



Please read before starting installation

## Installation Instructions for 12mm Frameless Glass Fencing

### Site Measure and Planning

Frameless glass fencing is only suitable to be secured into core drilled concrete or timber/steel decks.

Plan your ideal fence position including approximate positions of gates.

Draw out the shape of your fencing perimeter writing down the total length of each side.

It is best to lay out your fence on paper in plan form marking the panels and gaps in between.

Our glass range at 50mm width increments along with gaps in between should cover most requirements.

**Go to Figure 1 for instructional diagrams**

### Preparation

Lay out a string line or chalk line to create the perimeter of your fence.

### Installing into concrete slab

Lay out a string line showing the **centre line** of your fence. Determine the positions of your spigots on the bottom of each glass panel. **As a guide, divide each glass panel width by 6** to calculate the approximate distance in that the spigots need to be from the glass edges.

Now carefully mark out your measurements on the concrete or tiled floor.

**E.g.** for 8617mm length as shown in **Figure 1**, mark with pencil as follows:

From wall measure 53mm, **mark**, measure 1500mm **mark**, measure 852(gate) **mark**, measure 1500mm, **mark** etc, etc

Then within your glass edge marks measure in the spigot positions and mark with indelible pen, also mark the other way along the string line creating a cross. These are your important core drill centre markings; make sure they are in a perfect line as the core drilled holes allow only for a small degree of spigot movement.

You will now require a **core drill**; this can be hired at your local tool hire company.

You will need a core drill bit sized between 74mm to 76mm diameter. These machines are water cooled and fit to your garden hose. Ask for a guide which will stop the drill skimming off the concrete when first cutting. The general rule is to allow the diamond bit to cut without too much downward pressure; water should be more than a dribble but not full on.

Drill down to 80mm-100mm depending on thickness of concrete, the bit will cut through steel reinforcing.

To remove the core use a cold chisel or old wood chisel, carefully tap down the sides of the core, as the pressure on the core builds it should snap off at the base of the cut, otherwise chisel out until clean.

### Fitting spigots on glass

First cut some wooden positioning blocks for the glass to sit on, an ideal size is 60mm thick timber cut into approx 100mm lengths, two lengths for each glass panel.

Your glass panels have either been delivered by hand and are resting on timber or rubber blocks or by crate with protective packing.

**Note:**

- A** Our glass panels are polished all round for safe handling.
- B** 12mm glass is **very heavy** you will always need at least two men to install.
- C** The glass panels must never be placed down onto hard surfaces, use old carpet or wooden blocks.
- D** Lay glass on its edge and lean at an angle against a wall or secure surface.
- E** Make sure that the etched ID markings are at the bottom of each glass panel before fitting.

Select your first glass panel, turn up side down (etched ID mark at top) and place on any soft surface or rubber blocks away from hard surfaces, measure your core drilled hole centres in from marked glass edges and fit each spigot on the glass in the corresponding positions. Push down hard so the bottom plastic spacers (use 3) are tight under the glass. Tighten friction plates, turn over the glass panel and try spigots in the holes to double check the correct positions, adjust if required.

Continue with all the panels that you intend to fit at this time.

Check the level of the floor you are fitting to by securing a string line on a wall or post at 1260mm high at one end, level the line across and secure at the other end of the fence line. Measure down from the string line to the floor in several places along to the end of the line. If the measurement at the opposite end is the same height or within 35mm above or below this height, then 1260mm can be your starting point height for your first glass panel.

If the difference in height at the other end of the fence line is more than 35mm above or below 1260mm, then you will need to gradually step up or down each panel as you fit them, making sure that there is no larger gap than 100mm under any panel (pool regulation) or conversely the glass does not touch the ground anywhere.

You will need 2 x wooden wedges for each spigot these can be any timber and can be easily knocked up with a drop saw. Size is not critical approx 50mm long x20mm square tapering down to nothing. These are to tap into the hole each side of the bottom of the spigot to support whilst it is drying and are to be removed after drying.

Assuming that the floor is level, take the first panel, unwind or wind up the bolts under the spigots to sit into the core hole with bolts at approx 10mm above the bottom of the hole (this is whilst the glass is sitting on the 60mm wooden blocks.) If you are now confident that you have determined the height of your fence along the length you are about to fit, you can now fit and secure the first panel which will, when dry, act as a support to the following panels.

You will have purchased Sika Grout HES or similar and are now ready for spigot installation.

Mix the Sika Grout in a small container (A two or three litre ice cream plastic container is ideal) using a small amount of water at a time mix the grout to a smooth but **runny** consistency. This compound has quick dryers in it so do not mix too much at a time, **stir constantly and use quickly**.

Drop the first panel into the core drilled holes leaving the glass sitting on the 60mm wooden positioning blocks, line up the glass with the glass panel width markings and the centre line markings on the floor. Firmly tap in a wooden wedge each side of both spigots, level up the glass with builders' level. Any other method you may have to stabilize the glass is acceptable.

Pour in Sika Grout (must be runny) up to level with top of hole making sure that it is completely filled all round.

Tap in blocks more to stabilize. This panel must be kept steady for at least 20 minutes when it will start to dry and self support. Leave for 1 hour before the next step.

You can now remove the wooden wedges and wooden blocks from under the first glass panel, for re-use.

Repeat to same process with the next panel. This time you can use the first panel to stabilize panel 2 by using two timber blocks and a G clamp, sandwich the top of both glass panels between the two wooden blocks and clamp together until panel number 2 is dry, or continue on if you have the extra clamps.

You will note that the dome covers or cover rings have been left off at this stage. This does mean that the glass has to be raised off the spigots later for these to be fitted. You can install with these on but access for pouring the Sika Grout is then very limited. If you tape the rings up and use a funnel, plastic drinks bottle with one side cut off or similar accurate pouring method you can avoid this extra work..

To complete, adjust height and tilt facility on each spigot as required, for final glass alignment.

### **Installing onto a timber deck**

Your spigots will have a heavy base with 4 fixing holes. Secure to deck with our 316 stainless steel screws or your own stainless steel coach screws. There must be a suitable strength timber under the deck boards. If you are building the deck or can get access under, work out where your spigots will sit and fit noggins between the timber joists directly under each spigot. These can simply be off-cuts of joist anywhere between 50mm and 60mm thick and 150mm to 250mm wide. Cut these to fit between the joists and turn them on their side so the wide face is hard up against the underside of the deck boards and directly under the post position, then secure into the joists each side with baton screws. This will ensure a strong screw fixing to carry the weight of the fence above.

Position the spigots, using the centre to centre calculations as shown in **Figure 1**, mark and pre-drill holes through the deck into the noggins with a 4mm or 6mm drill, then drill through the **deck boards only** with an 8mm or 10mm drill bit, this will stop any splitting when screwing in. Use 8mm or 10mm stainless steel coach screws (with correct pilot holes) for a secure fit. Level up the post with shims under the base if required; use thin aluminium (drinks can ideal) or old Colourbond sheet.

To complete, adjust height and tilt facility on each spigot as required, for final glass alignment.

**Note:** For gates (3 widths available) fitted within a fence length, the gap you must leave between the dedicated hinge glass panel (see list) and the glass panel you have planned to use as the latch panel is **19mm** wider than the chosen gate width.

### **Gate Installation**

#### **Note; Gate must open away from pool**

Fit the two stainless steel hinge assemblies and Magnalatch side pull as per the detailed diagrams.

**See figure 2 for gate position diagrams and figure 3 for gate hardware assembly**

With a selection of thick and thin wooden or plastic blocks make up to exact level of adjacent glass panels.

Sit glass gate onto blocks and make final adjustments to level up with glass panels each side.

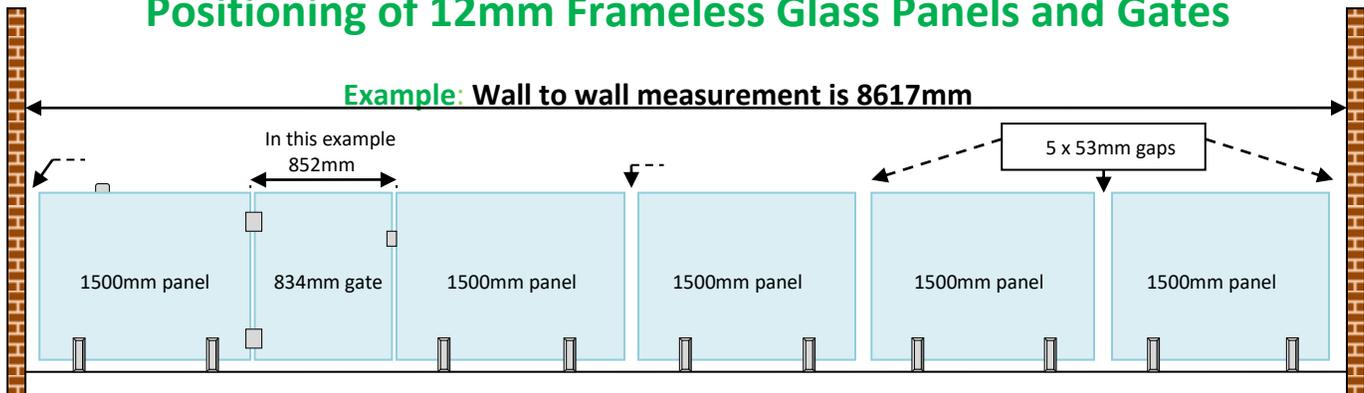
Fit hinge and striker plates to gate and hinge panel then level up.

Slide friction latch onto latch panel, line up height to match gate striker, tighten screw tension.

Replace hinge pins into a re-tensioned hinge and close gate. Adjust hinge height and width to line up with latch panel leaving a closing gap between glass panels of 10mm maximum.

Figure 1

## Positioning of 12mm Frameless Glass Panels and Gates



You have decided that you need one gate in your fence line.  
 Take 852mm off the overall wall to wall measurements for the allowance required between the gate hinge and latch panel, then, from the glass list, divide by the most suitable standard glass panel widths.  
 Allow for the 5 gaps that need to be left between the glass panels (these gaps can be anywhere between 20mm and 100mm wide)

**In this example** Overall width between walls is 8617mm.

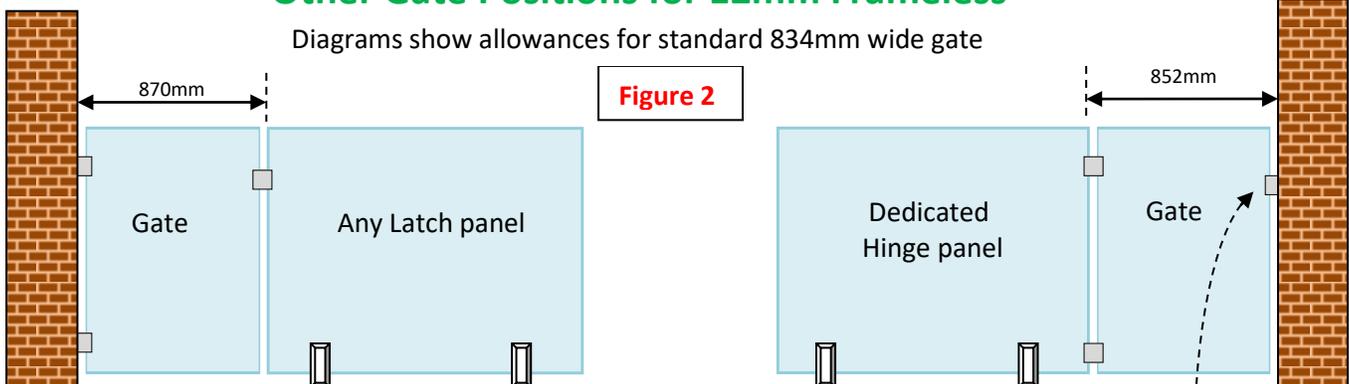
Take off 852mm ( 834mm standard gate+18mm hinge/ latch allowance) = 7765mm remaining.  
 7765mm divided by 5 x 1500mm glass panels = 7500mm with 265mm remaining.  
 265mm divided by 5 x gaps = 53mm for each gap width.

You have chosen 1500mm wide panels for this installation.  
 To calculate the spigot positions on the glass panel divide the panel width by 6.  
 In this case the distance in from glass edge to centre spigot is 250mm.  
 This is not a highly critical structural measurement and can be slightly varied.  
 Continue installation as per the written instructions.

## Other Gate Positions for 12mm Frameless

Diagrams show allowances for standard 834mm wide gate

Figure 2



Plan view of 90 degree corner

