Installing the TECHNO Balustrade system.

Tools required for the installation.
A. Core Drill 87mm Drill bit
B. Tape measure
C. Spirit Level
D. Marking pen
E. Caulking gun
F. Cutting Pliers
G. Cordless Drill and Philips head bit, 5mm Drill bit.
H. Aluminium cutting Drop saw.
I. Dust pan and brush
J. Soft faced mallet.
K. Timber wedges and blocks for supports.

Core Drill
Installing the Posts into Core Drill.
1. Clearly mark out the post centres onto the slab.
2. Core Drill each of the holes a minimum depth of 100mm.
3. Remove the core plug and clean out the remaining dust.
4. Insert all of the aluminium posts into the holes.
5. Start at the end of balustrade run first. With the use of 4 timber wedges centre and level the posts by forcing the timber wedges into the core hole against the post. Once you have established post and stabilised it move back to the last post on the other side of the balustrade run.
6. With the use of 4 timber wedges centre and level the posts by forcing the timber wedges into the core hole against the post. Level and centre the post into final position.
7. Run two separate string lines from the first post to the last post. One at the top and another 100 mm from the bottom of the post off the slab. These stringlines will act as a marker and aid in the placing of the remaining posts.
8. Starting at one end and working back towards the last post also ensures that the glass panels remain the same size.
9. Once all of the posts have been placed, prepare enough grout to fill a couple of holes at a time.
10. Filling the core holes with grout as follows
   a. Fill half of the core drilled hole only, ensuring that the grout mix runs freely into all of the spaces around the post.
   b. Continue half filling all of the remaining post holes.
   c. Allow the grout mix to harden at least for 1 hour after pouring.
   d. Remove the remaining timber wedges.
e. Continue filling the remaining core holes with the grout mix no further than the finished floor level.
f. Remove the string lines and measure for the glass if not having already done this. Please refer to the glass formula sheet in Section C for deductions and size charts.
Installing the TECHNO Balustrade system.

Installing the glass panels into a Solaris Balustrade system.

There are two methods of installing glass. Glazed in front or glazed from on top.

**Method 1. – Glass panels inserted from the front.**

1. The Spigots are inserted into the top of the post and screwed into place from either side of the underside of the caps shoulder using the 6G x 12mm CSK self-tapping screw. Failure to use the correct screw will result in glass breakages.

2. Place the selected handrail onto the spigots and centre the handrail so it seats onto the spigot shoulder. Ensure all end caps and joiners are in place prior to final screwing off the handrail from underneath through the 8 holes in the spigot body. End caps are squeezed in with a small bead of clear silicone behind the head as a means of sealing off any opening where water may find its way in. A 6G x 12mm CSK self-tapping screw can be used from underneath to lock the end cap in place.

**IMPORTANT NOTE TO INSTALLERS.**

All joins in handrails must be made directly above the spigot by using the correct joiner available in the components list. This is inserted and silicone into the hand rail opening. The handrails are the screwed in place from underneath by using 8 - 6G x 25 CSK Stainless Steel self-tapping screws.

3. Continue by inserting the glass panel into the Left hand side post. Line up the right hand side with the opening in the opposite post. The glass should clear the post by 3mm if cut correctly.

4. The glass panel is then centred and rested on two timber blocks laid on the floor.

5. Slowly lift the glass panel evenly up until it touches the underside of the post spigot.

6. Support the glass in this position by holding it in place or by the use of timber blocks.

7. Push in the rubber PVC wedge on either side of the glass into the gap. (Wet glaze if required)

8. Trim the rubber to length no longer than the glass bottom edge.

9. Measure and cut the infill pieces to fit below the glass. (Gap from glass to floor – 6mm)

10. Insert the Resilient Nylon Glass saddle.

11. Insert the saddle and infill piece into the post pocket and tap into place with a soft faced mallet. The infill is inserted with the nylon saddle in the end under the glass.

12. Remove the timber blocks supporting the glass.
Installing the TECHNO Balustrade system.

Method 2. – Glass panels inserted from the top prior to installing the handrails.

This method can be used if there has been an issue with the panels being cut large, lack of glazing space, or difficulty inserting the glass into the post or the glazing posts have not been correctly installed.

1. Measure and cut the infill pieces to fit below the glass. ( Gap from glass to floor – 6mm )
2. Insert the Resilient Nylon Glass saddle.
3. Insert the saddle and infill piece into the post pocket and tap into place with a soft faced mallet.
4. Place timber support blocks ( 75 x 35 ) on the floor next to each post.
5. Slide the glass in slowly from above the posts. Insert and slowly lower the glass panel until it rests on the timber blocks and centre the glass.
6. Support the glass in this position by holding it in place or by the use of timber blocks.
7. Push in the rubber PVC wedge on either side of the glass into the gap. ( Wet glaze if required, glass should remain supported for 24 hours at least )
8. Trim the rubber to length no longer than the glass bottom edge.
9. Measure and cut the infill pieces to fit above the glass. (Gap from glass to underside of cap – 6mm)
10. Insert the Resilient Nylon Glass saddle.
11. Insert the saddle and infill piece into the post pocket and tap into place with a soft faced mallet.
12. The Spigots are inserted into the top of the post and screwed into place from either side of the underside of the caps shoulder using the 6G x 12mm CSK self-tapping screw. Failure to use the correct screw will result in glass breakages.
13. Place the selected handrail onto the spigots and centre the handrail so it seats onto the spigot shoulder. Ensure all end caps and joiners are in place prior to final screwing off the handrail from underneath through the 8 holes in the spigot body. End caps are squeezed in with a small bead of clear silicone behind the head as a means of sealing off any opening where water may find its way in. A 6G x 12mm CSK self-tapping screw can be used from underneath to lock the cap in place.

IMPORTANT NOTE TO INSTALLERS.

All joins should be made directly above the spigot by using the correct joiner. This is inserted and silicone into the hand rail opening. The handrails are the screwed in place from underneath by using 8 - 6G x 25 CSK Stainless Steel self-tapping screws.

14. Removed the timber blocks supporting the glass.
Installing the TECHNO Balustrade system.

Direct fixing – Concrete base.
By using the direct fixing base plates supplied by Solaris, fabricators and installers are able to direct fix the posts to a solid concrete base. The Die cast Base Plates are custom made for this role. The foot plates are fitted to the base of Posts and screwed in place with 4 x 6G x 25mm Stainless Steel CSK screws from underneath the base plate. Once the foot place is fitted it’s then bolted to the concrete base with 4 x M10 Chemical Anchors.

IMPORTANT NOTE FOR INSTALLERS.
Use a spare base plate to assist you marking the holes out onto the concrete base. At no point should the holes be drilled through the base plate being installed. Clearly mark out all holes with a blank base plate and remove when drilling. Once the holes are drilled out, clean thoroughly and install the assemblies.

Direct fixing – Steel or timber base.
By using the direct fixing base plates supplied by Solaris, fabricators and installers are able to direct fix the posts to a solid steel or timber base. The Die cast Base Plates are custom made for this role. The base plates are fitted to the base of Posts and screwed in place with 4 - 6G x 25mm Stainless Steel CSK screws from underneath the base plate. Once the base plate is fitted it’s then bolted to the base structure using the listed bolts.

IMPORTANT NOTE FOR INSTALLERS.
Use a spare base plate to assist you marking the holes out onto the concrete base. At no point should the holes be drilled through the base plate being installed. Clearly mark out all holes with a blank base plate and remove when drilling. Once the holes are drilled out, clean thoroughly and install the assemblies.

Concrete Fixing instruction
The posts being inserted directly into the concrete footing must be treated with the use of a rubber based bitumen paint or barrier medium to stop the direct contact of concrete on bare aluminium. All cut surfaces must be treated prior to being inserted. Failure to treat the aluminium can cause corrosion and affect the painted surface of the posts.

The post must be embedded as per the fixing details provided. The local shire requirements and standard BCA regulations over write Solaris Balustrade’s recommendations where needed and must and must be complied too at all times.