

sentrel

INSTALLATION INSTRUCTIONS

ALUMINIUM

Vertical Cable Balustrade and Pool Fences

Sentrel Australia Pty Ltd

sentrel.com.au

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2020 V.1

NOTE!

These instructions will guide you through the process for mounting Sentrel Vertical Cable Aluminium Balustrade and Pool Fence panels.

We advise that you read through these instructions completely to ensure that you understand the process and achieve the best results. **NOTE:** Please take care handling the powder coat finish and pay special attention to the procedure for using post adhesive on pool fence posts/spigots.

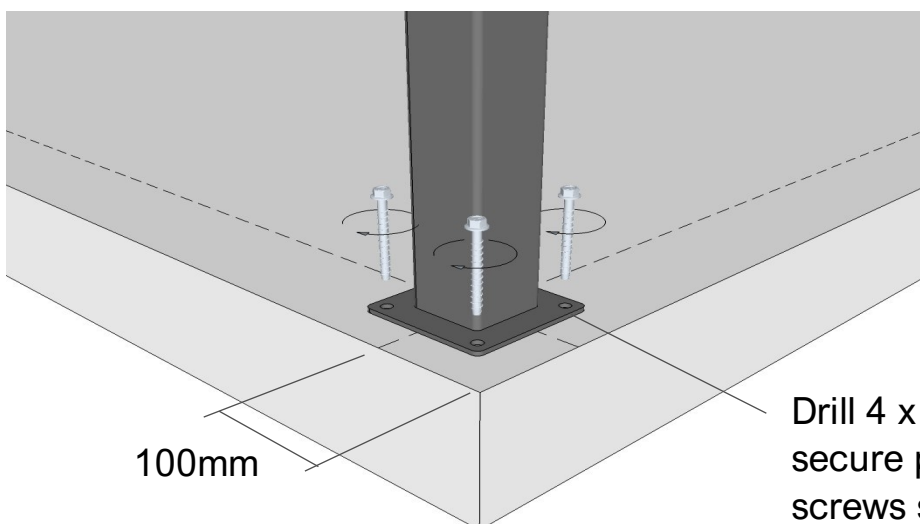
Sentrel will take no responsibility for problems arising from installations that are not in accordance with these instructions.

INSTALLING SENTREL BALUSTRADE POSTS

Sentrel balustrade posts have 'cut-outs' in them to receive the panels. The posts are fixed with 4 screws—one in each corner of the baseplate. A dressing plate is supplied to cover the baseplate and screws. This section shows you how to fix posts to concrete slabs and timber decks. For other situations (e.g. fixing through to steel beams) it is the client's responsibility to provide the correct fasteners to achieve a compliant installation.

Fixing balustrade posts to a concrete slab

- Place the posts in position according to the layout drawing, centred 100mm in from the slab edge. Ensure cut-outs are correctly aligned.
- Mark and drill 6mm holes in all four corners of post base, a minimum of 100mm deep from finished surface.
- Clean all dust and debris from holes.
- Secure post in place with concrete screws supplied. Tighten to a maximum of 15Nm.
NOTE: If the surface is not level, it may be necessary to shim under the corners of the post base to bring the post to plumb.



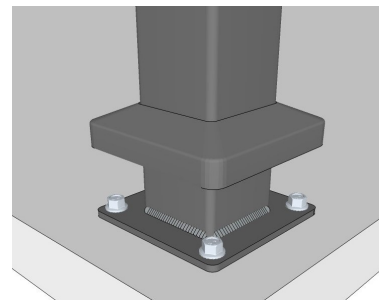
Fixing balustrade posts to a timber deck

- Place the posts in position and ensure cut-outs are correctly aligned.
- Mark and drill 4.5mm pilot holes in each corner.
- Use screws supplied to fix each post. (14 Gauge x 65mm Type 17).
- Decking boards must be made structurally suitable for mounting the posts. It will be necessary to reinforce the boards by fixing a minimum of 35mm hardwood blocks across several decking boards directly beneath the post. Failure to do so will result in non-compliant post strength.



Fitting the dressing plate

- When all posts have been installed and are plumb and secure, carefully slide the dressing plate over the post to cover the baseplate and screws.



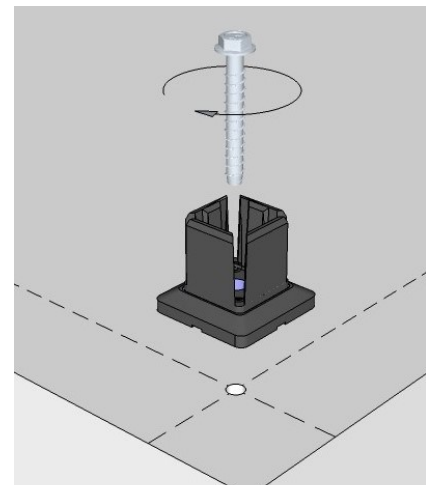
INSTALLING SENTREL POOL FENCE POSTS

If Sentrel posts are to be fixed (concreted) into the ground, follow standard fencing procedures. Be sure to align all posts plumb and in strict accordance with the layout drawing supplied. Ensure cut-outs are correctly aligned and that post tops are level. Panels can be fitted simultaneously if required.

If Sentrel posts are to be fitted to a concrete slab or timber deck, they are adhered with an anaerobic adhesive (Chemtools 8680 Retaining Compound—supplied) to proprietary spigots. The spigots must be positioned strictly in accordance with the layout drawing.

Fixing spigots to a concrete slab

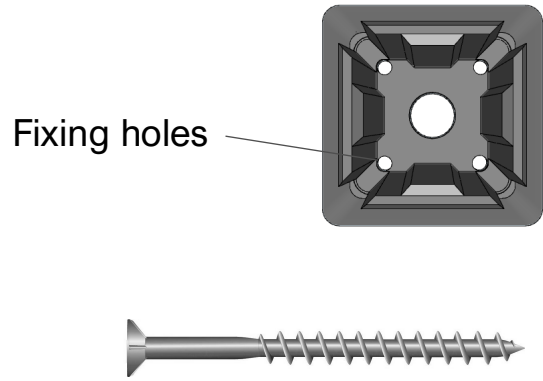
- Mark a centreline 100mm in from slab edge along the run where post spigots are to be fixed.
- Mark the spigot placement along the centreline as indicated in the layout drawing.
- Drill 16mm holes deep enough to suit the concrete bolts supplied.*
- Clean out all dust and debris from holes.
- Fix the spigot in place with concrete bolts and tighten to 80Nm.



* If the concrete bolts supplied are too long for the slab thickness, and you do not wish to drill through the slab entirely, the bolt can be packed up with a suitable number of 16mm washers (not supplied) under the bolt head

Fixing spigots to a timber deck

- Place the spigots in the correct position in accordance with the layout drawing.
- It may be possible to fix the spigots to a joist below with a 16mm coach screw or similar (not supplied). Otherwise, use the four fixing holes in the spigot.
- Mark and drill 3mm pilot holes.
- Fix in place with screws supplied. (10 gauge x 65mm Phillips head drive).
- Decking boards must be made structurally suitable for mounting the posts. It will be necessary to reinforce the boards by fixing a minimum of 35mm hardwood blocks across several decking boards directly beneath the post. Failure to do so will result in non-compliant post strength.

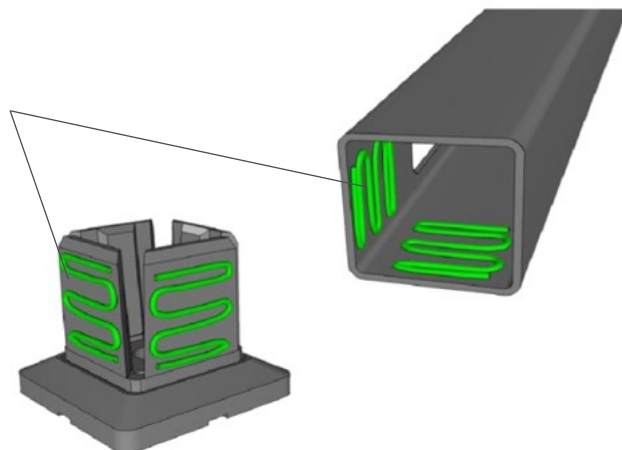


ADHERING POSTS TO SPIGOTS

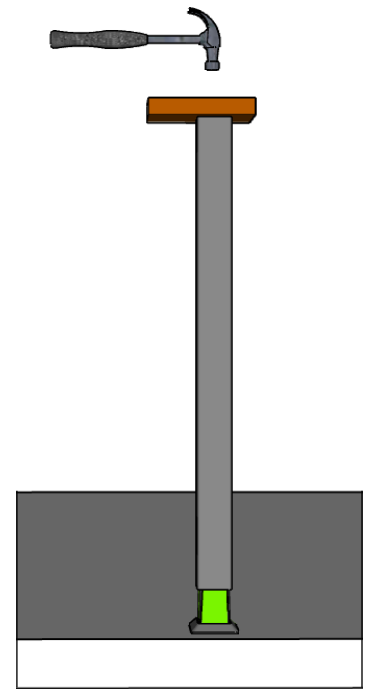
- Ensure that you have everything required to fit and plumb the post before beginning (i.e. mallet, timber block, level, and damp rag to remove adhesive).
- With a string line or otherwise, establish levels at each spigot. Note the variation, and choose the lowest point as a reference. If required, trim the **BOTTOM** of the posts accordingly to bring top of posts level. **NOTE:** This is a fine tune only. No more than 15mm can be removed from the bottom of any one post. If level differences are greater than this amount, other means will be required to compensate for the differences.
- Apply the retaining compound. **NOTE:** Ensure that you fully understand the application process of this compound **BEFORE** attempting to adhere the posts.
- Clean outside faces of spigot, and inside faces of post, with methylated spirits or acetone.
- Apply compound on all spigot faces **AND** inside of post. Spread with finger (in glove) or paddle pop stick (or similar) to ensure all faces have been covered entirely with a thin film of solution. **THIS IS EXTREMELY IMPORTANT.** Failure to apply the compound correctly may result in an unsafe or non-compliant installation.

Apply compound to outside faces of the spigot and inside faces of the post.

Spread to ensure a complete coverage of adhesive.



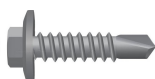
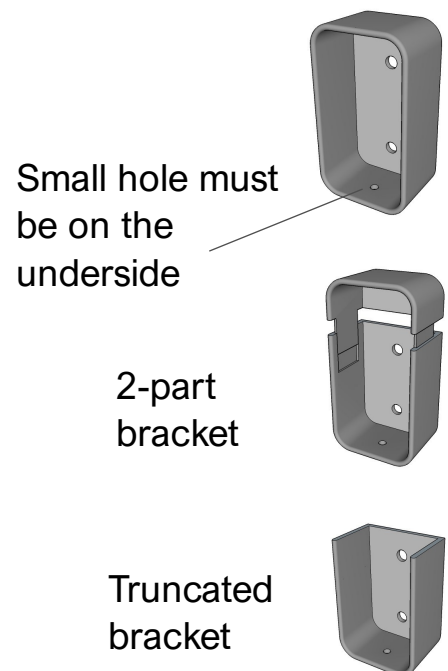
- Fix posts by knocking down with a hammer and soft block until firmly sitting on flange of spigot. Ensure cut-outs are correctly aligned. **NOTE:** The retaining compound will not begin to cure until contact is made between the metal surfaces.
- Immediately the post comes into contact with the spigot, the bonding process has begun. You will only have a minute to knock the post down fully into position, and bring to plumb. Work as fast and as accurately as possible, as best results are obtained when glue joint is made quickly.
- Hold the post in plumb position (if necessary) for 5 - 10 minutes. The compound will have grabbed sufficiently to hold the post in place. The bond will be strong enough to continue work after an hour, but will increase to maximum strength over a period of a week. Ensure no undue force is exerted on the post in this period.
- Remove excess adhesive immediately with a damp rag.



FITTING SENTREL BRACKETS (to existing posts or walls)

If your installation is between existing posts and/or walls, follow these instructions. If you need to fit brackets in conjunction with Sentrel posts, see the next section.

- Ensure brackets are positioned with the small hole in the short face to the underside. This hole is for securing the panels in place with rivets supplied. Only the top rail needs to be secured.
- 2-part brackets are supplied for the bottom rails to assist in ease of fitting. Screw the lower part of the bracket to the post, then slide upper part into position after installing panels.
- Installations with no handrail will have 2-part brackets supplied for the top rail as well. Installations with handrail will have truncated brackets supplied that must be fixed at the top of the posts with the open face upwards.
- Secure with screws supplied.



For fixing to metal

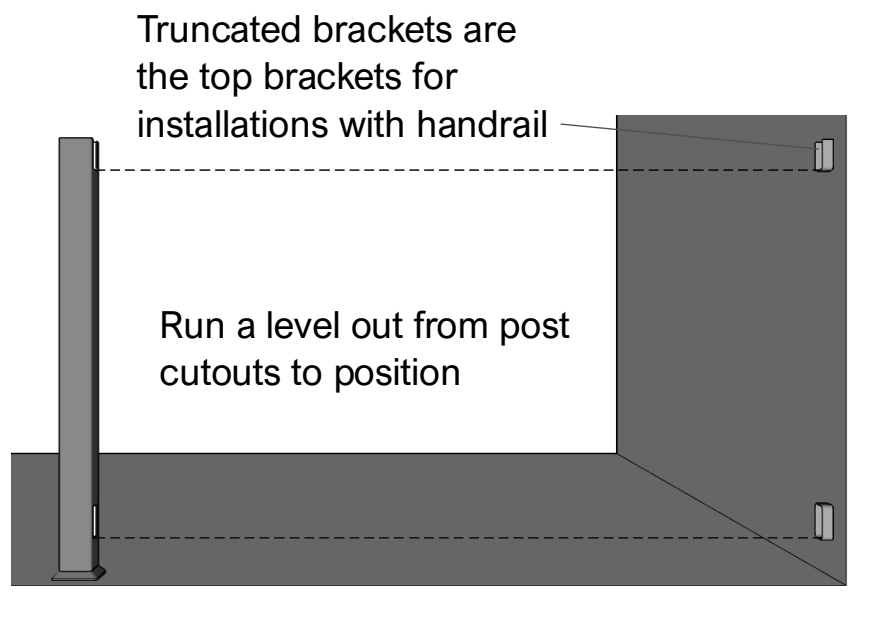


For fixing to timber

- Install brackets so that they align with the top and bottom rails of the panels. This is best done by running a string line and positioning all of the top brackets first.
- For balustrade, ensure that the finished height is no less than 1010mm and that the gap underneath the bottom rail does not exceed 125mm.
- For pool fencing, ensure that finished height is no less than 1210mm and that the gap underneath the bottom rail does not exceed 100mm.
- Once the top brackets are fixed, place the panels in position and hold the lower part of the 2-part bracket on the bottom rail.
- Mark the position of the bracket on the posts and remove the panels.
- Now, fix the bottom brackets in place, and fit the panels.

FITTING SENTREL BRACKETS (when used in combination with Sentrel posts)

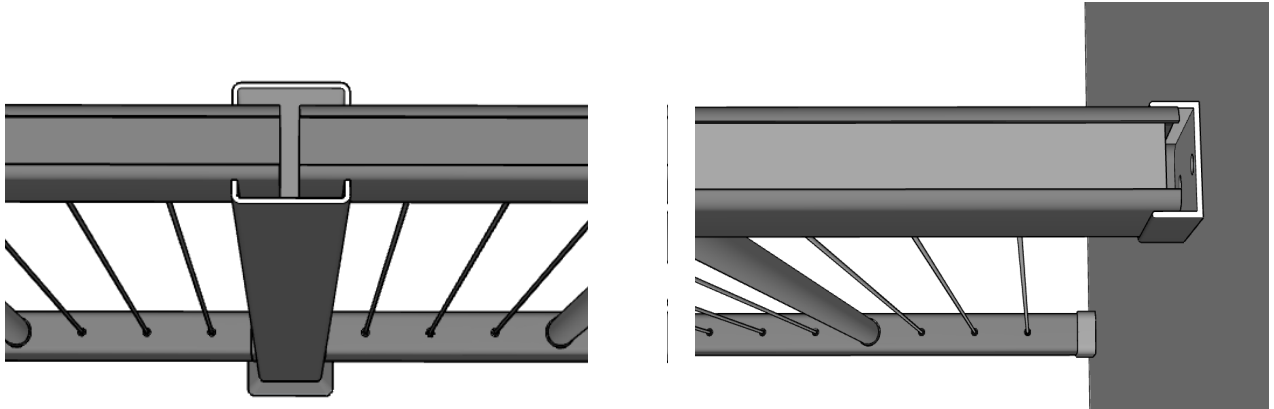
- Run a level out from the cut-outs in the posts to the walls and/or existing posts, in order to locate the position of the brackets.
- If your installation includes top handrail, position the truncated brackets at the top with the open face upwards.
- Ensure that the small hole in the short wall of the bracket is located at the bottom. Fix the brackets securely with the screws supplied. NOTE: If fixing into a wall, it may be necessary to use longer screws (not supplied).



FITTING PANELS

Panels are made to exact lengths and no trimming is required under normal circumstances. If trimming is necessary, use a drop saw or angle grinder with suitable cut-off disc.

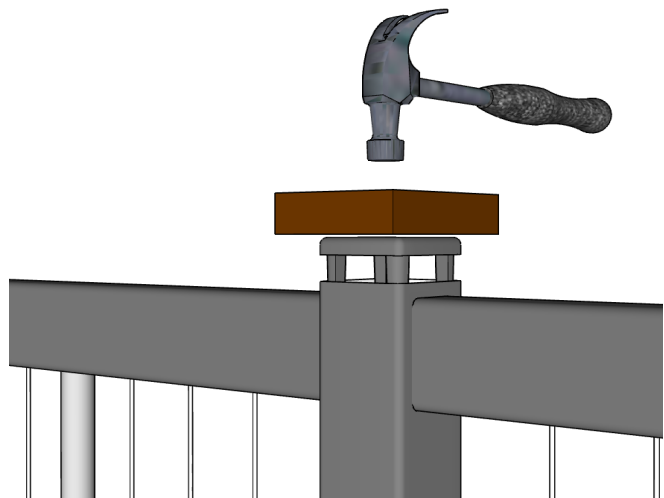
- Panels are supplied so that, when properly installed, the rail ends penetrate posts and brackets by approximately 25mm.
- Ensure that panels running between brackets and Sentrel posts are oriented correctly. Cable configuration is offset on these panels and will be marked as 'offset' accordingly. Panels that meet at 90° will have mitred ends.
- Install panels as per the layout drawing by pushing one end all the way into a post, then sliding the panel back into the adjoining post/bracket until it sits evenly in position.
- Panels being fitted to into 2-part brackets can simply be placed in position.



FITTING POST CAPS

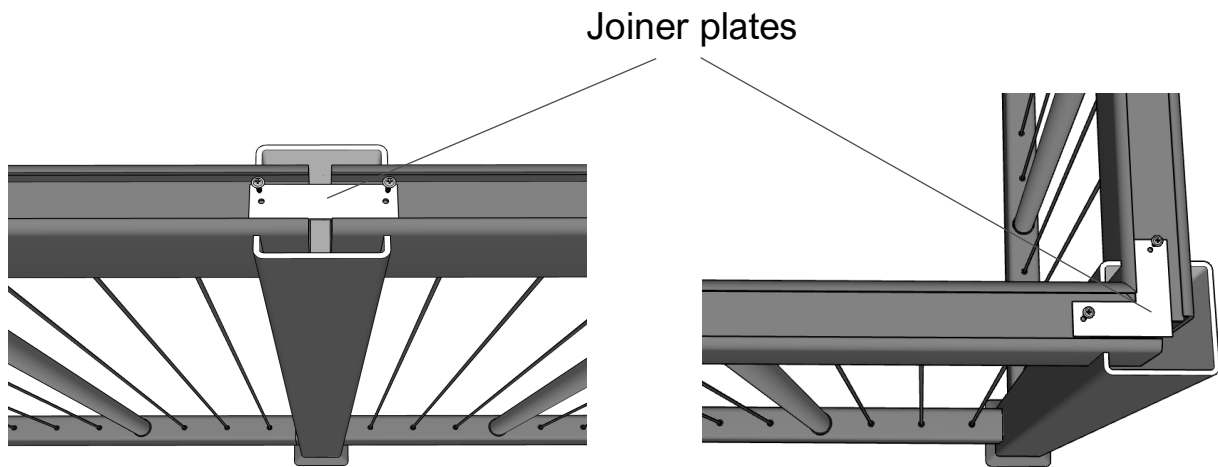
(for installations with no handrail)

- Ensure that all panels are fitted correctly and penetrate the posts equally.
- Position and knock down post caps with a soft block and hammer. The fins on the post cap will secure the rails into the posts.
- Go to 'FINISHING UP' for final instructions.

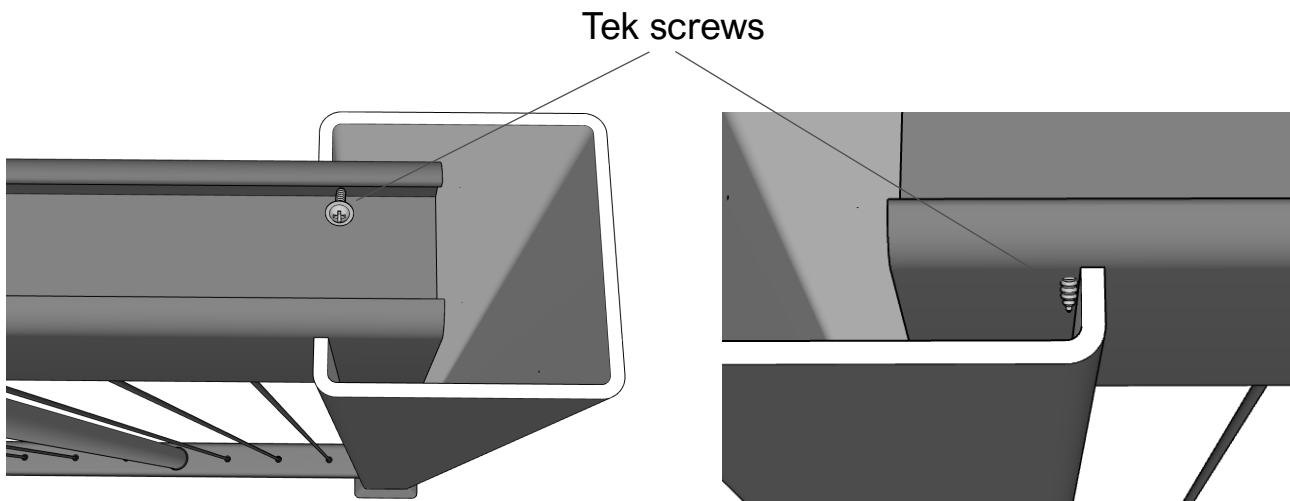


PREPARING FOR HANDRAIL

- Lock all panels in place with the joiner plates and screws provided. **NOTE:** Make sure that the correct panels are fitted to their corresponding openings, and in the correct orientation.



- To prevent panels from slipping out of end posts, use the tek screws supplied.
- Skew-screw through as shown, and be sure that the screws are positioned to sit against the inside face of the posts.



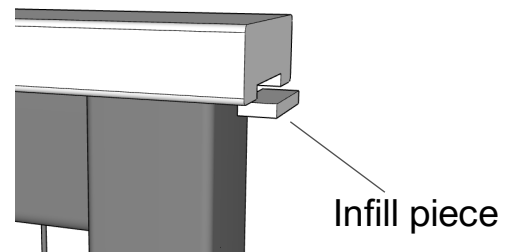
FITTING TIMBER HANDRAIL

- Using the handrail lengths supplied, cut and fit them to the top rail of the balustrade. Biscuit joints and adhesive (Bostik AV 515, or similar) are recommended where handrail joints occur. **NOTE:** The Sentrel system has been designed to be most structurally sound when handrail joints **DO NOT** occur over the top of the posts. Joints must be at least 100mm clear of any handrail mounting screws.

- Fix handrail in place with hex head screws (supplied) through the pre-drilled holes in the underside of the top rail. **NOTE:** To avoid splitting, it is imperative to drill a pilot hole and screw the batten screws in gently.



- Glue infill pieces (supplied) to fill in handrail channel where required.
- Fit plastic caps (supplied) to cover screw holes on underside of top rail.

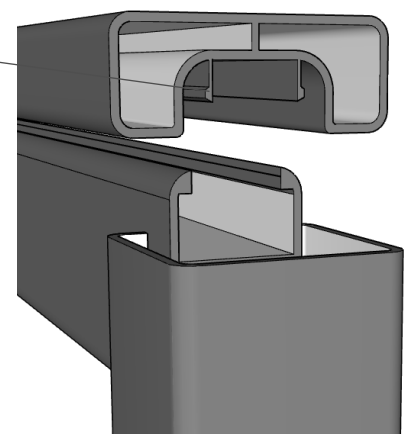


FITTING ALUMINIUM HANDRAIL

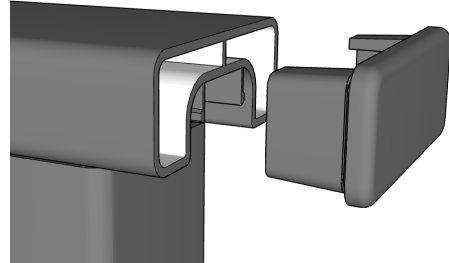
Sentrel aluminium handrail simply clips to the top rail of the panels. Lengths can be cut with a quality tungsten carbide blade on a drop saw. Care must be taken with all cuts, as there is no provision for filling joints. Accuracy is paramount for a neat installation.

Handrail clips onto
top rail of panel

- Cut and fit mitre joins first.
- Knock in place with hammer and wooden block, taking care not to damage the powder coat finish.



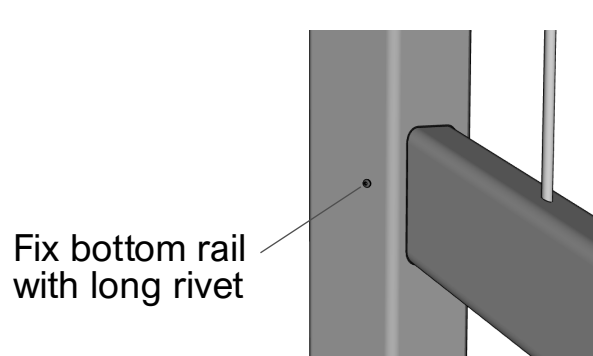
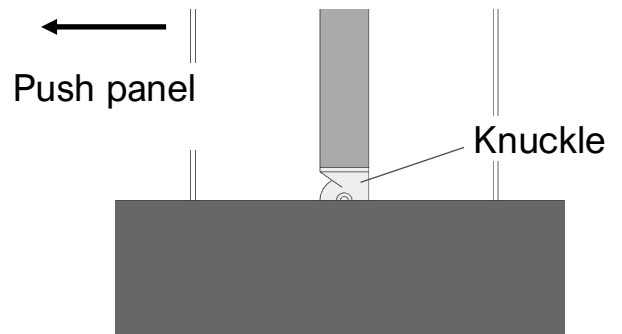
- Cut and fit the remaining lengths.
- On short runs, it may be necessary to apply a small amount of silicon on the underside of the handrail before assembly to help prevent it moving. This will also be necessary on handrail fitted to stair panels.
- Fit handrail end-caps if required— simply knock in with timber block and hammer.



INSTRUCTIONS FOR FITTING STAIR PANELS

Stair panels are supplied straight and have flexible knuckles that allow the panel to be pushed to the exact angle. Be sure that stair mounting posts have been positioned exactly in accordance with the layout drawing. For fixing stair mounting brackets, follow the same procedure described for straight panels.

- Push the panel to the correct angle of the stairs. Be sure to push the panel in the direction that the knuckles allow.
- Fit panels following the same procedure described for straight panels.
- Using the long rivets supplied, fix bottom rail to post/bracket at either end.



FINISHING UP

- If panels mount to walls or existing posts, fix the top rail of the panel to the top bracket, through the hole in the base of the bracket, with the rivets provided.
- Secure the bottom rail with pop rivets supplied. Drill 3.2mm (1/8 inch) hole through the post and rail, approximately 10mm back from the inside face of the post to ensure that the rivet picks up the end of the panel rail.
- Clean stainless steel poles with a suitable cleaner – white spirit is ideal.
- If you have installed a gate with hinges supplied by us, please note that these hinges are ADJUSTABLE. Set to the lowest setting possible, so that the gate closes positively but without slamming.
- The installation is now complete.

Certification

Sentrel balustrades are engineer-certified and are suitable for the following occupancy types listed in table 3.3 of AS/NZS 1170.1: A, B, E, C, C1/C2, C3, D, F/G. They are suitable for use at heights over 4 metres. Sentrel pool fences have been engineer-certified in accordance with AS1926 Set-2012 and NATA's accreditation requirements.

Certification reports can be found on the Resources page at www.sentrel.com.au.