BLITZ GLASS

Pool Fencing Installation Considerations

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FRAMELESS GLASS **DIY** GUIDE

SITE MEASURE

1. Planning is the first step of any successful project.
2. We have a large range of sizes to allow for varying site requirements.
3. Simply decide where you would like your pool fence to be located.

Below are some great tips on measuring your site:

- The recommended distance from the edge of the pool is 1300mm or more - For fences closer than 1300mm, "earthing" must be considered
- Watch out for underground cables and pipes when core drilling
- Aim to use as many of the same sized panels as possible to ensure a great looking end product
- Use a steel tape measure to ensure correct measurements are taken
- If fixing to pavers, you need to form a concrete footing underneath & re-cement pavers to footing

MOVING & STORING GLASS

Glass panels must never touch, lie against or rest on concrete, tiles or any hard surface. If moving your glass panels, always ensure they sit on rubber, timber or preferably both. Although your glass is safety toughened, if treated incorrectly the panels will shatter into small granules.

MATERIALS

We can supply all of the fencing and extra components required.
For a standard fully frameless glass fence project, you will require:

- Glass panels & glass gate
- Spigots & dress rings or domical covers
- Stainless steel hinges
- Stainless steel latch
- Grout
- Glass cleaner & cloth
- Dyna bolts (for base plate application)

TOOLS REQUIRED

You will require some basic tools in order to complete your fully frameless glass fence project installation:

- Steel tape measure
- String line
- Chalk line
- Core Driller (For core drill applications)
- Hammer drill (For base plate applications)
- Spirit level
- Allen key set
- Mats or blankets

REGULATIONS

RING BEFORE YOU BEGIN!
Simply consult your local council before installing a pool fence to ensure compliance with any local bi-laws. Council regulations vary from region to region and your local council can help with decisions on distances and heights of fences from neighbours and pavements. Mandatory safety regulations need to be strictly adhered to.

Fully Frameless Pool Fencing

Core Drilled

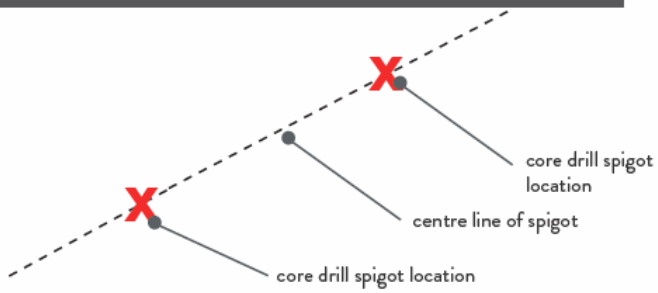
FRAMELESS GLASS **DIY** GUIDE

FIXING METHOD - **CORE DRILLED**

1

Mark out the centre line of proposed glass fence with a chalk line. Determine spigot location based on a sheet size (spigot hole placement guides on pages 2 & 3). Once spigot positions are marked, core drill a 76mm diameter hole at 110mm deep. Ensure no wiring or underground pipe will be affected. Remove the core and clean the any excess water & concrete which may obstruct spigot.

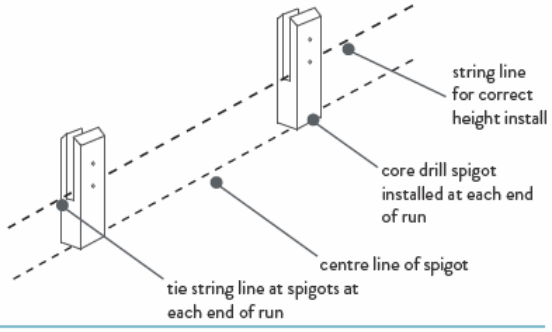
Note: Do not exceed 100mm gaps between glass panels. Optimum gap is 40mm to 60mm



2

Check level of floor to determine the height of each spigot. We suggest installing a spigot at each end of a straight run and then use a string line to set the spigot heights inbetween.

Note: Do not exceed 100mm gaps from fixing surface to the bottom of the glass



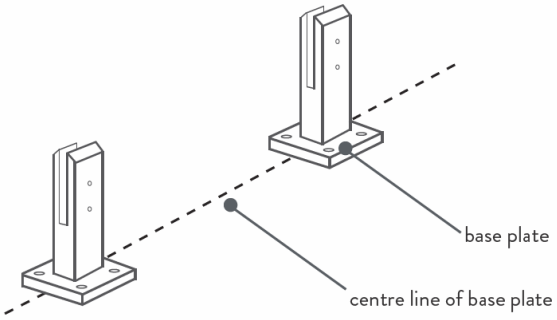
Base Plated

FIXING METHOD - **BASE PLATED**

1

Mark out the centre line of proposed glass fence with a chalk line. Determine spigot location based on a sheet size (spigot hole placement guides on pages 2 & 3). Use base plate as a template to mark out the hole positions and drill holes to suit.

Note: Do not exceed 100mm gaps between glass panels. Optimum gap is 40mm to 60mm

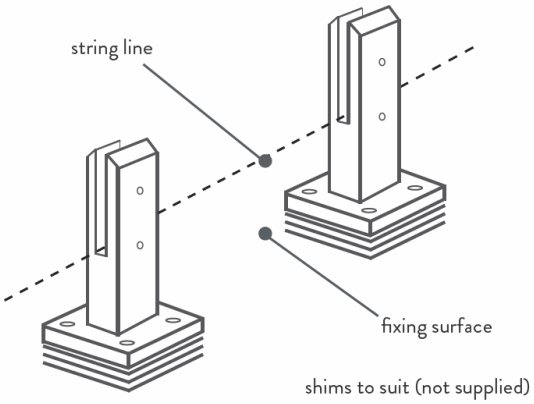


2

Now the base plated spigots can be fitted to the floor and plumbed via shims (not supplied) under the base plates. Be sure to tighten firmly as the smallest of movement at the base plate will result in noticeable movement at the bottom of the glass fence.

Note: Do not exceed 100mm gap from the fixing surface to the bottom of the glass

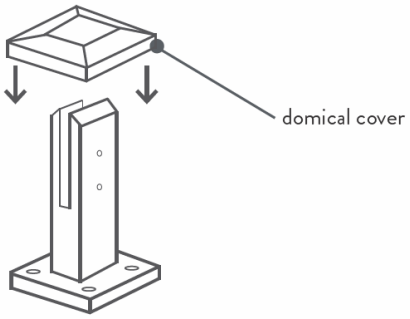
Tip: By setting the two outer spigots of your total span, a string line can be run in the 'throat' of the spigots, giving correct height for all spigots in between



3

When all spigots are installed, slip domical cover the top of the spigot to hide fixings. It will be necessary to turn the adjustment screws on the spigot face all the way in to allow cover to pass over

Note: Same installation method applies to round base plate spigot



4

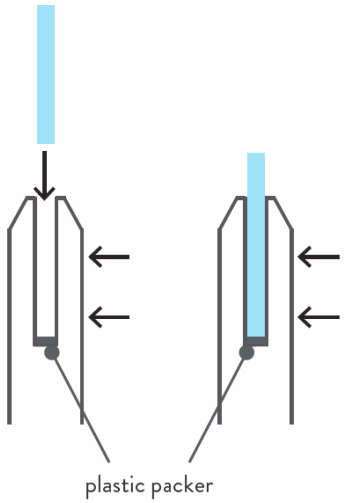
The glass is then installed to the spigots.

Place plastic packers between glass & spigot; at no stage should glass touch the metal

How friction adjustability works:

1. Place glass in spigot

2. Fix/tension glass from grub screw side with allen key



Marking Out

- Mark your plan onto the concrete/paved/timber area.
- Place a pencil mark where each edge of the glass panel will be.
- Ensuring the gaps between are approximately equal across each section
- Mark in any gates, allowing for the hinge & latch gaps
- Mark spigot placement for each panel. (Refer to recommended spigot location list)
- Place a circle around the spigot marks to avoid confusion when drilling.
- Double check all panel sizes, spigot positions and spacings

Core-drilling

- It is important to ensure the correct marks are identified for the core holes.
- Ensure the core hole is centred on your marked line. Mark with texture so lines will not be washed away when core drilling.
- Generally a 76mm hole is made to support the timber. (Using a template will assist accuracy)
- Run the water in your drill and make your holes approximately 100mm deep
- Clean the area thoroughly to avoid any possibility of staining from concrete slurry/filings.
- Use a hammer and chisle to tap the cores loose and remove. (Tongs can be useful)
- Drain the holes with a sponge

Installation

- Your glass panels should be stacked ready to go. Identify the top and bottom of the panels.
- Remove the spigots from their boxes, loosen grub screw and place on the bottom of the panel at the recommended spigot location (same logic used for identifying core drilled holes)
- Slide both spigots onto the correct positions on the glass
- Tighten the grub screws to they grab, followed by a further half-turn
- Place the dress ring over the spigot. (Check polished side is correct) and tape it in position or use a rubber band to secure the dress ring.
- Flip the panel so the spigots are on the ground and the panel is ready for installation.
- Repeat the process for all panels, or enough to do a section of your fence

Erecting Glass Panels

- Place your timber spacers approximately 100mm away from each hole to avoid contact with the dress rings. Using your spirit level ensure that the timber blocks & spacers are all level across your fence line.
- Prepare your braces, weights and clamps.
- Carry your first panel into position checking that the spigots line up with each of the core holes and the glass panel is sitting firmly on your timber blocks & spacers.
- Ensure the panel is supported whilst you connect the first brace
- Continue placing other panels in a similar manner bracing each panel. Ensure you do not knock the other panels when erecting the fence line.
- Consider the weather conditions when you are applying braces or connecting panels together.

Level, plumb and straight

- Using your spirit level make any adjustment using small plastic spacers.
- Repeat this step with all panel ensuring all panels next to each other are at the same height
- Measure your gaps and gate openings to ensure that they are correct
- Adjust your panels to ensure the bottoms are also aligned with each other.
- Ensure all panels are plumb (making it vertically straight) and in a straight line.

Finishing Up

- Core holes are filled using the high early strength, non shrink grout. It is very high strength and can harden very quickly. On a warm day it can take less than 15 minutes.
- It is recommended to make small batches at a time and follow safety guidelines outlined.
- After double checking everything with the fence you are ready to pour.
- Add roughly two handfuls of grout into a small bucket and slowly add water until you get a "thick shake" consistency ready to pour. If you have excess water, add more grout.
- Using a funnel, jug or applicator pour and fill each hole to the top.
- Clean away any run off with a sponge immediately.
- Drop the dress rings and clean any grout on the spigots
- Test if the grout has set by using a screwdriver. Anywhere between 20 minutes & 2 hours
- When it has set you can gently remove the braces.

Final Check

- If your fence is not quite perfect the adjustable spigots can be used to adjust the vertical plumbness of the panel. Adjusting the top and bottom grub screws will allow the top of the panel to move.

Suggested Spigot Placement.pdf

Installing the gate

- Remember that the gate must open outwards from the pool area and automatically close from any position. The gap on the latch side of the gate must not exceed 10mm

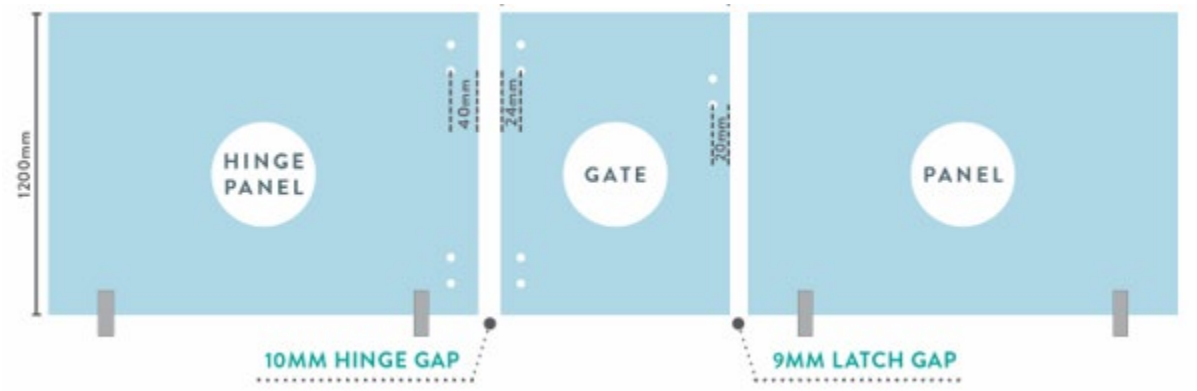
Glass Gates

MASTER RANGE GATE PANELS

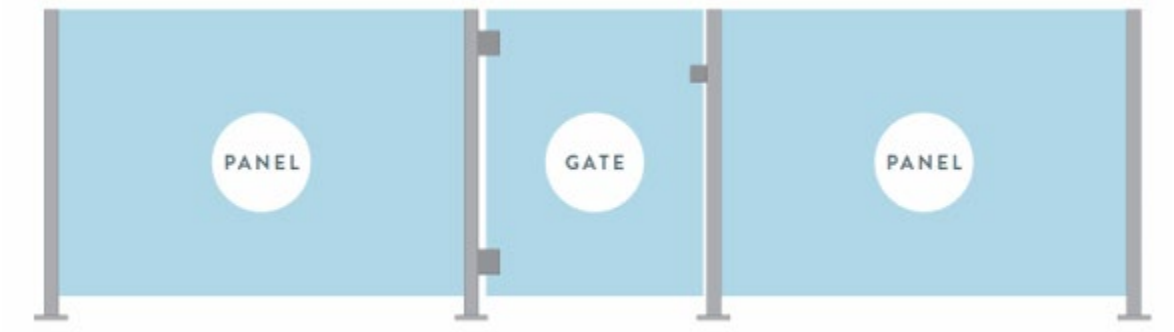
Glass Gate Panels

- Panels are 1200mm in height and 8mm thick Grade ‘A’ toughened glass.
- Glass panels have 2mm radius safety corners
- Panels are available in sizes from 750mm wide to 1000mm wide.

FRAMELESS GATES – TYPICAL GATE SETUP



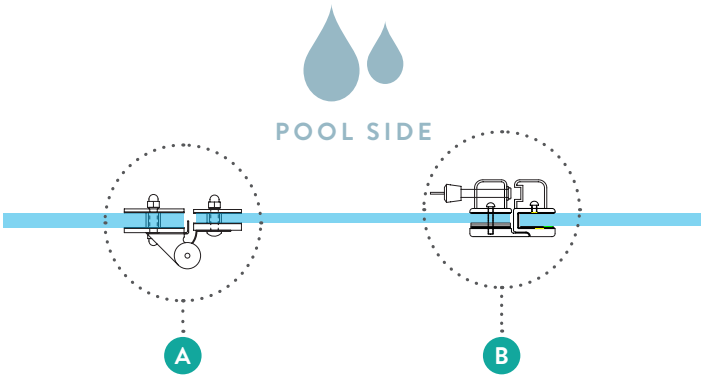
SEMI FRAMELESS GATES – TYPICAL GATE SETUP



*** Important : Gate must hinge AWAY from the Pool ****

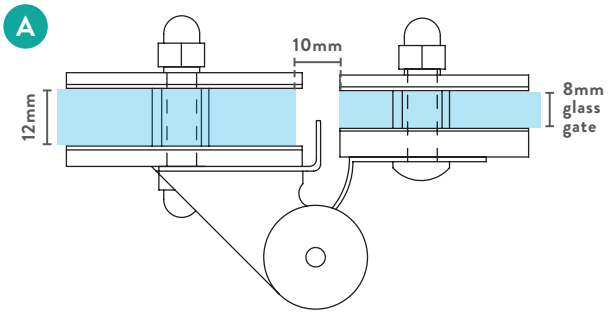
GATE HARDWARE LAYOUTS

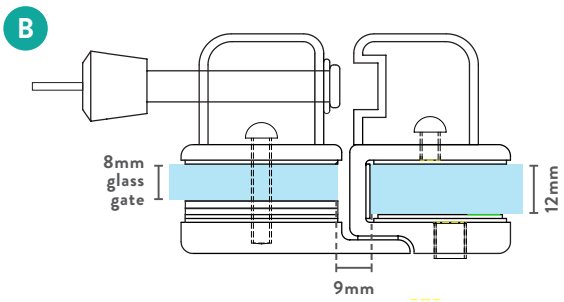
GLASS TO GLASS APPLICATION



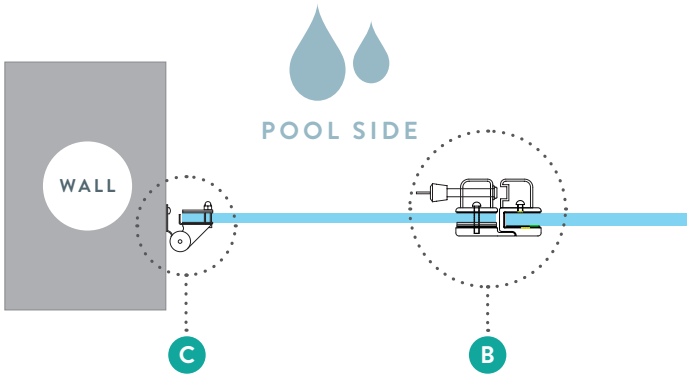
Note: Extra packers (supplied) may be required to accommodate different glass thicknesses

IMPORTANT: Gate must hinge AWAY from pool



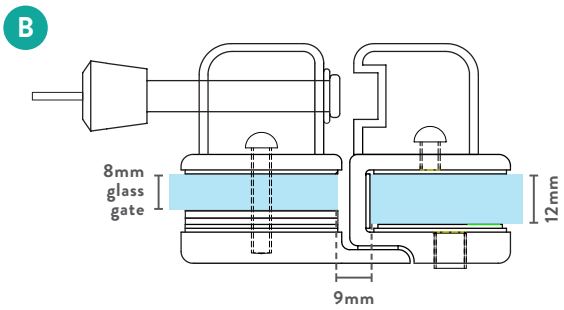


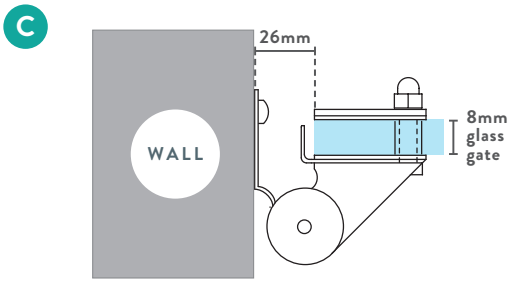
GLASS TO WALL APPLICATION



Note: Extra packers (supplied) may be required to accommodate different glass thicknesses

IMPORTANT: Gate must hinge AWAY from pool

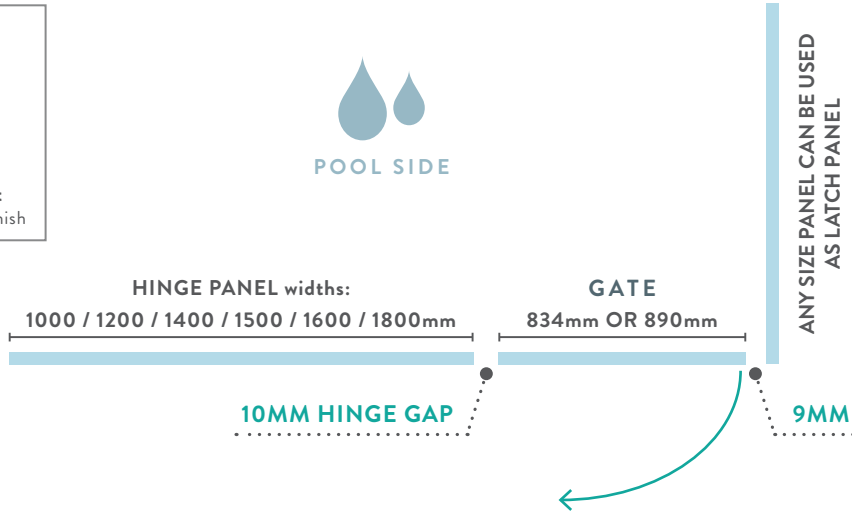




GLASS TO 90° CORNER APPLICATION

HINGE OPTION

Glass to glass hinge set
Available in Satin or Polish finish



LATCH OPTION

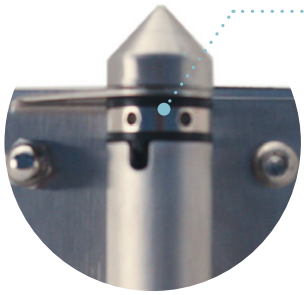
Glass to glass 90° latch kit
Available in Satin or Polish finish

IMPORTANT: Gate must hinge AWAY from pool

HINGE TENSIONING GUIDE

Hinge

70mm tensioning tool

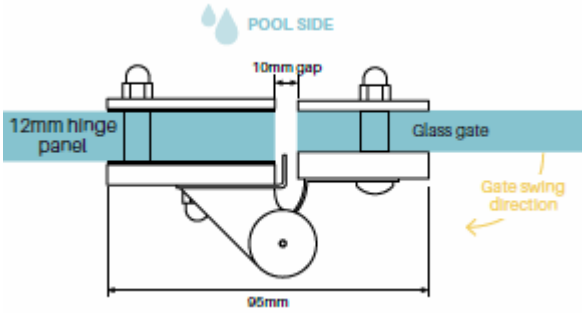
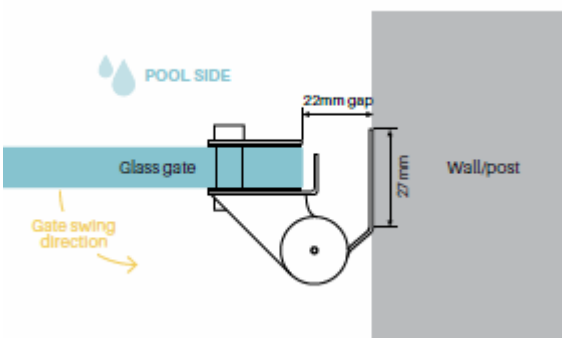
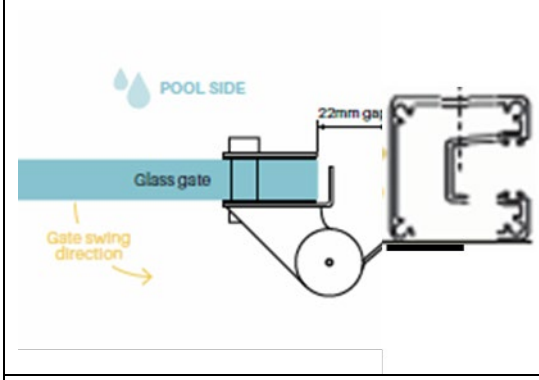
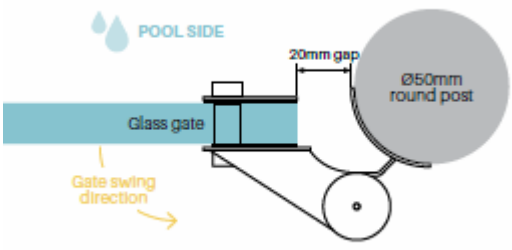


15mm stop

1. With 70mm tensioning tool, remove the 15mm stop located in adjustment holes and bolt hinge to the hinge panel and gate
2. Install the latch hardware
3. Using the 70mm tensioning tool, re-apply tension to spring as required and insert 15mm stop into adjustment holes

IMPORTANT: Gate must self close from all opened positions to a latched position

MASTER HINGE RANGE

	 **Glass to Glass Hinges**	Allowance 10mm
	 **Glass to 90 Degree Hinges**	Allowance 22mm
	 **Face Mount to Post Hinges**	Allowance Can be varied between 15mm to 25mm
	 **Glass to Round Posts**	Allowance 20mm

Master Range Hinges

- The Master range hinges have a tension pin located in the barrel of the hinge that provides the tension on the spring to achieve the self closing functionality. Moving the pin in the barrell adjusts the level of tension.
- Removing the pin removes all tension from the gate hinge.
- Remove the tension pin using the "tension tool" provided (approx. 50mm long) Insert the tension tool in one of the spare holes and turn anti clockwise.
- Take out the small pin and set it aside. (It will be re=inserted once the gate is fitted)
- First place the hinges on the glass gate. Holding the hinge with the barrell facing you place the hinge with the "L Shape" plate on the glass gate.
- Ensure that the rubber gasket is between the metal hinge and the glass gate.
- Place the smaller (20mm) bolt through the hinge and rubber gasket. Ensure the small round plastic spacer is placed on the bolt to protect the glass from the metal.
- Place the bolts through the holes located in the glass gate
- Place another black gasket on the other side of the gate and add the stainless steel pressure plate. Secure into place and hand tighten with the dome nut.
- Repeat this process until both hinges are in place and then using the Alan key firmly tighten the hardware onto the gate panel.

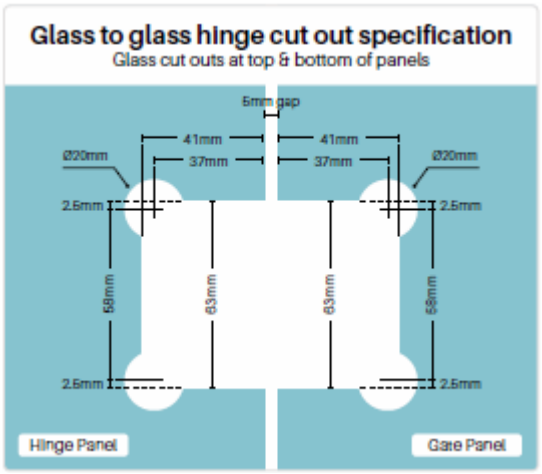
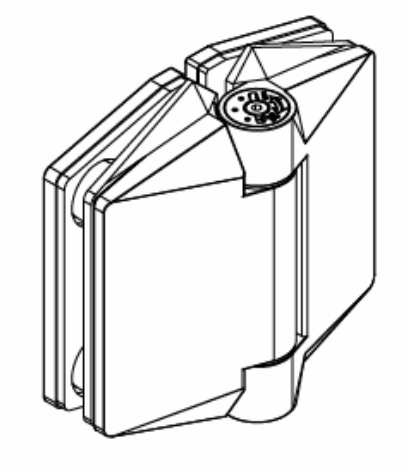
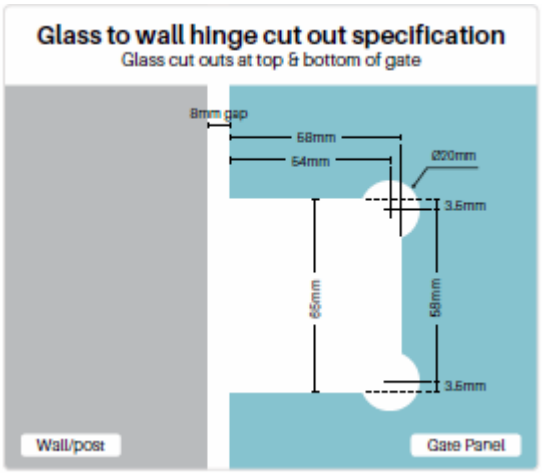
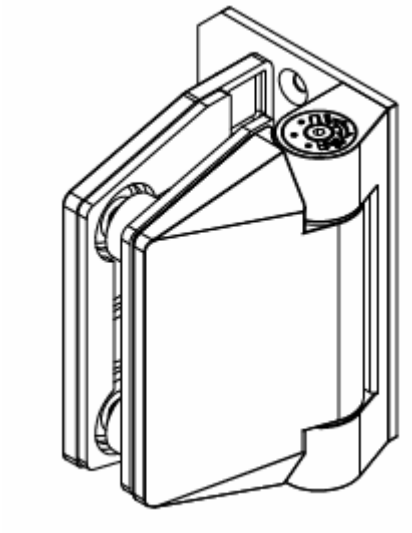
Glass Gate to Glass Hinge Panel

- Using Timber blocks and spacers place the gate in allocated space so that the gate hinges align with the holes in the hinge panel.
- The timber block and spacers should be set so that the gate panel is sitting approximately 1-2 mm higher than the latch panel. This will allow for any movement in the hinge body.
- Repeat the process of placing the rubber gasket between the metal and the glass, use the larger (25mm) bolts and use the plastic spacer and tighten using the Alan key.
- Your gate will now be in place and ready to re-insert the tension pin for the self closing functionality. Using the tension tool in the barrel, move it anti clockwise and insert the pin. You can continue to do this until the correct tension is on the gate to self close.
- Remove the timber blocks & packers and confirm that the gate swings freely and lines up with the panel on the latch side.

Glass Gate to Post

- The same principle applies as Glass Gate to Hinge Panel with regards to the location of the gate, however the fixing of the hinge to the post will be via the appropriate screws depending on the type of post.

POLARIS GATE HINGE RANGE

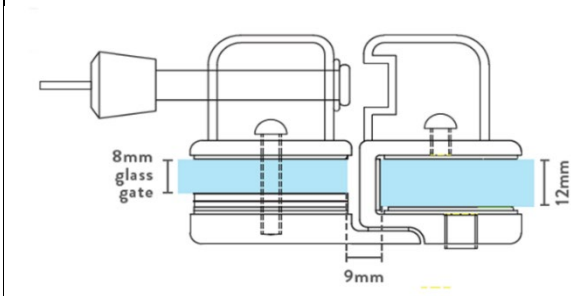
		Allowance 6mm
		Allowance 8mm

Installation instructions for the Polaris Hinges are available online at the manufacturers website.

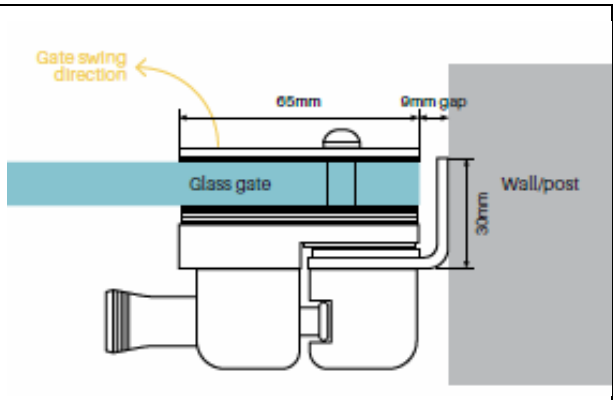
www.polarishinges.com.au/installation

MASTER GATE LATCH RANGE

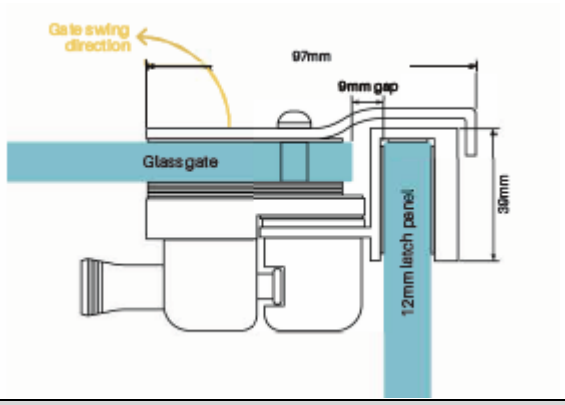
It is a compliance requirement that all latches maintain a maximum of 10mm gap. For all latches you should allow for a 9mm gap between the glass gate and the latching panel, wall or post.



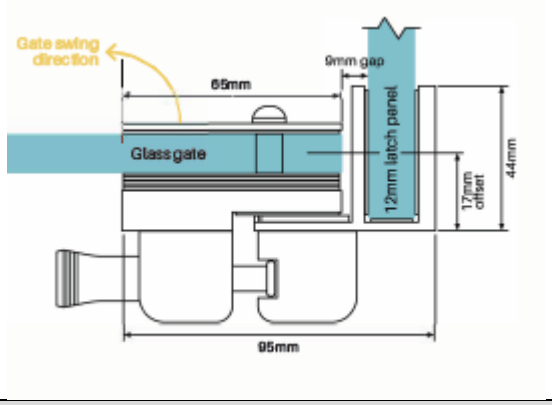
Glass to Glass Latch



Glass to Post or Wall Latch



Glass to 90 Degree (External Fitting)



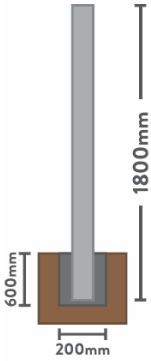
Glass to 90 Degree (Internal Fitting)

Latches

- Attach the spring-handle half of the latch to the gate, making use of the pre-drilled holes
- Place the striker half (including pressure plate) on the latch panel and tighten the grub screws
- Slide the latch panel over, if necessary, to reduce or increase the gap size to ensure less than 10mm

Semi Frameless

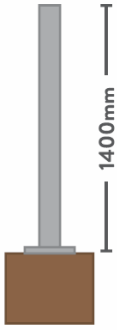
POST INSTALL OPTIONS



1. IN GROUND

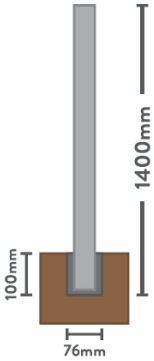
Install posts "In ground" by inserting 1800mm posts into post hole (min. 600mm deep)

Inserting post into ground without concrete footing is not recommended



2. BASE PLATED

Bolt 1400mm base plated post to fixing surface. Drill 4x 14mm holes and fix securely with epoxy, chemset or dynabolts. Bolting base plated posts to timber decking is not recommended unless suitable substrate is in place



3. CORE DRILLED

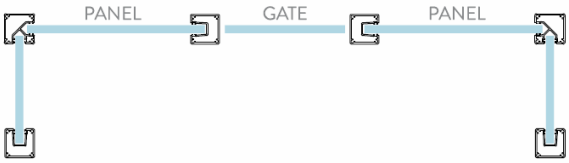
Using a 76mm core drilling machine, create a 100mm deep hole in the concrete and/or coping around the pool then insert 1400mm posts into holes

FENCE LAYOUT EXAMPLES

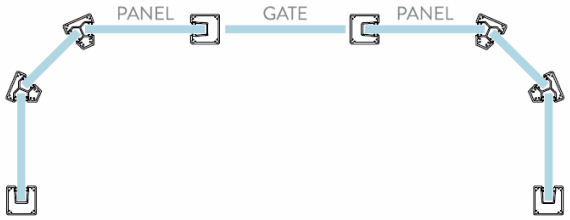
1. STRAIGHT RUN

2. BETWEEN WALLS/POSTS

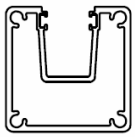
3. USING 90° CORNERS



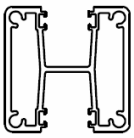
4. USING 135° CORNERS



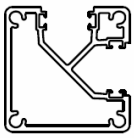
POST PROFILES / **50x50mm Square**



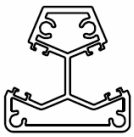
ONE WAY POST



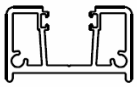
TWO WAY POST



90° POST



135° POST

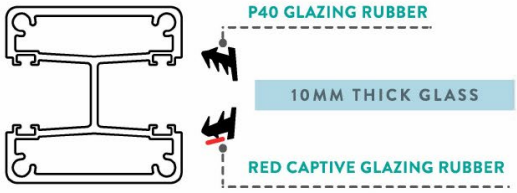


HALF POST

INFILL

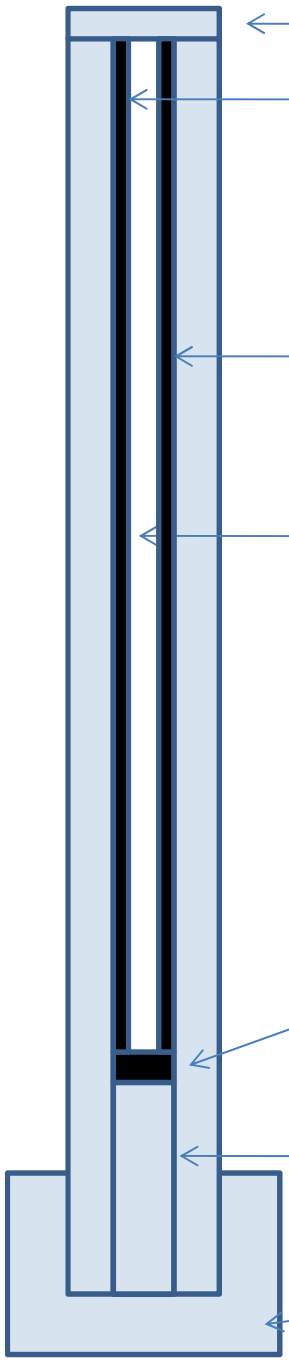
POST DETAILS

GLAZING RUBBER



TIP: Use soapy water to make installation of push in glazing rubber easier

ALUMINIUM POST Considerations



Top Cap

Blue Captive Rubber to be inserted into post slot
* Slide the blue plastic component down the internal slot of post
(Ensure thick part of rubber is on the outside on the glass)

Glazing rubber to be pressed into position once glass is in place. Using a spray of warm soapy water will provide for easier installation.
Note : Rubber can stretch when being installed so do not cut excess pieces until rubber has settled in place

Glass Panel (1200mm High)

Note : Generally allow for 1208mm from top of infill to top of post.
This will provide for space for infill protector & glass panel
Bottom of post may need to be "docked" to fit into hole to provide correct height at the top.

Infill Protector (6mm)

Infill at bottom to be cut to achieve the height requirements
(This can be fixed to post and extended into hole so that it is concreted in place. Otherwise it will need to be individually cut for each post)

Dress ring to cover hole.
(Note : ensure in place before installing glass)

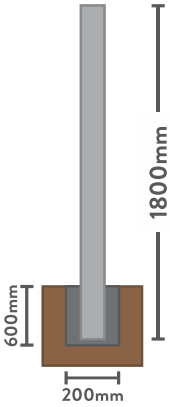
DIY GUIDE

MARK & DIG POST HOLES

Once you have decided on the location of your fence, follow these simple steps:

1. Set up a level string line on the proprosed fence line keeping it as close to the ground as is practical (approx. 30-90mm from the ground). This will be where the bottom of your glass panels will finish. The gap between the bottom of the glass panels and ground level must be no greater than 100mm
2. Mark out post hole centres along the string line
3. Posts can be installed in 3 ways: Base plated, In ground, or Core drilled

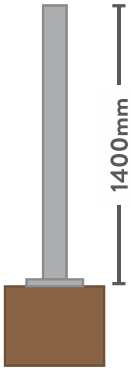
POST INSTALL OPTIONS



1. IN GROUND

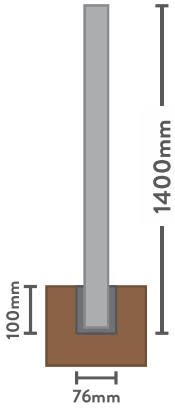
Install posts "In ground" by inserting 1800mm posts into post hole (min. 600mm deep)

Inserting post into ground without concrete footing is not recommended



2. BASE PLATED

Bolt 1400mm base plated post to fixing surface. Drill 4x 14mm holes and fix securely with epoxy, chemset or dynabolts. Bolting base plated posts to timber decking is not recommended unless suitable substrate is in place



3. CORE DRILLED

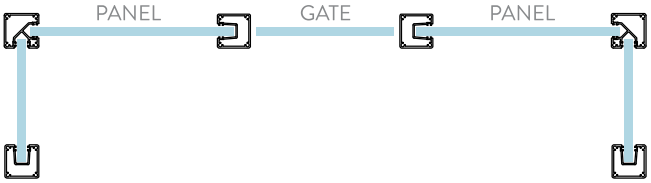
Using a 76mm core drilling machine, create a 100mm deep hole in the concrete and/or coping around the pool then insert 1400mm posts into holes

FENCE LAYOUT EXAMPLES

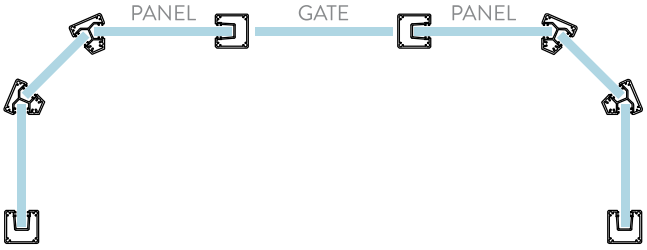
1. STRAIGHT RUN

2. BETWEEN WALLS/POSTS

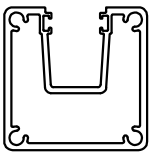
3. USING 90° CORNERS



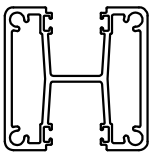
4. USING 135° CORNERS



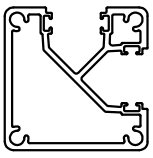
POST PROFILES / **50x50mm Square**



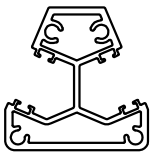
ONE WAY POST



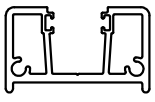
TWO WAY POST



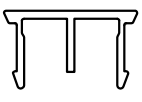
90° POST



135° POST



HALF POST

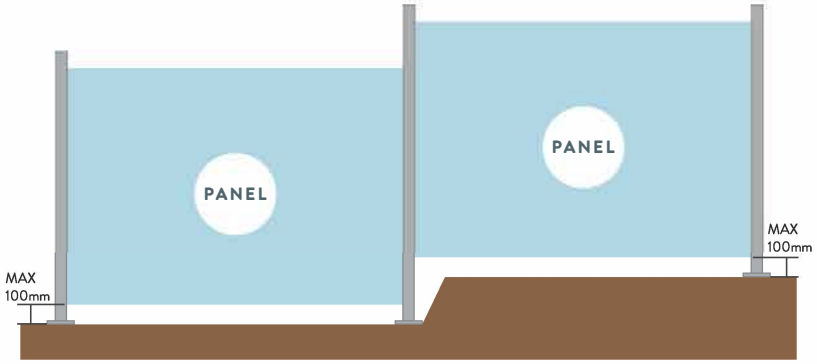


INFILL

Please note: All posts apart from half post & infill are available with base plates

DIY GUIDE

SLOPING GROUND



To comply with pool fencing regulations and maintain the minimum fence height of 1200mm and the maximum gap allowance under the fence of 100mm, step ups or step downs can be overcome by using our 1800mm posts

INSTALLING IN GROUND/BASE PLATED POSTS

Once you have decided on the location of your fence, follow these simple steps on installing posts:

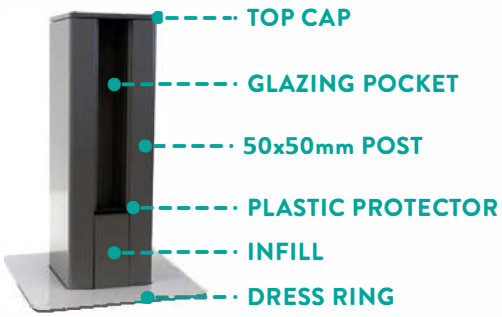
1. Identify the string line level against the posts. Measure up 1210mm up from that string line level & mark that point on the post (Allow an extra 10mm above the 1200mm high glass for the top cap to sit on top of the post). If required, trim post to that mark
2. Double check that the post centres are 100% correct and ensure the posts are plumb
3. Pour grout into post hole and ensure the posts remain level and plumb (Insert wooden chocks into post holes before pouring grout to assist with keeping posts level)
4. Remove any excess grout/dirt with a damp sponge prior to grout setting
5. Follow setting time directions on grout packaging before installing glass panels

INSTALLING GLASS PANELS

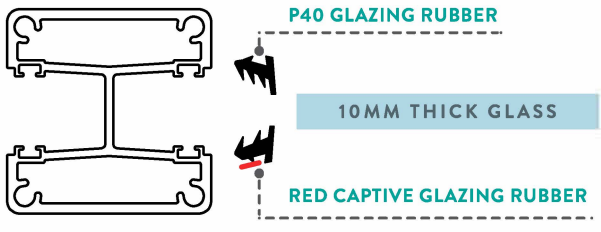
Once your posts are installed, follow these simple steps on installing your glass panels:

1. Using your string line as a guide, snap in the aluminium infill at the correct height ensuring that the infill rests on the hardened grout or floor. You will need to use a hacksaw or similar to cut infill to the correct size. Place the plastic protector on top of the infill. Glass will sit on the plastic protector. Refer to diagrams below
2. Insert the glass into the posts and insert appropriate glazing rubbers on both sides of the glass
   Insert the "red" rubber by sliding down into the pocket cavity. The opposite side rubber is pushed in once glass panel is put into place
3. Trim excess glazing rubber with a stanley knife

POST DETAILS



GLAZING RUBBER



TIP: Use soapy water to make installation of push in glazing rubber easier

TIPS FOR GLASS HANDLING & INSTALLING

Glass handling should be done with the utmost care and attention.

Guidelines recommended include employing a number of checks prior to undertaking any activity:

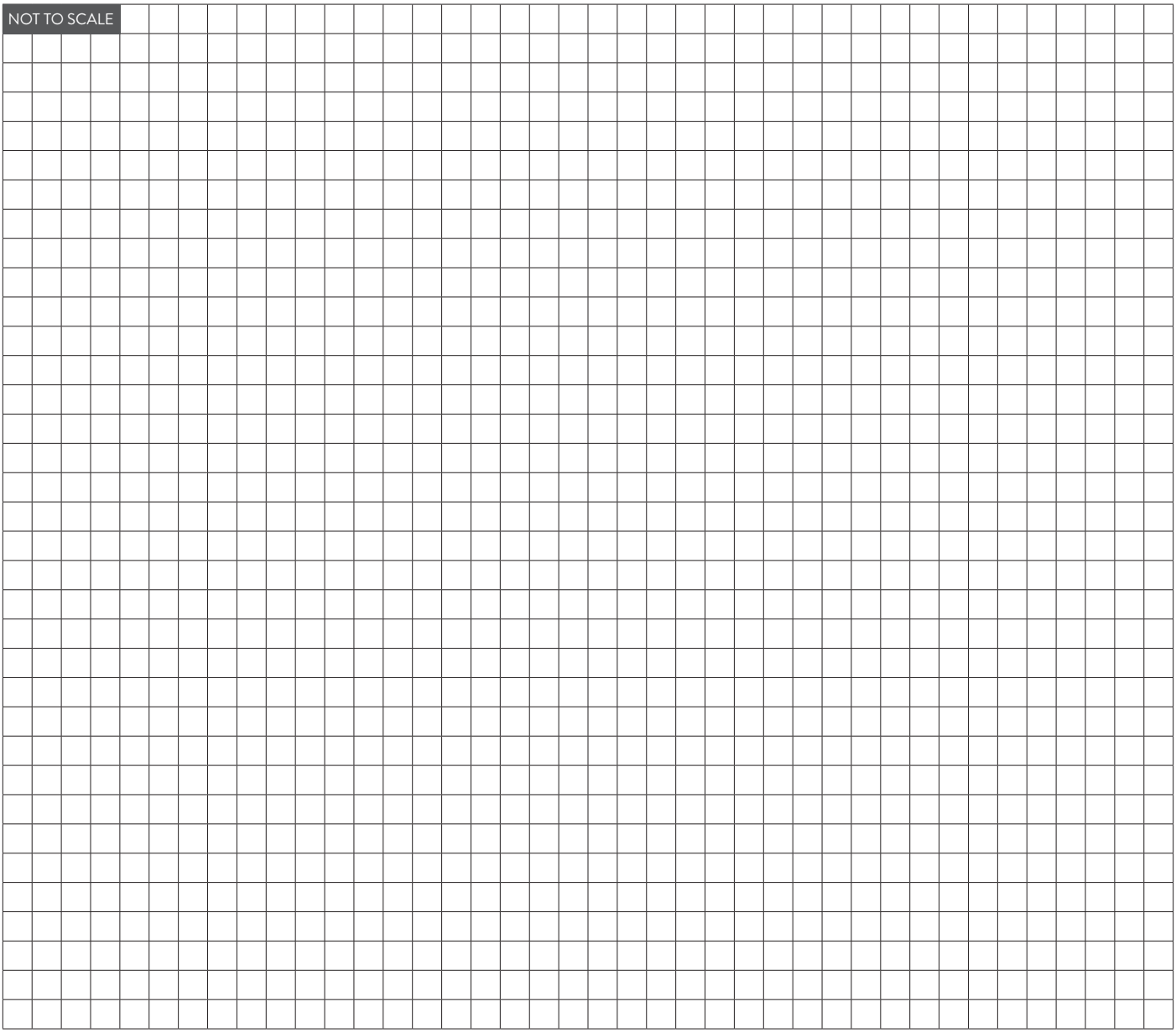
- Ensure that there is sufficient room to maneuver the glass
- Check the weight prior to lifting, if too heavy, call for assistance or use other means
- Use safe lifting posture
- When lifting glass, it should be kept upright and movement smooth to avoid undue flexing

Recommended personal protective equipment used when undertaking activities with glass include :

- Suitable gloves (non-slip)
- Steel capped boots are always a good idea
- Safety glasses
- Suction cups and lifting devices (if large pieces of glass moved)
- Clothing should be tight fitting so no loose items can catch the glass causing trips and falls

Glass should be stored in dry conditions on its edge and should not come in contact with any substance harder than itself. Also, glass should be stored having an inclination of 3 degrees for static racks and 5-6 degrees for transportable racks and trolleys and in both cases supported evenly over its surface area. If glass is transported in a crate laying horizontally, unpack the glass as soon as possible and store in the recommended upright position with incline. Do not put glass bottom edge directly on the ground when storing upright – always put suitable timber/hard rubber blocks under the bottom edge so as to avoid chipping edges.

FRAMELESS GLASS **DIY** GUIDE



NOTES