



EX-Series[®]

RailEX[®] RS

Handrail Assembly Guide

World leaders in the design and supply
of Fibreglass Reinforced Plastic (FRP)
Access Systems for industry.



TREADWELL[™]

Handrail Assembly Guide



Installation Items

- Tape Measure
- Socket Set
- Tri-Lobe Drive Screw Driver OR Tri-Lobe Drive Drill Bit
- Electric or Battery Drill
- Lock C-Clamp Vise Grips, preferably with Swivel Pads
- Rubber Mallet
- Hammer
- Gloves
- Angle Grinder
- Sealer Kit
- Anti-Seize
- Air gun & compressor

Step 1: Plan Your Work

Before commencing work you should always review the situation or area into which you intend installing the RailEX® ROUND system – the reason for this being that your work will be a lot more efficient and the end result far more effective if you select the right components prior to commencing works.

We recommend you develop a sketch drawing / plan of the module or modules you need to develop to create a satisfactory handrail in the area being improved.



IMPORTANT NOTE:

It is important during this stage that you ensure that stanchion spacings **do not exceed 1,500mm** and that the height of the top rail will be **greater than 900mm** to ensure compliance with AS 1657: 2013

Step 2: Select Components

Following the planning phase, components or parts should be picked or ordered and compiled in readiness for commencing actual installation work.

Step 3: Cutting Post and Rail Material to Length

Following the planning phase, components or parts should be picked or ordered and compiled in readiness for commencing actual installation work.



Measuring post



Checking measurement of post throughout



Cutting post once confirmed lengths



Sealer applied on edges



IMPORTANT NOTE:

It is recommended that all 'cut ends' (of both rail and post material) be re-sealed utilising an EX-Series® Vinylester Resin Sealer Kit to ensure that premature breakdown of the FRP material is not experienced.

Once all components or parts required are to hand, you will be able to commence measuring and cutting posts and rails – this can be done on site by measuring existing posts and or rails if there is an existing handrail being replaced and you are undertaking the work in the field however we recommend you cut all of the rails to size following development of sketches per **STEP 1** and proceed to assemble the modules required in a workshop as this will generally result in a better standard of workmanship.

Remember that site adjustments are easily made with the RailEX® product as no hot work permits are required.

Step 4: Dry Assembly of Modules



1. Components with sealer on edges



2. Fasteners laid out



3. Measurements for insert



4. Measured for insert

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5. Components are placed tightly together



6. Components laid out before assembly

Assembly of actual modules can now commence, either in the horizontal position on a workbench (or on the ground if a workbench is unavailable, although not recommended) or in the upright vertical position if the handrail is being assembled in situ.



IMPORTANT NOTE:

It is recommended that RailEX® ROUND handrail be assembled in the horizontal position in a workshop as this does reduce the chance of surface damage and greatly improves the overall squareness of the modules.



All split components laid out

The most effective means of achieving the desired result is to set out all of one part of the split components on a bench in their approximate positions and then place the cut lengths of tube (rail and post) into their correct positions – following this, the other part of the two part components can be placed into position.

If you are assembling the modules in the upright or vertical position, you will require quick grip clamps to hold the components together during the process, until such time as drilling of connections and fasteners are able to be inserted. Note: ensure that when you clamp the fitting components together around the post and/or rail that you do not impinge on the hole locations as these will need to be accessed for drilling and subsequent fastening.

It is recommended that you commence by placing your post mounts into position and fasten these securely, then insert rails whilst simultaneously clamping the fitting components together around the vertical (posts) and horizontal (rails) parts.

Step 5: Check Measure



Measurements checked



Measurements checked

Now that the module is dry fitted, you will need to satisfy yourself that the module has been constructed in compliance with Treadwell's published data – we recommend you perform a quick check measure of heights, post or stanchion spacings and rail spacings, along with any other critical compliance measurements that may apply per the published AS 1657:2013 document.

Step 6: Fastening/Connection of Modules



Area to be assembled is first clamped



Holes are drilled



Area is then cleaned with air gun

Once you are satisfied that the module is satisfactorily assembled, commence drilling holes in the fittings and through the rail – this can be performed simultaneously.

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Anti-seize is applied onto each screw pre-installation



Screws are installed with anti-seize

Following drilling of the holes which should not be done from one side only, but should be performed from either side, the fasteners can be inserted and tightened.



Screws are installed with anti-seize



Screws are inserted with a special 3 point screw bit from Treadwell



IMPORTANT NOTE:

If the module is being assembled in the horizontal position, the barrel nuts (internally threaded) part of the F-RXH-SFK06 need to be firmly placed into the drilled holes on the one side of the module prior to the module being rotated and the bolts and washers being inserted into the other side of the fittings.

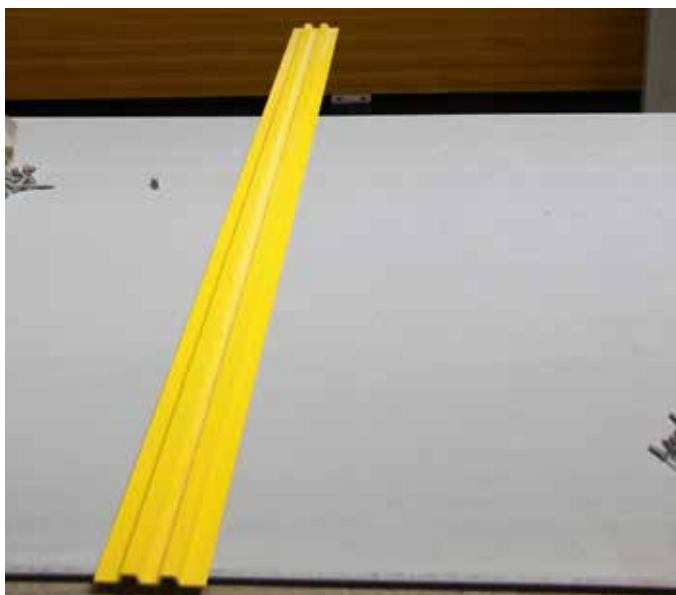
Step 7: Install Kickplate

Following the successful completion of the module assembly, you will be able to install the kickplate.

You should have identified all components required to successfully create a compliant kickplate during STEP 1 of the process so all components and the chose fastening type should be available. In this instance, we have chosen rivets.

- Rivets
- Kickplate
- Drill
- Rivet gun





We now recommend you check measure the lengths of kickplate required and cut these from the stock lengths. Remember to sand and seal all cut ends.

Regardless of the type of kickplate or extent, the kickplate cannot be situated any more than 10mm above the top surface of the flooring. To ensure this compliance is met with, it is recommended that you either mark the stanchions at 10mm above the top surface of the floor or alternatively place a max. 10mm packers of sorts on the top surface of the flooring.

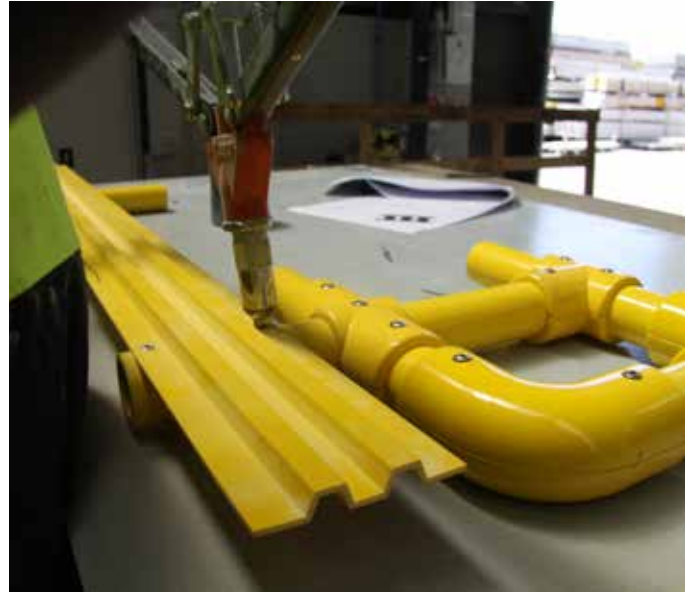


Holes are drilled

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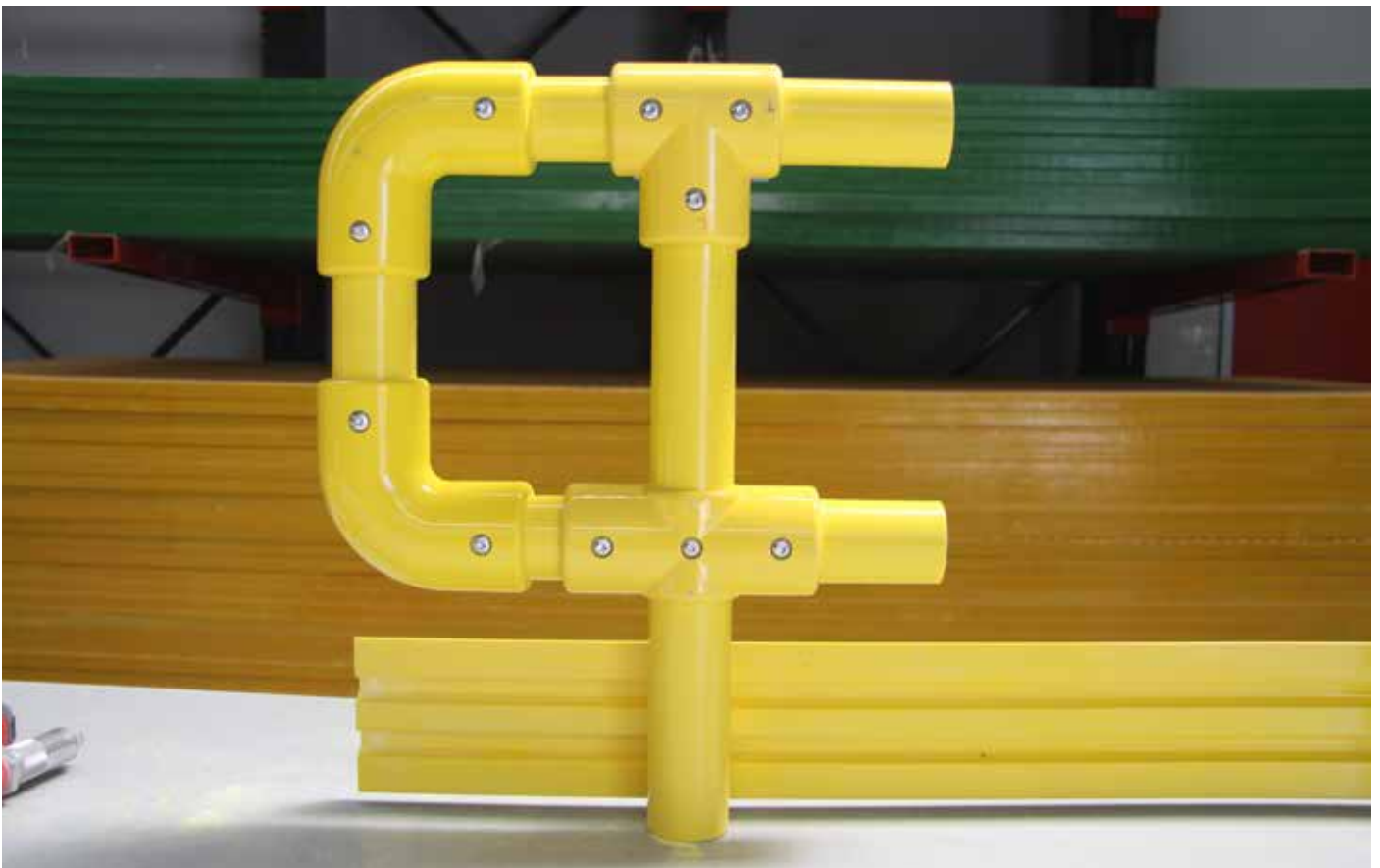


Rivets are placed accordingly



Rivets are next inserted

Step 8: Assembly Complete



Remove the clamps and tidy the work area and your handrail assembly and installation job should now be complete.



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