

I N S T A L L A T I O N   I N S T R U C T I O N S

## SUNRAIL NAUTILUS



# Atlantis Rail SunRail Nautilus Installation Guide

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The *SunRail™ Nautilus* system combines the modern look of stainless steel cable and tensioners with the low maintenance quality of highly polished or brushed tubing. The following guide will take you step-by-step through the process of installing your “Sunrail™ Nautilus” system. Along the way, we’ll offer you tips and tricks to help you get your railing installed today and ready for tomorrow.

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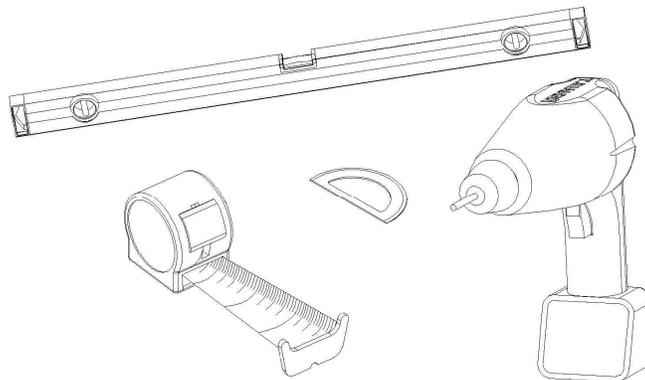
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# Building your Sunrail™

## Step 1 – Necessary Tools

Before you begin, you will need the following tools to install your railing.

- Power drill
- 1/4" Bit for bases
- Chalk line (Optional)
- 25' Tape measure
- 1/8" Allen wrench
- 5/16" Allen wrench
- 5/32" Open wrench
- 7/32" Open wrench
- Carpenters square
- Level



### ADDITIONAL TOOLS

ATLANTIS RAIL OFFERS AN INSTALLATION TOOL KIT TO AID YOUR INSTALLATION. ASK YOUR SALES REPRESENTATIVE FOR MORE INFORMATION.



*Atlantis Rail installation toolkit*

## Step 2 – Laying out your Railing System

### Reading and understanding your assembly drawing

Your assembly drawing is laid out numerically from the left of your drawing beginning with rail section one. For two rail systems, each rail section will have two rails, an upper hand rail (labeled UH) and a lower hand rail (labeled LH). Your railing system will be packaged in the same numeric fashion that it is labeled on your assembly drawing. This is so you can lay your boxes out on your deck according to which rail goes to which section.

**NOTE:** When reading your assembly drawing, always remember the top rail in the projection view is always facing the plan view

### Locate and check the parts of your rail system

When your rail system arrives on site, take the time to make sure that all the parts you were supposed to receive are present and undamaged. Report any inconsistencies with your Atlantis Rail sales representative as soon as you are aware of the issue.

Lay out your rails and posts on the appropriate deck. Open the boxes of fittings and lay the appropriate fittings out along with the rails. When all the parts are laid out and accounted for, you are ready to begin.

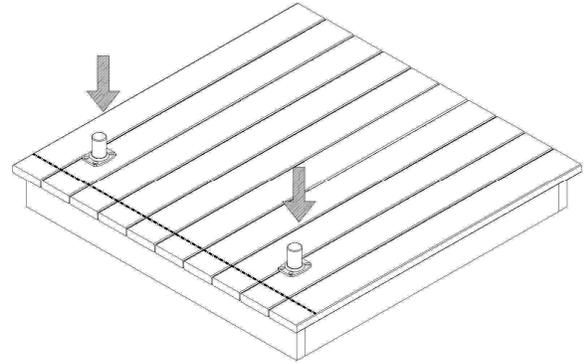


## Step 3 – Installing the Straight Rails

**NOTE:** If installing the Microstar L.E.D. lighting, please skip ahead to the Microstar section before proceeding

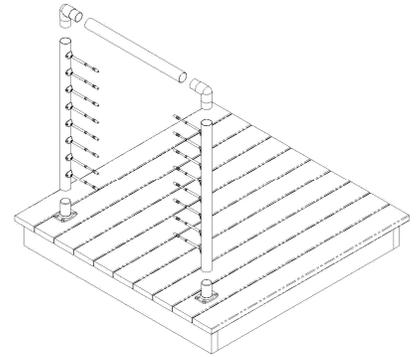
### Find the center line of the railing

Begin with a corner post. If you have stairs, start at the top corner of the stairs. This will help later to ensure that the stair railing will fit. Use a square and a tape measure to find the centerline of the railing. You will find this dimension on your drawing, usually labeled “Typical Offset.” Drag and snap a chalk line at this measurement. The center of each of your post bases should be on this line. Make sure that this measurement lines the screw holes up with the framing below. This may require you to block out beneath the deck.



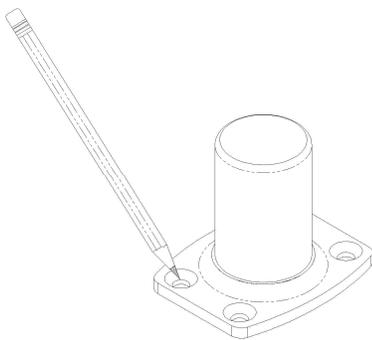
### Dry fit railing section

Building one section at a time, assemble the rail frame to be sure that everything fits into place properly. Using a level, be sure that posts are standing vertical and rails are sitting level. This can affect placement of the posts, so before marking or drilling any holes for mounting, make sure that the section is plumb. When the section is plumb, and all the parts are fitting together, use the base to mark the center screw holes on the base. Repeat for each post in the dry fitted section.



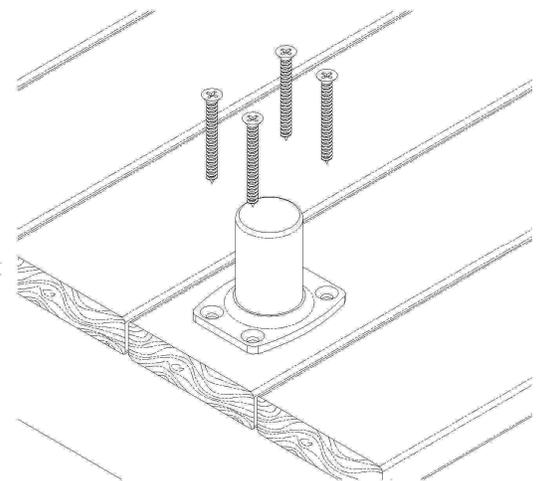
**\*WARNING\*** BE SURE TO **ALWAYS** WEAR YOUR SAFETY GLASSES WHEN OPERATING POWER TOOLS

**NOTE:** If using fascia mount brackets (S0950-0002), or concrete bases (S0950-0006), please refer to alternate mounting options section in this guide before proceeding



### Install Bases

With the holes marked, remove the bases and with a 1/4" drill bit, carefully pre-drill holes for the base screws. Be sure to drill through the decking and into the framing below. Install bases with (4) 5/16" Lag screws (3" Long).

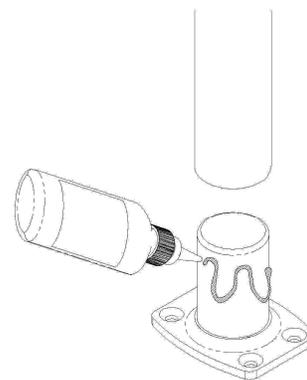


*Install bases using (3) 5/16" Lag Screws*

Replace the dry-fitted rail on the bases and begin dry-fitting the next run of railing. Measure, dry-fit, plumb, and level, mark and install the next run of bases as previously described.

## Assemble the Frame

When you are comfortable that the dry-fit sections are correct, lift up each post and apply a thin bead of Lido brand adhesive to the base. Place the post back on the base working the adhesive all around spreading it evenly. Wipe off any excess adhesive immediately. Continue around the deck with the adhesive securing the posts to the bases. Apply adhesive to all top rails and fittings as well. The Lido brand adhesive will keep the posts and rails from pulling up or rotating. The structure of the Sunrail™ Nautilus system comes from the tension of the cables.



*Apply a thin bead of adhesive to prevent rotation*

**NOTE:** Be sure to wipe down inside of post or rail and outside of base or fitting before applying adhesive to ensure the strongest bond between materials

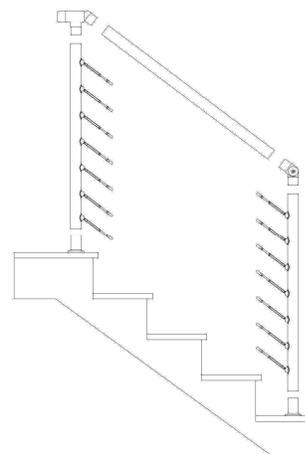
### **\*WARNING\***

**LIDO BRAND ADHESIVE CREATES A STRONG BOND. BE SURE YOU HAVE THE RIGHT COMPONENTS BEFORE APPLYING LIDO WELD.**

## Step 4 – Installing the Stair Rails

### Dry Fit the Frame

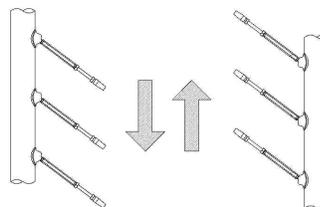
Beginning with any posts you have installed for the straight sections, begin dry-fitting the stair sections. This again is to ensure that all components of the railing will fit together properly without forcing. Locate the center of the bases. You will find the dimensions to the center of the bases on your drawing. Use these dimensions for the initial fit. Adjust as necessary continually checking for plumb. If the drawing is followed correctly, the top handrail will be parallel with the slope of the stairs and between 34"-38" in height (measured vertically directly above the nosing of the stair).



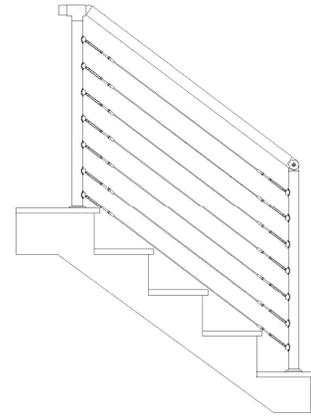
The Sunrail™ Nautilus system was designed with adjustability in mind. As a result, several adjustable fittings allow for many different solutions. It is important to make note of which of these fittings have been designed into your system, and be sure you use the correct one when dry fitting.

**NOTE:** When dry fitting, Check that all adjustable fittings are locked into place when checking for level

When installing the stair rails, make note of which direction the tensioners are facing. There is a small recess in the base of the tensioner that allows it to pivot up or down to accommodate the slope of stairs.



**NOTE:** If using fascia mount brackets (S0950-0002), or concrete bases (S0950-0006), please refer to alternate mounting options section in this guide before proceeding



### Assemble the Frame

Begin marking and installing the bases as described in step 3. Re-assemble the frame on the bases continually checking for plumb. When you are satisfied, apply a thin bead of Lido brand adhesive to any metal to metal connection to prevent rotation. Remember to clean inside the tube and the outside of the fitting to ensure the strongest possible bond.

### Step 5 – Installing the Cable

#### ADDITIONAL TOOLS

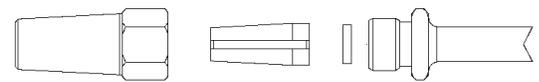
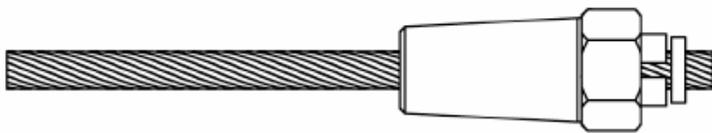
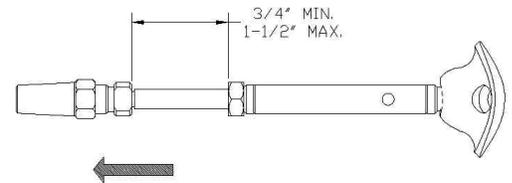
ATLANTIS RAIL OFFERS CABLE CUTTERS THAT AID IN CUTTING 5/32" CABLE. IT IS IMPORTANT THAT YOU USE SHARP TOOLS TO CUT THE CABLE AS A DULL TOOL WILL SPLAY IT. ATLANTIS RAIL CABLE CUTTERS LAST APPROXIMATELY 20 CUTS. ASK YOUR ATLANTIS RAIL SALES REP FOR MORE INFORMATION



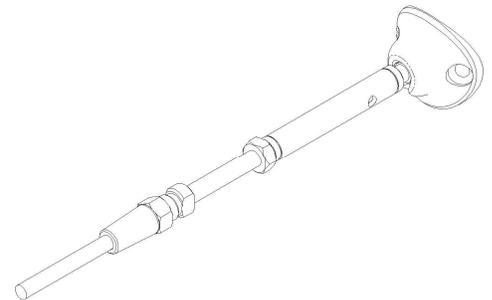
*Atlantis Rail cable cutter*

### Install the cable

With the rail frame installed, begin by extending the receiver outward a minimum of 3/4". For longer cable runs, you will need to extend the receiver 1-1/2" to be sure you have enough room to tension the cable. Remove cone and aluminum wedge taking care not to lose the small brass washer. Insert cable through each individual piece and reassemble around cable.



Next, thread completed assembly back onto the receiver. Tighten the cone down. Upon doing this, the aluminum wedge will crimp down on the cable and hold it in place. With the cable installed in one tensioner, pull the cable to the opposite tensioner. Pull the cable tight to the tensioner and cut it. Thread the cable through each mid post and using the same process as before, install the cable into the opposite tensioner. Use this length to measure all cables in a section to ensure uniformity.

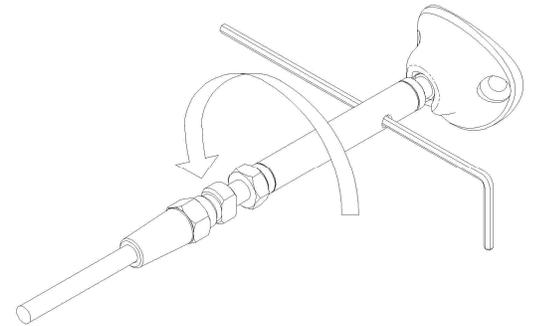


**\*WARNING\***

USE WORK GLOVES AND SAFETY GLASSES TO PROTECT YOUR HANDS AND EYES FROM CABLE. DO **NOT** OVERTENSION.

## Tensioning the cable

Begin with the center run of cable. Insert 1/8" Allen wrench into hole as shown and hold receiver nut with 5/16" open wrench. Rotate the Allen wrench and turnbuckle body counter-clockwise to tension. Tension each side equally until taut. Do **NOT** over tension. Over tensioning will cause posts to deform and deflect. When properly tensioned, tighten lock-nut down to maintain tension.



**\*WARNING\*** ALWAYS WEAR WORK GLOVES AND SAFETY GLASSES TO PROTECT YOUR HANDS AND EYES WHILE WORKING WITH CABLE.

When tensioning, it is important that you begin with the center run of cable and alternate working above and below the center, much like tightening the lug nuts on a tire. This will help to ensure that your posts don't deflect during tensioning. It will also help tension equally throughout. Continue tensioning all the cables in this same fashion until all cables are tensioned.

## Product Specifications

The "SUNRAIL™ NAUTILUS" system uses stainless steel handrails, posts and fittings. It is advised to observe that tension must be applied to tensioners and cable. Post should be mounted securely enough to resist detachment and hold under tension.

### Components

Posts are 2" O.D., .06 Wall thickness grade 316 s/s. Available finishes; satin brushed & mirror polished

System Height: Two standard system heights are 36" & 42"

Railing: 2" O.D. x .06 wall 316 s/s tubing. Available finishes; satin brushed & mirror polished

Infill (Cable): Cable is spaced at 3" on center wire to wire. Tensioners are riveted to posts (pre-installed)

Cable spans (end to end between tensioners) should not be more than 50 ft in length

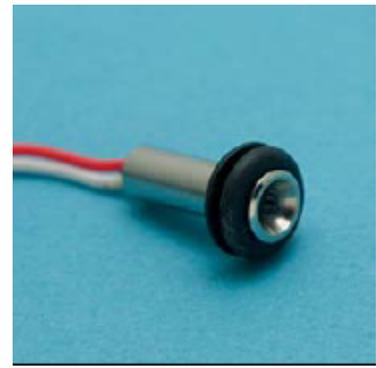


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|            | Material     | Fin. | Dimensions                           | Notes                              |
|------------|--------------|------|--------------------------------------|------------------------------------|
| Post       | 316 s/s      | B/P  | 2" O.D., .06 Wall thickness          | Custom and stock posts available   |
| Rail       | 316 s/s      | B/P  | 2" O.D., .06 Wall thickness          | Custom and stock lengths available |
| Cable      | 316 s/s      | --   | 5/32" 1x19 316 stainless steel cable | 580 lb. WLL                        |
| Tensioners | 316 s/s      | --   | See catalog for more information     | Riveted, by Atlantis Rail          |
| Fittings   | 316 cast s/s | B/P  | 3.5" Round Base, 2" Outside Diameter | Lido Adhesive to prevent rotation  |

## Microstar™ LED Lighting

Microstar™ is a complete line of small, super bright white LED lights. These systems are available in both 12 volt and 24 volt and each draws only 0.02 amps. Each Microstar™ has an expected bulb life cycle of 50,000 hours or 12 years of 10 hours per day usage. They provide sufficient levels of light to illuminate railing features without hot spots or dark shadows.



## Installing Microstar™ LED Lighting

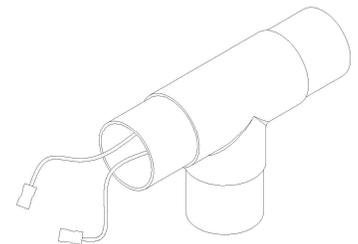
### Step 1 – Install the Transformer

Mount the Microstar™ transformer (supplied) near a 110v power outlet but leave transformer unplugged until it is needed. Select the end post closest to the outlet in order to connect to the transformer. You will need to run the low voltage wire down this post so plan accordingly. You may need to drill an additional hole in the decking beneath this post to run the low-voltage wire to keep it hidden.



### Step 2 – Install Jumpers

Run supplied jumper wires between all fittings. This includes Tees, Elbows and 3-Way corners. Adjustable fittings, and dovetails should already have jumpers installed for your convenience.



### Step 3 – Connect rails with jumpers

Beginning with the end post closest to the transformer, connect rails sequentially with the jumpers. As you go, be sure to check each rail section for proper functionality and make any necessary wiring adjustments before installing the rails.

**NOTE:** Atlantis Rail checks each light in our shop to be sure that it is functioning according to manufacturer's specifications. However, it is a good idea to check the lights on site to be sure that no wiring came loose in transit.

Install rails as they are connected according to instructions located in this installation guide. When all rails are connected and installed, connect the string of lights into the transformer. Plug the transformer into the wall and set the timer.

