Boundaryline

PICKET**PANEL**
Install Guide

Version 1.0

Guide to installing Boundaryline's Picket**Panel** Fencing

This guide will serve as your resource for installing PicketPanel. If you have any questions, please contact our Technical Team on 0800 003 006 or email technical@boundaryline.co.nz.

Before you start

Describe your site details when ordering materials.

Identify your soil type/ground conditions, this will determine the required concrete and footing details.

Check with local council regulations on boundary fencing and confirm the locations of underground services before commencing digging.

For your reference

A DAR5025-BK bracket can be utilised to install panels in a curved line, see page 09

PicketPanel fence panels are pre-assembled and all designed with raking functionality for easy installation.

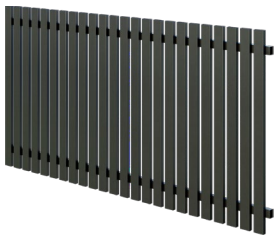
The brackets are designed to rake from 0 to 15 degrees, the rails can be modified to allow for further raking. It should be kept in mind that raking will decrease the gaps between pickets, and they may require respacing.

Included in this guide are the steps on how to modify the rail for increased raking and how to respace the pickets, see pages 10 and 11.

Glossary

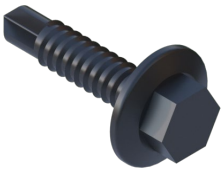
A complete panel consists of:

Posts 50x50 or 65x65mm
In-ground or Flanged

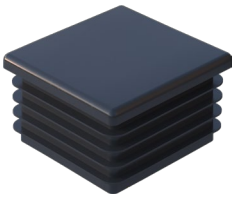


Fence Panel
Pickets are all fixed at 100mm centres

Brackets x 4 (6 x brackets for 1800mm panels)
Fixed to the post using 2 x 12gx30mm tek screws



Tek Screws
Attaches the brackets to the panels and posts



Post Caps
Designed to slot into the posts

Installation Overview

Tools Required

- ☐ Tape Measure
- ☐ Spade/Shovel
- ☐ Level
- ☐ String Line
- ☐ Concrete
- ☐ Drill

Optional Tools

- ☐ Powered Auger - 200mm diamenter
- ☐ Hacksaw/Powered metal cutting saw
- ☐ Laser-level
- ☐ Rivet Gun

Safety Gear

- ☐ Safety Boots
- ☐ Gloves
- ☐ Helmet
- ☐ Eye Protection
- ☐ Hearing Protection
- ☐ Sun Protection

Ensure you have the right tools before installing PicketPanel

STEP 1 | Laying Out The Fence Line

a. Accurately establish the property boundary. Determine and mark any legal boundaries and/or underground services. *If the boundary pegs can't be found, request a copy of the site plans from the council, or get a surveyor to correctly establish the boundary.*

b. Lay out a string line to establish the placement of the fence. A string line will ensure the fence line remains straight.

c. To determine the measurements for the post positions, see table **A**:

d. Mark the post positions with post markers or spray paint. Measurements should start from the centre of the first post and continue to be measured from each post centre to the next.

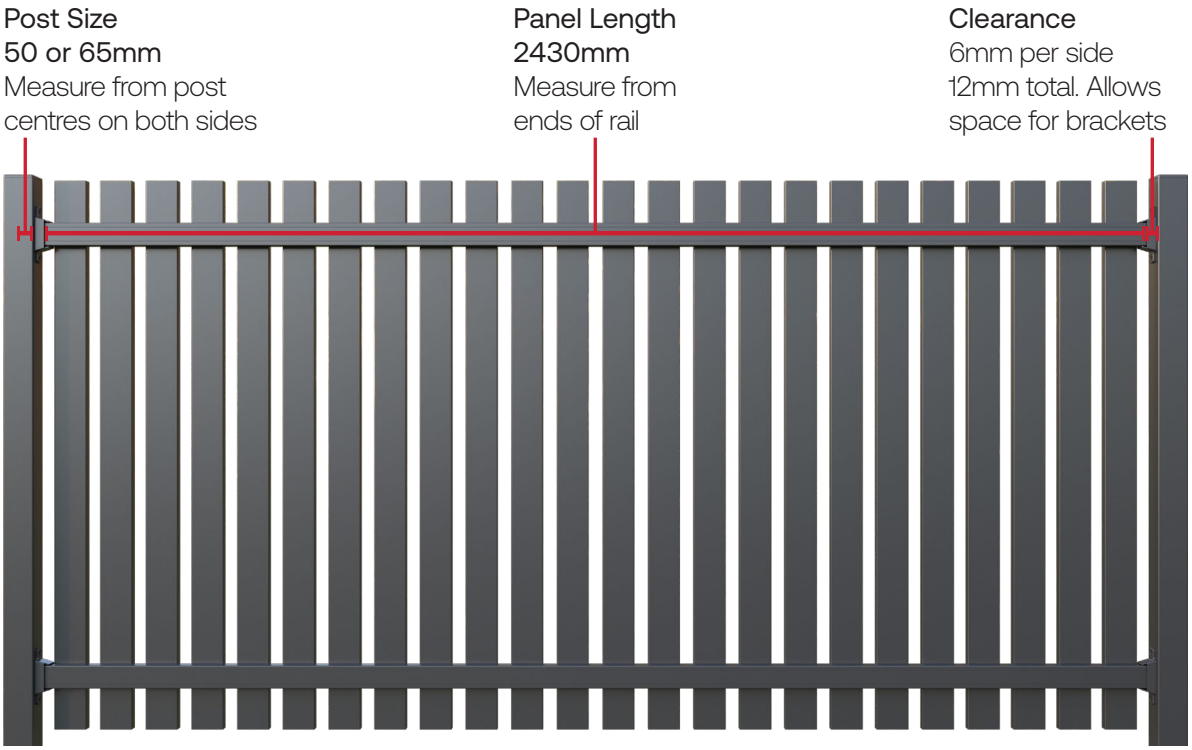
e. Once all post positions and post centers are determined and marked, use the string line or laser level to make sure all straight lines are aligned.

Table A

Panel length	+	Clearance*	+	Post size	=	Post centre
2430mm	+	12mm	+	50mm	=	2492mm
2430mm	+	12mm	+	65mm	=	2507mm

**Clearance between the post and panel allows space for the bracket*

Where to measure the panel and posts



When installing PicketPanel, it is recommended to give consideration to the spacings of the posts, to avoid the need to respace the pickets when installing.

The panels are 2430mm wide, with the centre of each picket spaced at 100mm apart. If posts require being closer together than the standard panel length, keeping the posts distances in multiples of 100mm, where possible, (i.e., 2330mm, 2230mm etc), will result in simply trimming off the excess of the panel and prevent the need for respacing pickets.

If this is not achievable, a guide to respacing pickets is on page 10

STEP 2 | Dig Post Holes

If using **Flanged Posts**, go to **page 07.**

If using **In-Ground Posts**, dig the holes for the posts using hand tools and/or a powered auger.

The diameter of all post holes are required to be at least 200mm in diameter.

When digging the holes, ensure the post holes don't taper inwards towards the bottom, they need to be either vertically straight and parallel, or be wider at the bottom than the opening.

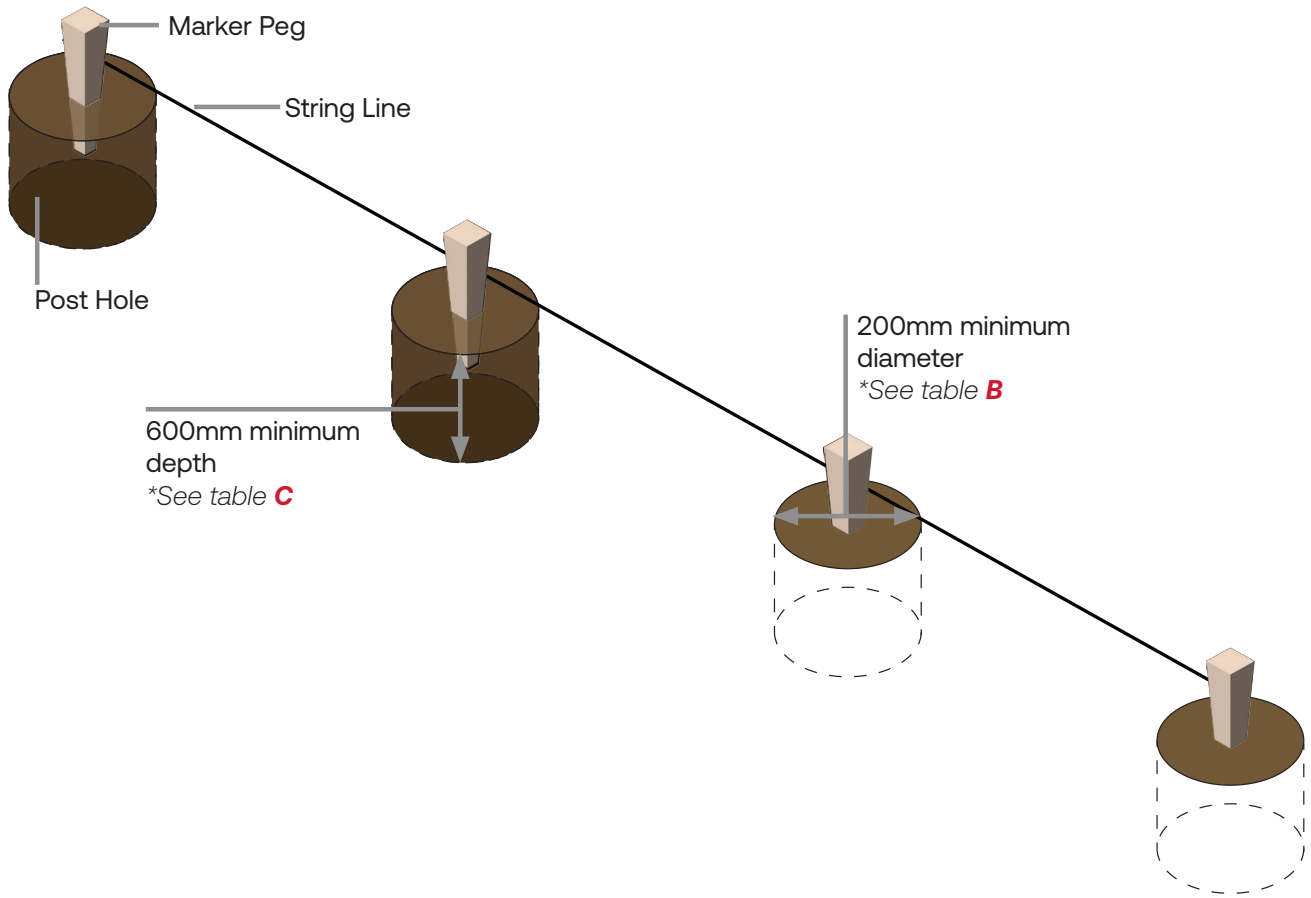
For post hole dimensions, see tables **B** and **C**, which provide guidance depending on post size and soil type.

Table B - Required post hole dimensions

Post Size	Suggested Hole Diameter
50x50	200-300mm
65x65	300mm

Table C - Post lengths required will increase accordingly to cater for these ground conditions

Soil Type	Minimum hole depth	Approximate concrete required per post hole
Firm Earth	600mm	2 bags - 20kg bag
Loose Fill	900mm	3 bags - 20kg bag



STEP 3a | Installing Posts - In-Ground Posts

Posts should be installed in 'good ground' as defined by NZS3604

a. Place the post into the hole and ensure the height and position are correct using a tape measure and/or a laser level.

b. Ensure there is sufficient height on the post, from ground level to the top of the post, to allow for the panel height and ground clearance. Ground clearance is measured from the bottom of the pickets. A minimum of 50mm is recommended.

c. Pour the concrete around the post, taking care to keep the post at the right height and position. Regularly check with a spirit level to ensure the post is plumb and ensure the post remains square to the fence line and does not turn as the concrete is laid around it.

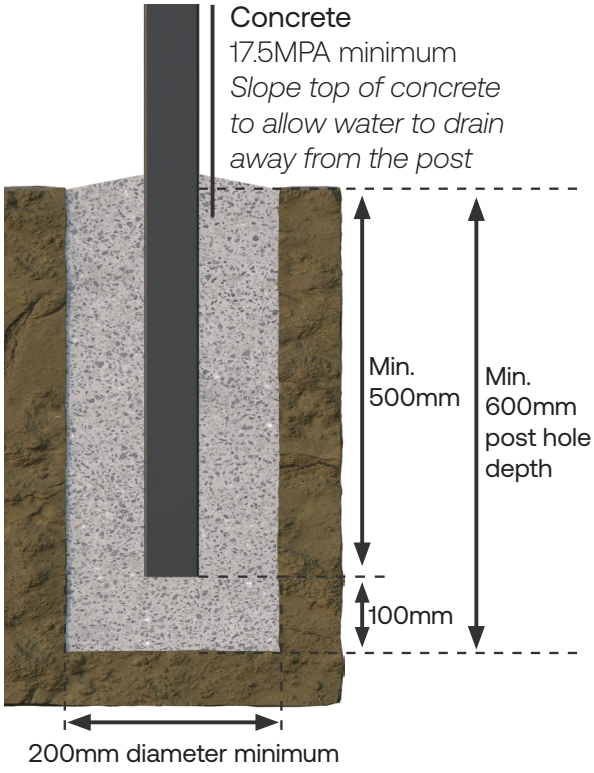
d. If the fence line follows any contours in the land or the fence line is curved, regularly check the height of the posts while working down the fence line to ensure a good visual line along the top of the fence.

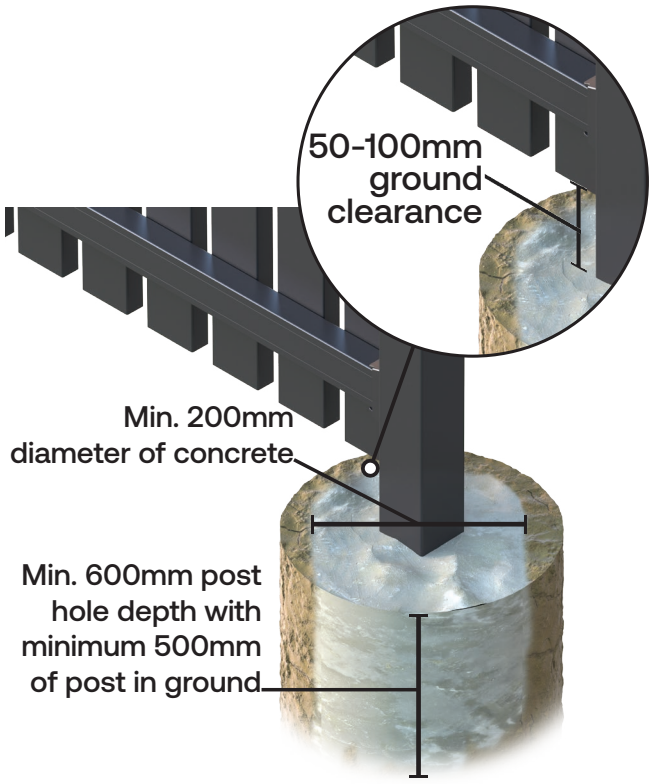
e. Allow for the concrete to completely set before installing the panels.

In-ground post options

- PicketPanel 50x50mm
- PicketPanel 65x65mm

Post sizes are dependent on the application and design requirements





TIP For standard 50x50or 65x65mm aluminium posts, a fairly dry concrete mix can be used which will hold the post in place without any bracing while the concrete dries. However, the site must be revisited before the concrete sets firm to recheck post alignment. Any heavier posts, i.e, gate posts, should be concreted in place and braced until the concrete is dry.

STEP 3b | Installing Posts - Flanged Posts

a. Ensure the surface is firm, level and clean.

Concrete surfaces are required to be 20MPa minimum and be at least 120mm thick. The bolts require at least 90mm of embedment into the concrete and must be 40mm away from any edges.

Wooden Surfaces* are required to have 120mm embedment into the joist, with extra allowance for the decking timber. Thicker decking timber will require longer screws to maintain the 120mm embedment depth requirement.

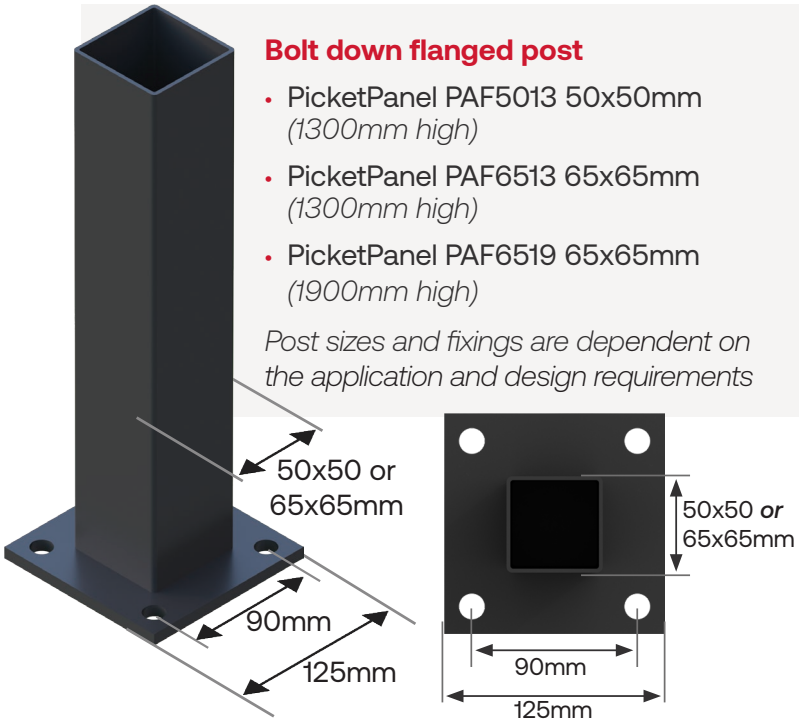
b. Check post position, alignments and measurements for the panels are correct before bolting down the posts.

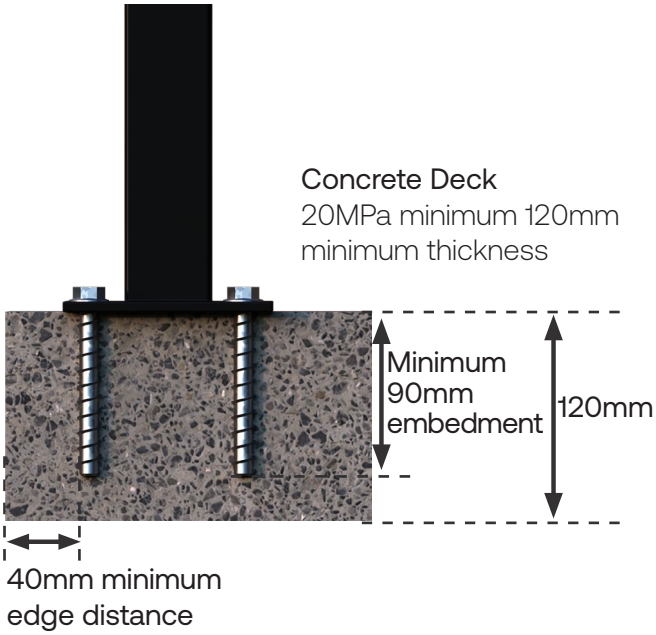
c. Fix the posts in place with four fixings ensuring the correct screws are used for the material surface. *Details for timber and concrete options below.*

Bolt down flanged post

- PicketPanel PAF5013 50x50mm *(1300mm high)*
- PicketPanel PAF6513 65x65mm *(1300mm high)*
- PicketPanel PAF6519 65x65mm *(1900mm high)*

Post sizes and fixings are dependent on the application and design requirements



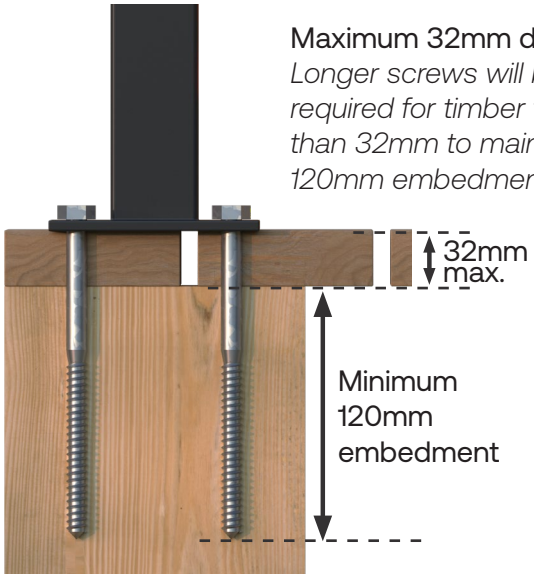


Fixings - *indicative*

In concrete:

4x M12 Ramset Anka screws or similar with minimum 90mm embedment

Maximum 32mm decking.
Longer screws will be required for timber thicker than 32mm to maintain 120mm embedment depth



Ensure screws are placed in centre of outside joists

Fixings - *indicative*

In timber:

4x 12mm coach screws with minimum 120mm embedment

When installed on timber surfaces, PicketPanel **does not comply with F4 (Fall From Height) requirements*
*For **all** installations requiring F4 compliance, refer to the PicketPanel PS1 for details.*

STEP 4a | Installing Panels

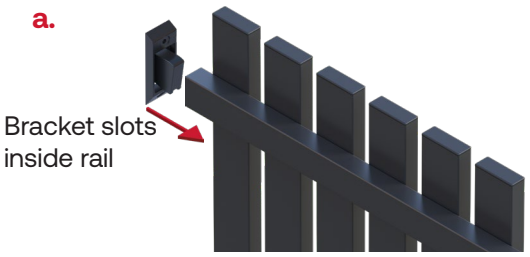
Once the posts are completely set and secured, the panels can be installed.

a. On the posts, measure to confirm the placement of the brackets, allowing for 50-100mm of clearance between the ground and the bottom of the pickets. The panels should sit flush with the top of the posts. *For ground clearance, 50mm minimum is recommended.*

b. Slot the brackets onto the rails, then place the panel between the posts into its correct position and attach the brackets to the post. Since PicketPanel can rake, once one side is attached, the other side can be easily lowered into position.

c. Once the brackets are attached, the rail can be fastened to the bracket to lock the panel into its final position.

a.



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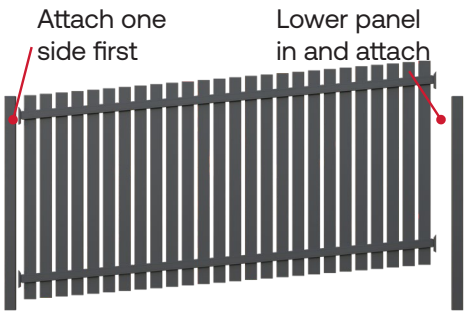
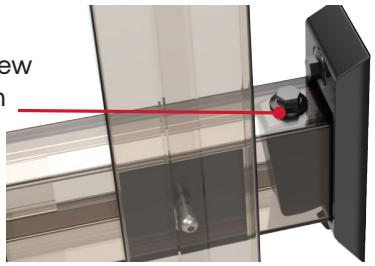


c.



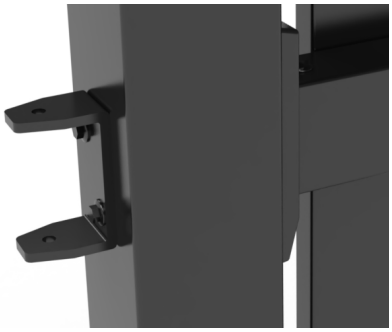
STEP 4b | Installing Panels in a Curved Line

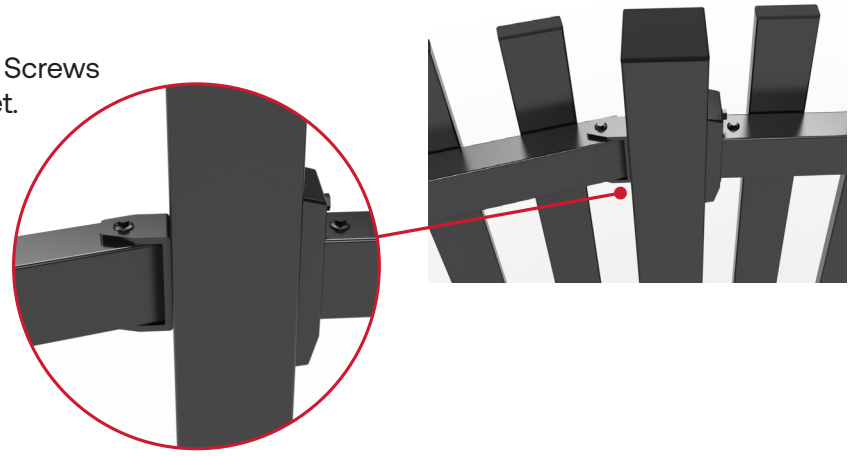
If PicketPanel is being installed in a curved line

a. Using a DAR5025-BK bracket measure 100mm from the top of the post to the top of the bracket. Secure the brackets onto the post with the provided Tek Screws.

b. Position the panel at the required angle (if the angle is more than what the bracket allows, you may need to trim the rail down see **page 09** on how to trim the rails).

c. Attach the panel to the bracket using Tek Screws through the top and bottom of the bracket.





STEP 4c | Installing Panels Raking Over 15 Degrees

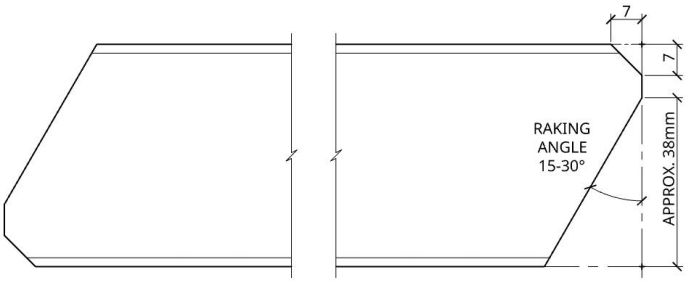
If PicketPanel is being installed with a raking angle exceeding 15 degrees.

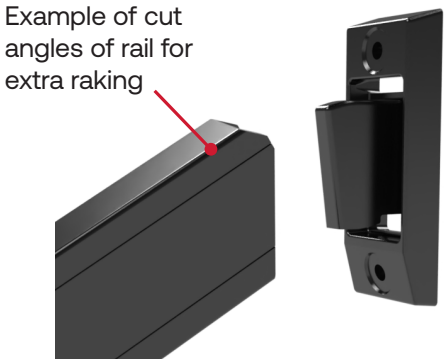
Please note: When raking panels, the spacing between the pickets will ***decrease***. Raking more than 20 degrees may require you to respace the pickets. A guide on respacing pickets is available on page 10.

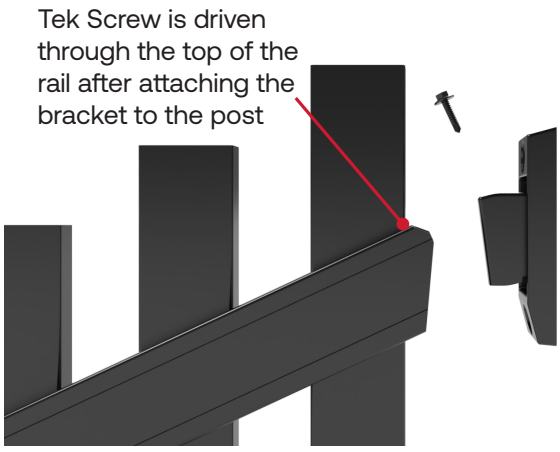
a. Measure the angle that the panel will rake to and cut that from the rail. The cutouts will be the opposite at either end of the rail. Also measure a 7mm cutout from the long edge of the rail, this will keep the end of the rail from protruding.

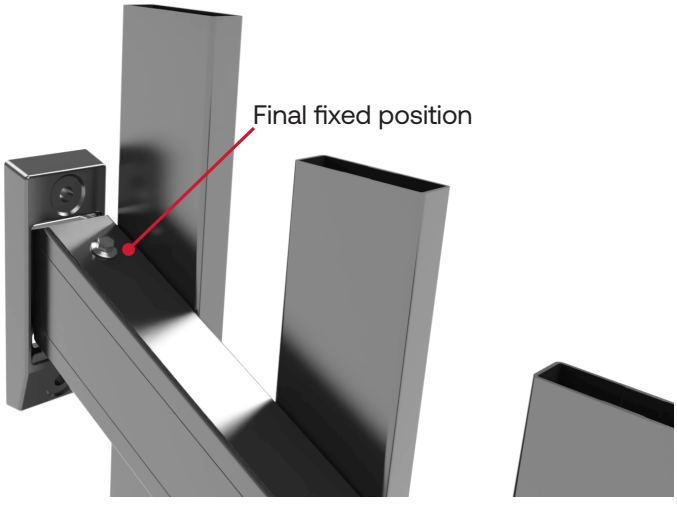
b. Slot the brackets onto the rails, then place the panel between the posts into its correct position, ensuring the bracket on the lower end is inverted to accommodate the rake. Attach the brackets to the posts using the provided Tek Screws.

c. Fasten the rail to the bracket to fix the panel in its final position.









EXTRA | Respacing Pickets

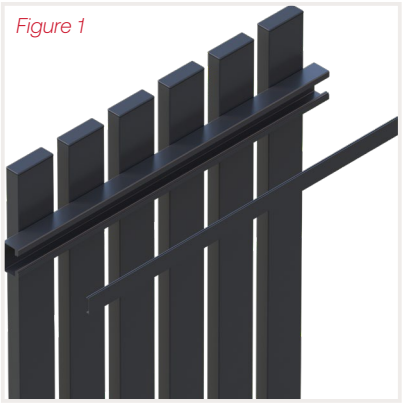
Tools required

- ☐ Drill with 5mm drill bit
- ☐ Rivets (4.8mm aluminium with grip range of 3.2 to 4.8mm)
- ☐ Rivet Gun or Hand Riveter
- ☐ Tape Measure

Step 1:

Remove the slip cover from the back of the rails on the panel.
The cover is designed to slide out of the channel. *Fig. 1*

Figure 1



Step 2:

Drill out the rivets with a 5mm drill bit. *Fig. 2*

Be careful not to allow the chuck of battery drill to rub on the rail, this can damage the powdercoated finish.

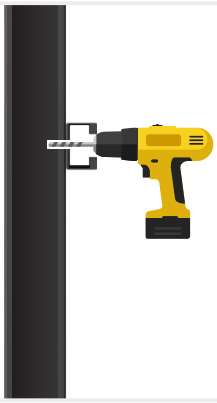
Figure 2

Step 3:

Space out pickets evenly.
Small 5-10mm differences are typically not noticeable.

TIP Use a spacer to keep the picket gap widths consistent

Figure 3



Step 4:

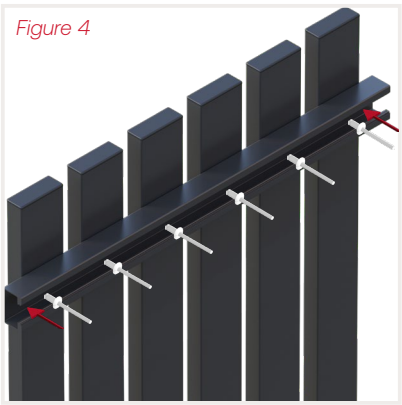
Drill new hole, through both the rail and the back side of the picket, be sure to avoid drilling right through to the front side of the pickets. *Fig. 3*

TIP Mark the drill bit with a piece of tape at 5mm of depth to make sure you don't overdrill

Step 5:

Rivet the new pickets on using a hand riveting tool or a rivet gun. *Fig. 4*

Figure 4



Step 6:

Replace the slip cover.
The previous rivet hole should be covered over with the refixed pickets.

Boundaryline

Auckland
43 Noel Burnside Road
09 250 1144

Christchurch
19 Mania Road
03 347 3191

Invercargill
60 Basstian Street
03 211 5145

0800 003 006
enquiries@boundaryline.co.nz
boundaryline.co.nz