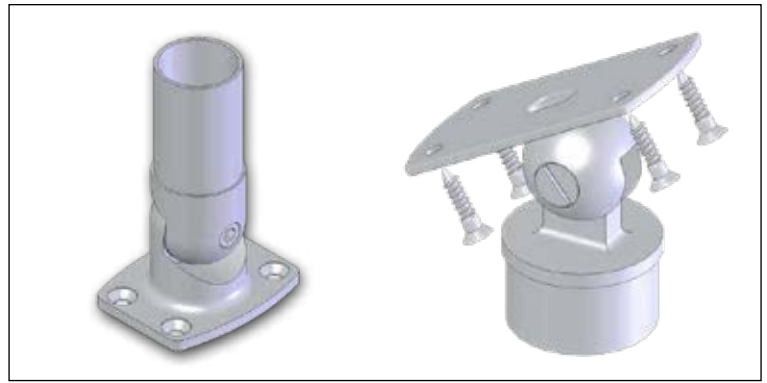


Figure L. The adjustable base and adjustable stair fitting will accommodate most standard stair and ramp pitches.

Fascia Mount Bracket - S0950-0002

Atlantis Rail offers a fascia mounting option when installing a SunRail 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" lag bolts. These screw through the side of the fascia bracket and into the fascia board (See *Figure M*). If you prefer thru-bolting, use four (4) machine washers. Mark and drill through the fascia screws, nuts and washers until tight.

When the fascia mounts are securely fastened, attach the Rail Mounting Base using four (4) 5/16" x 1/2" long machine screws into the top of the bracket (See *Figure N*). Tighten down, check for level, shim where necessary and install the rail.

For more detailed information please refer to the SunRail Fascia Mount Bracket Installation Instructions. Ask your Atlantis Rail Sales Representative for more information regarding building a SunRail Latitude.

Concrete Mounting Base - S0950-0006

Atlantis Rail offers a Concrete Mounting Base option when installing a SunRail 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 (S0950-0001) and Rail Adjustable Base (S0950-0003). For more detailed information please refer to the SunRail Concrete Mounting Base Installation Instructions. Ask your Atlantis Rail Sales Representative for more information regarding building a SunRail Latitude.

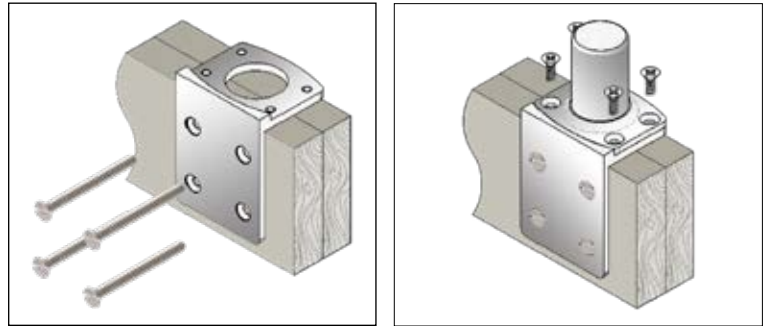


Figure M. (Left) Install four (4) 1/2" lag bolts.

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

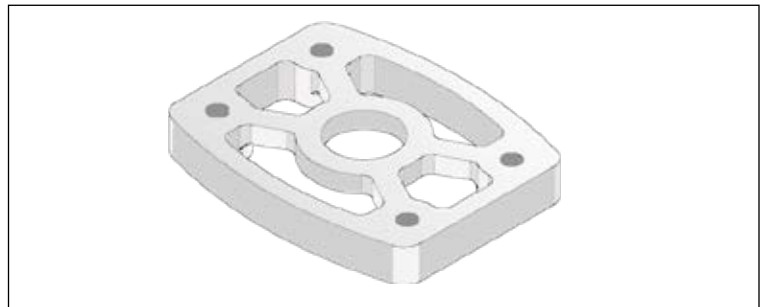


Figure O. Concrete Mounting Base (S0950-0006).

SunRail Latitude System Specifications

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

Cable Spacing

Cable spacing varies depending on post kit model. Consult the SunRail Latitude Post Kit Cable Spacing table below for complete details.

SunRail Latitude Post Kit Cable Spacing

Post Kits & Cable Spacing

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

SunRail Latitude Product Specifications

Components

Product	Description	Dimensions	Fasteners	Notes
S0952-E036	SunRail Latitude 36" End Post Kit	36" 316L stainless steel	--	Custom posts available
S0952-M036	SunRail Latitude 36" Mid Post Kit	36" 316L stainless steel	--	Custom posts available
S0952-C036	SunRail Latitude 36" Corner Post Kit	36" 316L stainless steel	--	Custom posts available
S0952-E042	SunRail Latitude 42" End Post Kit	42" 316L stainless steel	--	Custom posts available
S0952-M042	SunRail Latitude 42" Mid Post Kit	42" 316L stainless steel	--	Custom posts available
S0952-C042	SunRail 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	--	--	--
C0196-0004-25	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