

Component Glass Installation Instructions

Please Note: Aluminum Railing is only as strong as what it is attached to. The installer must ensure that all mounting screws for post base plates and wall mounts are mounted into solid material with backing. Failure to fasten the mounting screws into solid material (deck joists or wall studs) will weaken the installation.

Before you install any railings, review the deck layout drawing and your bill of materials required for the project. Double check there is no damage to the product from transportation and the quantities of all materials received are correct, against the packing slip supplied with the order.

1. If you're using bottom receiver clips on posts, determine which posts need receiver clips and where they should be placed on the post. Then using the "Rail Clip Jig" pre-drill and attach clips with #10 x 1 1/2" #8 head screws. If using bottom rail wall mount sleeves on posts, install them at step #13.
2. Based on your deck layout information, set posts on the deck in their approximate locations. Ensure mounting area has adequate solid backing. Do not screw posts down at this time.
3. Once the post location is determined, using a tape measure, calculate equal and balanced spacing between posts in each railing run. With posts set in their final locations, use a pencil and mark mounting holes location; remove the post and pre-drill holes in the deck. Set posts back in place and mount only one screw, just snug enough to hold the post in place and prevent it from falling over. Do not use sealant on the mounting screws at this time. **Note:** If mounting to concrete use the recommended base plate Neoprene Gasket.
4. Place top rail sleeves loosely in posts where required. Do not fasten sleeves to posts at this time. **Note:** Trimming down some posts maybe required to allow for sleeves, stair angles or deck irregularities.
5. Once all the posts and sleeves are set in place, check that the posts are relatively plum to the deck and square to the building. Some vinyl or rubber gasket maybe used as shims under the base plates for the adjustments. Final adjustments will be made when the mounting screws are anchored.
6. To determine the length of the top rail, inspect the top sleeves to see how far the top rail will enter inside the sleeve and or wall mounts. Measure, calculate and record the top rail cut lengths from sleeve to sleeve for each run of railing. With all top rail measurements recorded, calculate the cuts out of the supplied material from your order. **Note:** Cut the largest rail piece first, progressing down to the smallest piece. This will maximize material usage.
7. The remaining posts without sleeves on them will require a Post Mount Component Plate for level rail and a Post Mount Stair Plate for stair rail. These post mount plates will connect the post to the underside of the top rail. These component parts can now be attached to the top of the posts with #10 x 1 3/4" or #10 x 1 1/2" screws.

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8. Stair posts need to be cut to size to fit the stair angle. This can be done by holding the top rail at the required height and on the correct angle to one side of the post. Using a pencil, mark the post on the angle at the correct height. Keeping in mind the thickness of the post mount stair plate. **Note:** Measure twice, double-check and then cut once.
9. Now, that all the sleeves are in place and post mount plates are attached you can install the top rail. Lift the sleeves off the posts, insert the top rail into the wall mounts and sleeves, and then rest it back down onto the posts mounts. Ensure there is a maximum and/or equal amount of top rail is inserted into each sleeve.
10. Check for correct railing height by double-checking the railing is level and the posts are square and plum. When everything looks right, using #10 x $\frac{3}{4}$ " self-tapping screws, attach sleeves to top rail from the underside and then attach the posts to the sleeves from the outside of the deck.
11. Once all the top rails and sleeves are fastened into place, it's time to permanently screw down the posts to the deck. Insert the plastic shoulder washers into the base plate mounting holes. Put a little NP1 Urethane Sealant into the already pre-drilled holes and a little on the threads of the screw. Just snug screws down and do not over tighten. As railing becomes secure, once again, double check railing is straight and level, and the posts are plum and square. Shimming under the post base plates with vinyl or rubber gasket maybe required. **Note:** This is the same process for attaching the railing mounts to a building or wall.
12. When using receiver clips attached to posts, measure and record all the exact distances between posts from receiver clip to receiver clip. With all bottom rail measurements recorded, calculate the cuts out of the supplied material from you order. **Note:** Just like you did with the top rail, cut the largest piece first, progressing down to smallest piece, this will maximize material usage.
13. When using bottom rail wall mounts to posts, inspect the sleeves to see how far the bottom rail will enter inside the wall mount. Measure and record the distance between the posts and deduct for each sleeve. (Approx. $\frac{1}{2}$ ") With all bottom rail measurements recorded, calculate the cuts out of the supplied material from you order. **Note:** Just like you did with the top rail, cut the largest piece first, progressing down to smallest piece, this will maximize material usage.
14. Slide a component support leg into the bottom rail before installing, this will determine equal bottom gap around the deck. ($1\frac{3}{4}$ ") Double check bottom rail is parallel with the top rail and looks inline with the deck surface. Some smaller glass openings may not need a component support leg.
15. Slide the support leg to the center of the glass opening, then pre-drill, seal and secure to the deck in the same manner as the posts. Cut top and bottom glass insert to fit openings and snap into place.

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16. Measuring for glass should be done after frame installation is complete. This is in case of alterations required to the job site during the installation process. Allow a 1" to 3" spaces between the glass and posts or walls. This allows wind to pass through the rail and hand clearance for easier installation of the glass. Glass height should be $\frac{3}{4}$ " larger then the opening from top insert to bottom insert.
17. Glass can now be installed by sliding it up into the larger top insert first, then aligning it with the smaller bottom insert and push it down into place. **Note:** A small amount of dish soap along the insert surface may help this process.
18. Now that installation is complete, clean the rail and glass of fingerprints, then double check the railing for scratches or scuffs. Most imperfections can be cleaned or rubbed away using Vim or car polish.
19. If touch up is required, make sure the surface is clean and free of all contaminants. When applying touch up paint, try to use as little as possible and only in the scratched spot. This will help avoid attraction to the defective area. Once dry, some car polish or rubbing compound may help blend the painted surface.
20. Once everything is complete have the owner inspect the installation for final approval.

Tool Requirements for Railing Installation

- ◆ 10" Mitre Saw with a Carbide Triple Chip Blade
- ◆ Electric or 18-volt cordless, variable speed Drill
- ◆ Hammer Drill for concrete or stucco applications
- ◆ Electric power cords
- ◆ Drill bits - 1/8" & 5/32" & 3/16" & 1/4" (bring extras)
- ◆ Driver bits #2 & #3 - 6" long Robertson head (bring extras)
- ◆ Hack Saw
- ◆ Safety Glasses
- ◆ Ear Protection
- ◆ Tape Measure
- ◆ Pencil
- ◆ Exact-o-Knife
- ◆ Pliers or Vice Grips
- ◆ 3' Level
- ◆ Framing Square
- ◆ String line
- ◆ Hammer
- ◆ Metal File
- ◆ Flat Aluminum File
- ◆ Non-Marking Rubber Mallet
- ◆ Dish soap for glass installation
- ◆ Tin Snips, center cut or Yellow handle
- ◆ Caulking Gun
- ◆ Bottom Rail Clip Jig

Component Glass



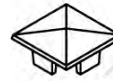
RAIXLSQCM



WMTXLSQ180



CAPXLSQ



CAP212



RAIBCM



MFPSTMNTCM



MFRECCLEA



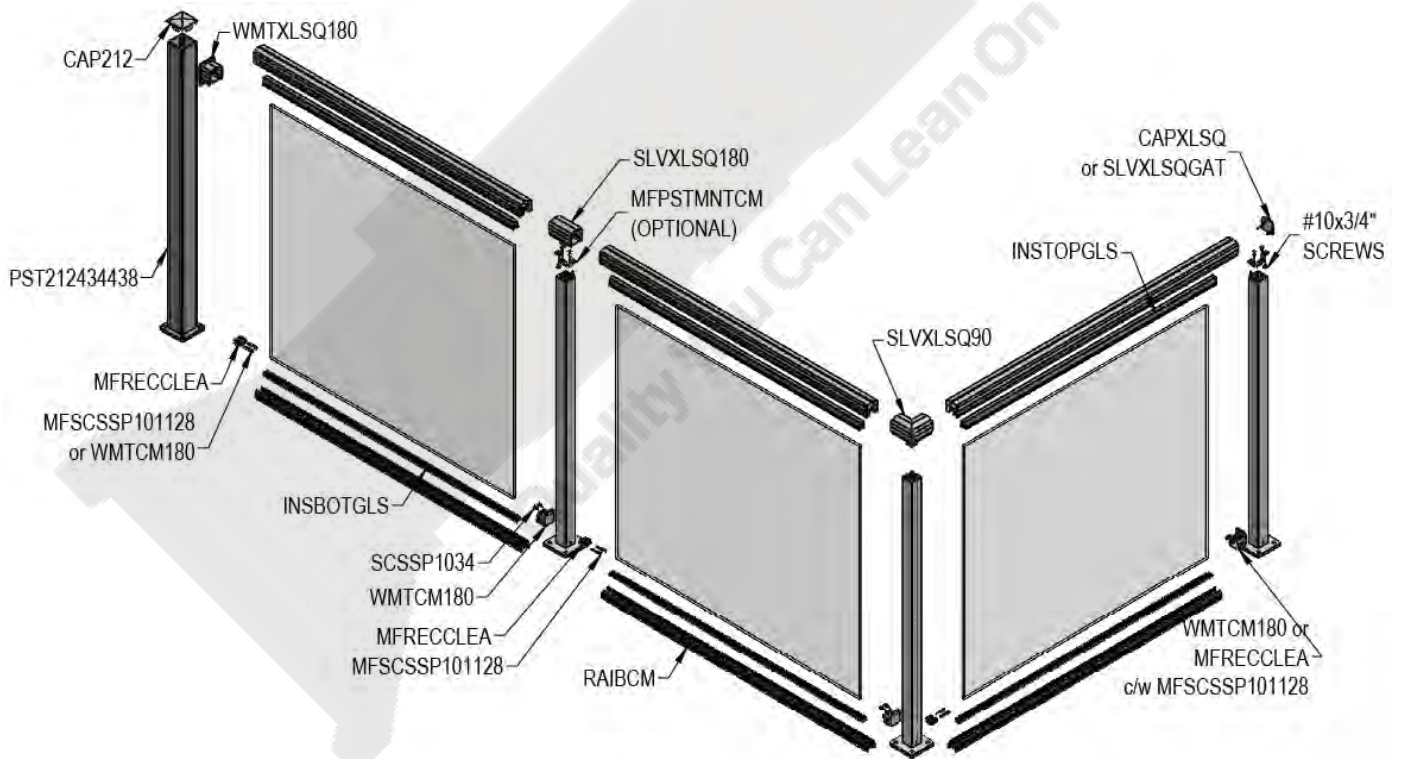
WMTCM180



INSBOTGLS



INSTOPGLS

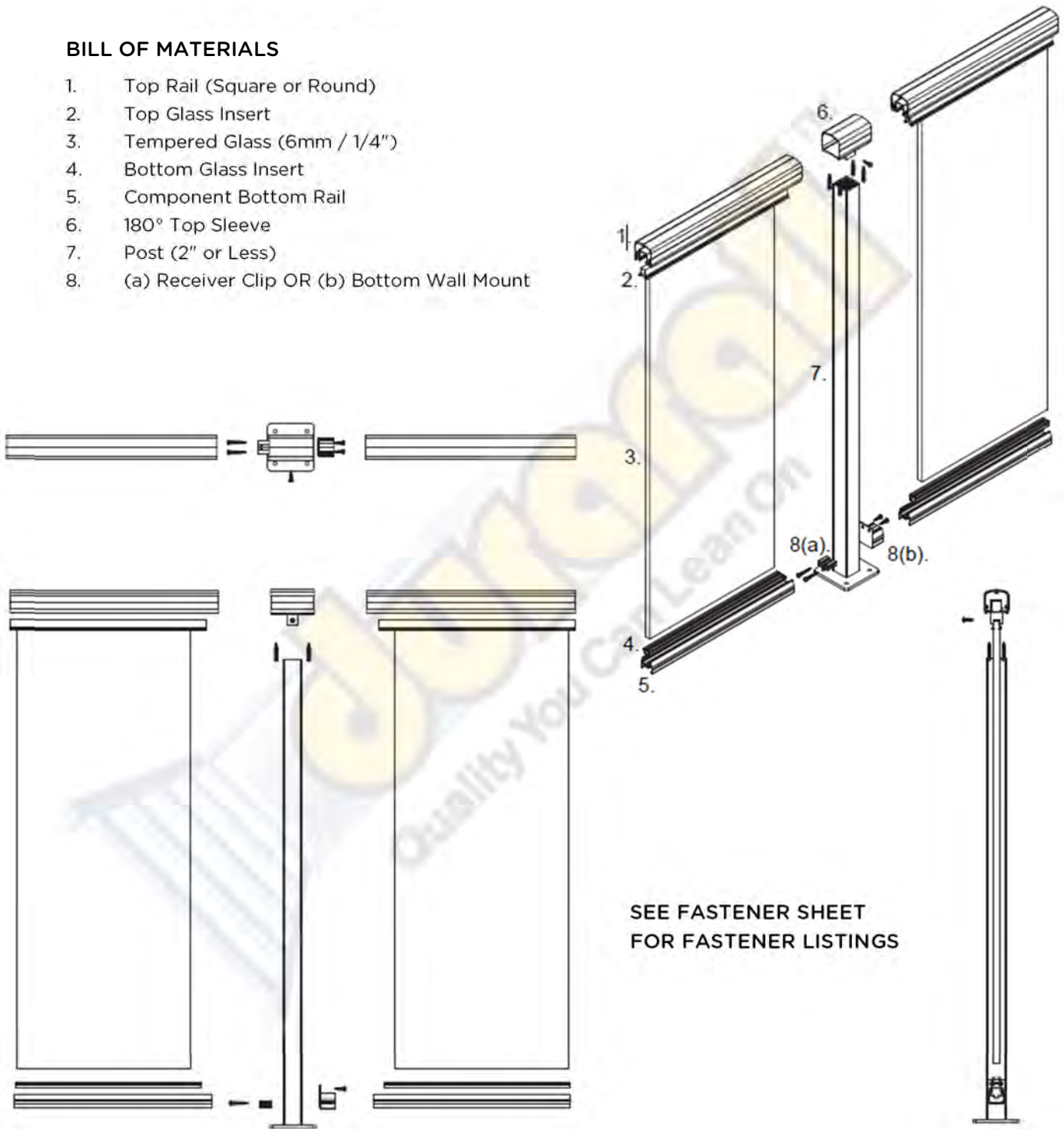


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Center Post with Continuous Top Rail Detail – Component Glass

BILL OF MATERIALS

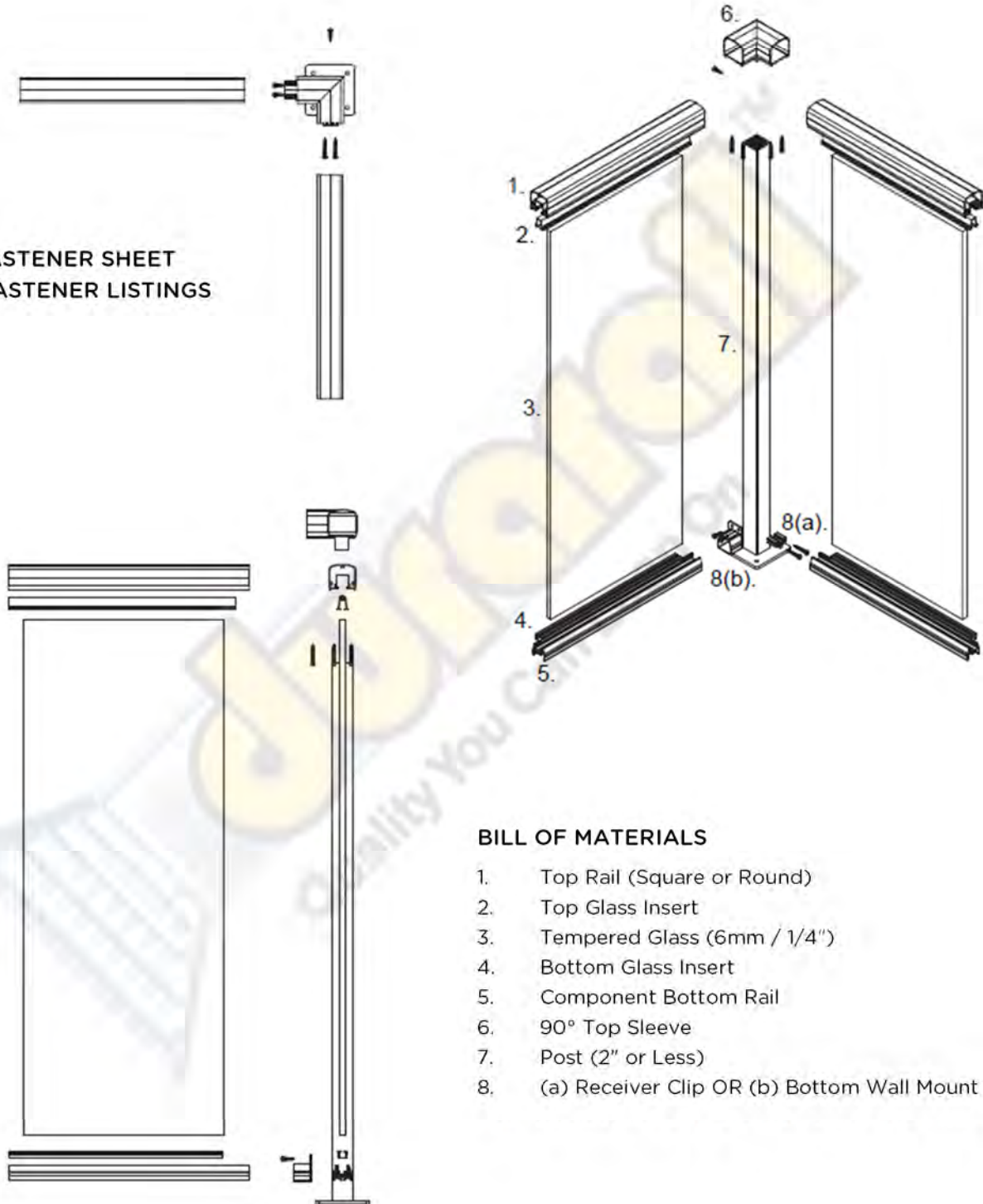
1. Top Rail (Square or Round)
2. Top Glass Insert
3. Tempered Glass (6mm / 1/4")
4. Bottom Glass Insert
5. Component Bottom Rail
6. 180° Top Sleeve
7. Post (2" or Less)
8. (a) Receiver Clip OR (b) Bottom Wall Mount



SEE FASTENER SHEET
FOR FASTENER LISTINGS

Corner Post with Continuous Top Rail Detail – Component Glass

SEE FASTENER SHEET
FOR FASTENER LISTINGS

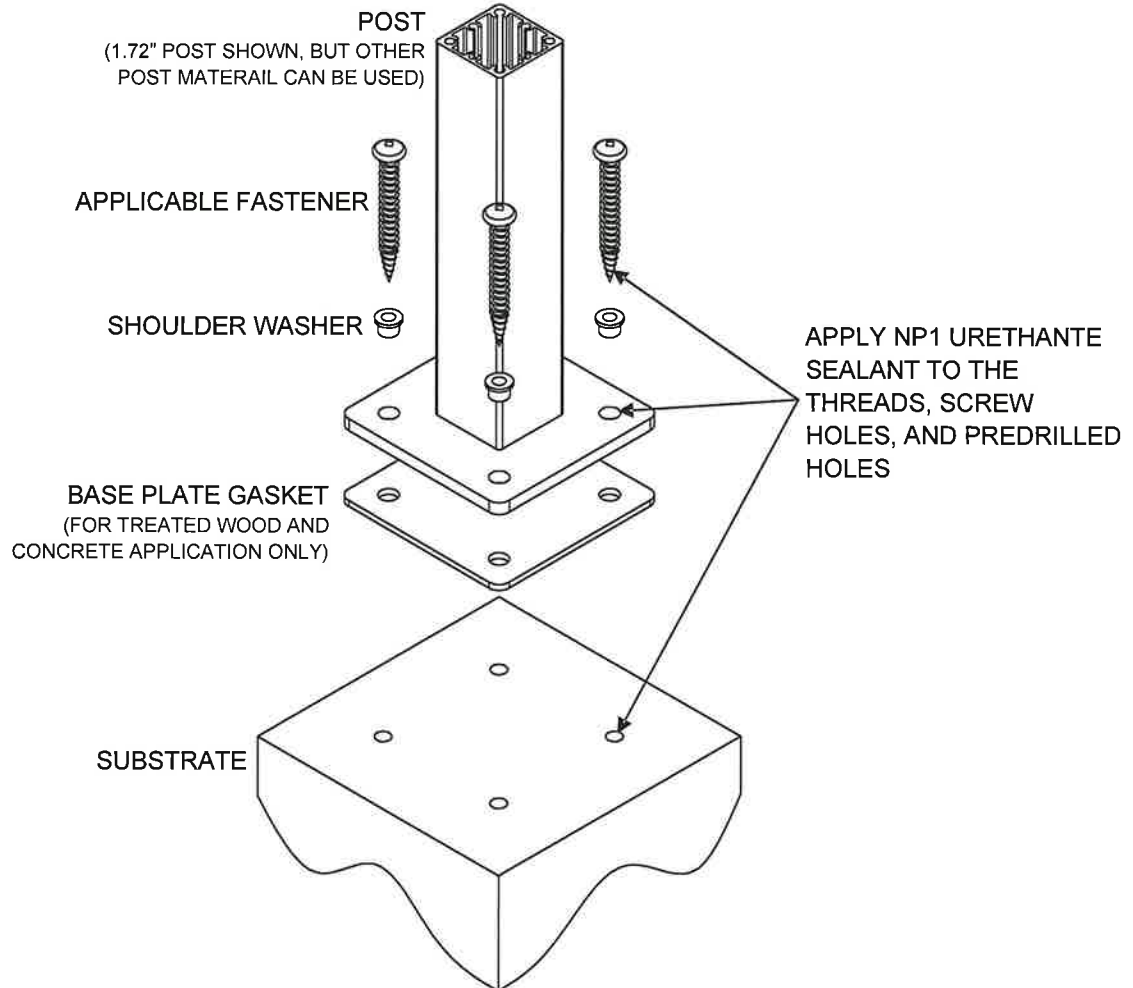


BILL OF MATERIALS

1. Top Rail (Square or Round)
2. Top Glass Insert
3. Tempered Glass (6mm / 1/4")
4. Bottom Glass Insert
5. Component Bottom Rail
6. 90° Top Sleeve
7. Post (2" or Less)
8. (a) Receiver Clip OR (b) Bottom Wall Mount



Surface Post Installation Method



SHOULDER WASHER: These are put into the base plate mounting holes to prevent the stainless steel screw from marking the paint or coming in contact with the aluminum base plate, which could cause electrolysis. These can be purchased from the railing manufacturer.

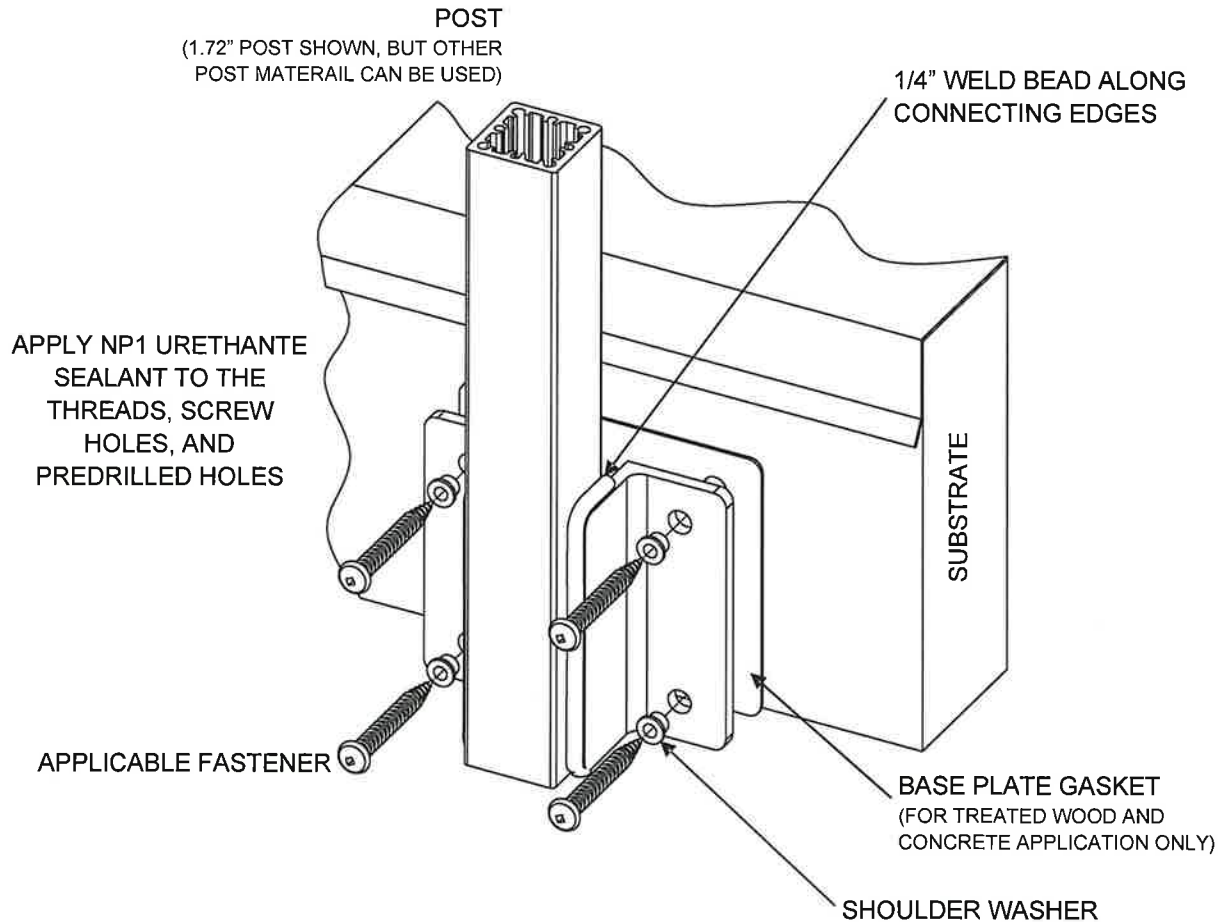
NEOPRENE GASKET: These are used for treated wood and concrete applications. The Neoprene Gasket is placed between the post base plate and substrate. This will help prevent corrosion caused by the acidic reaction between the aluminum and the treated wood or concrete. These can be purchased from the railing manufacturer.

NP1 URETHANE SEALANT: This sealant is placed in all screw chases, predrilled holes, and to all screw threads when installing. The sealant will prevent leaks in the building structure, and create a barrier between the different metals in the railing, which reduces the chance of electrolysis or corrosion. This type of sealant is used instead of silicone because there are solvents within silicone that will also dissolve or corrode the screws and aluminum railing over time. This sealant can be purchased at most hardware stores.

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Fascia Post Installation Method



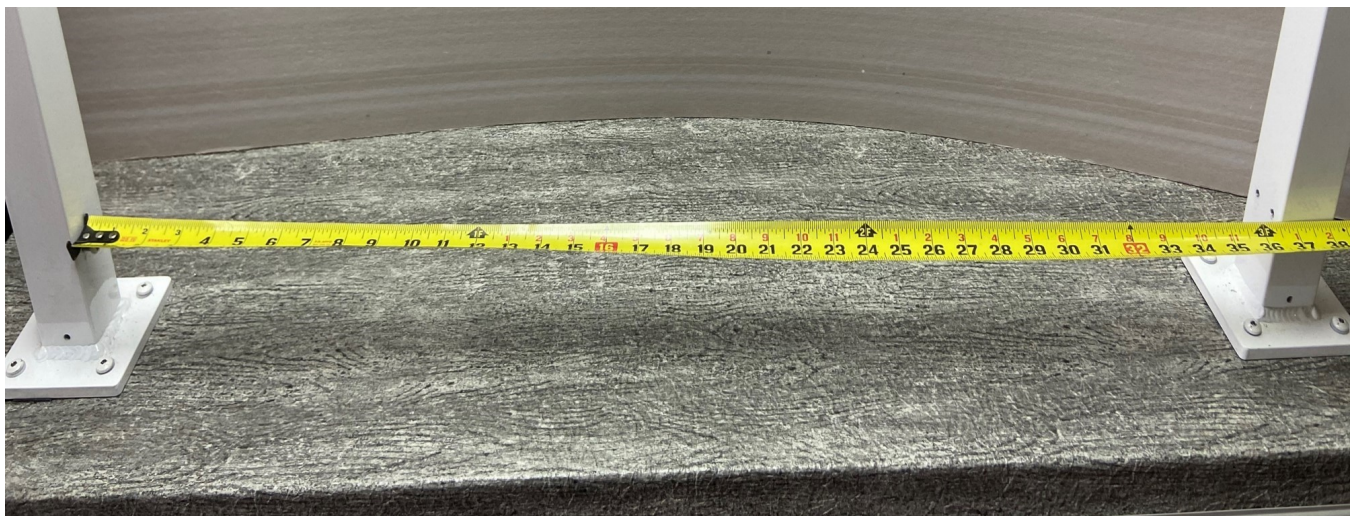
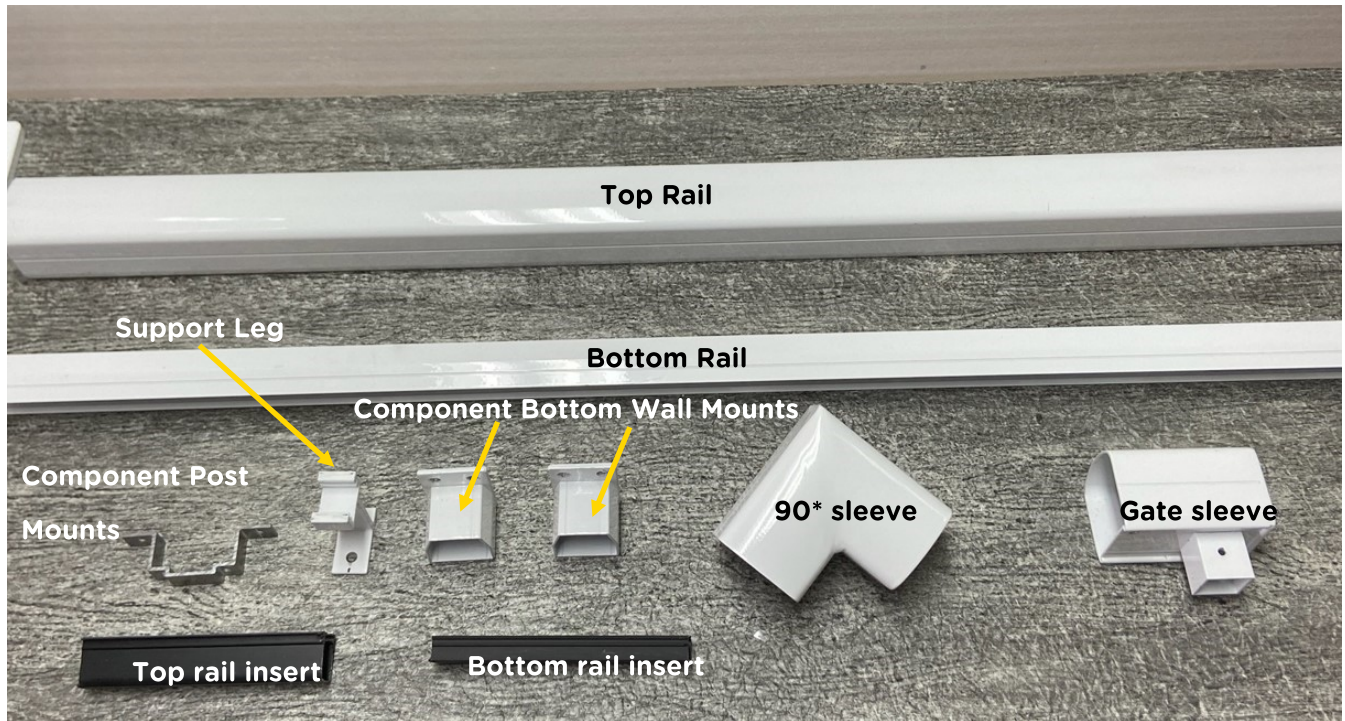
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BASIC INSTALLATION FOR STANDARD GLASS RAILS



Once you have all your posts installed, the first step is to measure and cut the bottom rails.

Take your measurements from post to post on the inside as shown above (NOT the flange) and subtract 3/4" from your overall measurement. This will allow for the weld inside the wall mount and the thickness of the mounting plate.

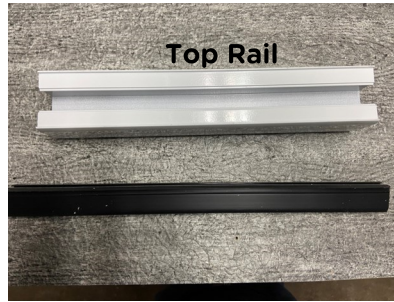
You will still end up with 7/8" of an inch of the bottom rail inside the wall mount.

TRAINING TIPS: Step-by-step Details

Both Top & Bottom rails will need to have inserts installed to accept the 1/4" glass panels.



- The taller of the two inserts is for the top rail/receiver channel.
- The shorter insert is for the bottom rail.
- Your inserts should be as long as the rail you cut.



When cutting the glass inserts, cut the sides first, then cut the bottom. To cut the inserts, straight aviator snips work the best.

After cutting the channel the ends may look like this. This will make it very difficult to insert the rails into the wall mounts.

Cutting the ends like this at an angle will make things much easier for you.



Make sure the inserts are completely snapped into the bottom rail as shown below.



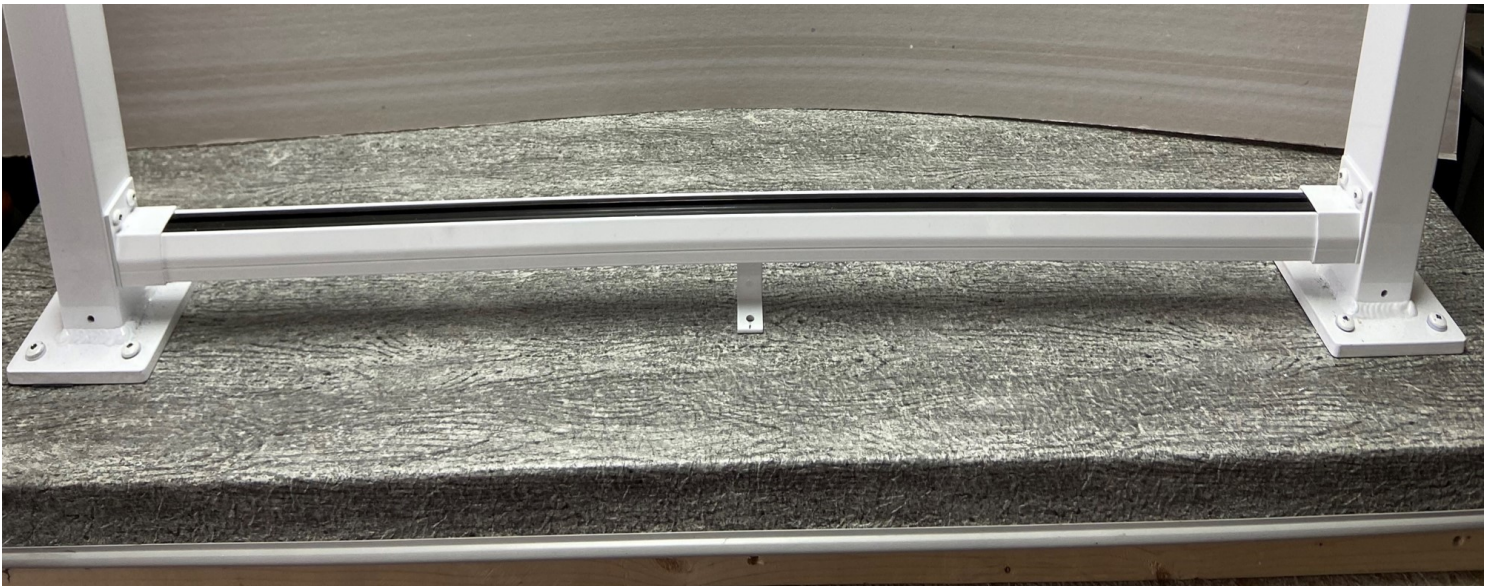
TRAINING TIPS: Step-by-step Details

When you install the bottom rails to the post, slip the wall mounts onto each end of the bottom rail.

You will need to insert a support leg into the bottom rail on each side. This will give you the proper height to attach the bottom wall mounts.

Slide the support legs into the groove on the bottom rail as shown below, making sure there is a support leg at each end of the rail. The hole in the support leg should face the outside of the deck.

Mark and pre-drill your holes for the wall mounts. Remove one of the support legs and center the remaining support leg between the posts then attach the bottom wall mounts using the supplied 3/4" screws.



This is how the finished installed bottom rail should look. The support legs come with a hole to secure them into the deck using a 1 1/2" screw.

If you install them into a Duradek you must follow the same installation as the post screws. Pre-drill the hole, fill the hole with caulk, dip the screw threads in caulk, then install the screw. A better option when installing on vinyl is to fill the hole in the support leg with caulk to keep it from moving without screwing it into the Duradek. Repeat this process for all your bottom rails.

TRAINING TIPS: Step-by-step Details

Now measure for your top rail. Measure in between the posts as you did for the bottom rail. If you have a long run with intermediate posts then measure in between the 2 end posts only. If you have a 90 deg sleeve on each side the subtract 3/8" from your total measurement so the top rail doesn't go too far into the 90 deg sleeve and hit the return piece in the other side of the sleeve.

Cut your glass insert the same length as the top rail. Insert it into the top rail making sure it is snapped in all the way.

Insert that has not been snapped in all the way.

Insert that has been installed correctly.



← Top insert should look like this when it's properly installed.

TRAINING TIPS: Step-by-step Details

Once you have installed the insert in the top rail, slide the gate sleeve on one end of the top rail and the 90 degree sleeve if you have a return on the other end of the rail.



Insert the sleeves into the top of the posts. Pre-drill holes in post using a 1/8" drill bit, then secure all sleeves to post, using supplied 3/4" screw as shown below.



When the framework is complete, you will need to screw ALL sleeves into the top rail using 3/4" screws. Pre-drill the holes using a 1/8" drill bit.

Then insert the screw to secure the top rail to the sleeve. This step **MUST NOT BE MISSED!** (Safety Issue)



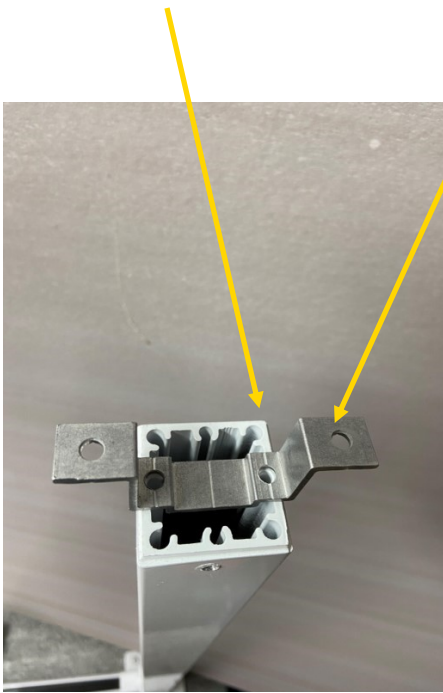
TRAINING TIPS: Step-by-step Details

If there are any intermediate posts, use the Component post mount bracket to attach the post to the top rail.

Install the bracket to the post using the 3/4" screws

Fasten the bracket to the top rail using the 3/4" self tapping screws supplied

When you install the insert you will need to notch the insert to fit around the bracket. If you do not notch the insert, it will not fully snap into the top rail.



Unnotched Insert

Notched Insert

INCORRECT →



← CORRECT

TRAINING TIPS: Step-by-step Details

MEASURING FOR YOUR GLASS

To measure for your glass panels:

- Measure in between posts and subtract 6"
- The glass height for a 36" rail system should be 32" tall
- The glass height for a 42" rail system should be 38" tall
- The glass needs to be tempered glass, 1/4" thick
- The 2 vertical sides need to have polished edges

ORDERING GLASS

With a 36" system, the measurement between two posts is 36 5/8". Less 6" would be 30 5/8". You have the option to order the width 30" or 31" as the glass company rounds to the nearest inch.

In this example, the glass is 31" wide and 32" tall 1/4" tempered glass with the 2 vertical edges polished.

GLASS PANEL INSTALLATION



- Installing the glass panels is best done with 2 people.
- You will need to spray the top and bottom insert with Windex. This will allow the panels to slide into the inserts. Without the Windex it is almost impossible.
- With one person on each side of the panel center it in the hole
- Slide the glass into the top insert then lower it into the bottom insert. Adjust so panel is centered between the posts.
- Clean the glass and you are done.



Here is the installed glass by making the width 31".
The gap on either side was 2 11/16".

Remember to keep the gap less than 4" to meet code requirements.

