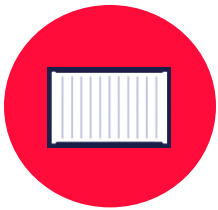


The background of the cover is a photograph of a dark green, vertically-slatted metal fence. On the left side, there is a large, gnarled tree trunk with peeling bark. The title text is centered over the fence.

FENCING

Selection &
Installation Guide

Monument®



Choosing the fence Profile

It's important to select the right fence for your surrounds and home styling. You can either go for a contemporary look or conventional or simply classic profile. Clicksteel offers 3 unique profiles : Zig Zag or Metzag, and Metline fencing, designed to withstand most wind conditions. The wind load on your fence at your site will depend on a number of factors, including where you live, where the fence is to be installed and the number of surrounding properties. These details are important as they will assist in identifying the installation requirements for your property. If in proximity to severe marine conditions or swimming pools, please contact ClickSteel for advice.

STEP 1

Determine Your Wind Region



REGION A
41m/s or 147.6kmph



REGION B
51.9m/s or 186.84kmph



REGION C *Contact a ClickSteel expert for Cyclonic area Installation.*



REGION D



STEP 2

Identify Your Terrain Category

Category 2 Open terrain, including grassland with well scattered obstructions having heights of typically 1.5 - 5m with no more than 2 obstructions per hectare.



Category 2.5 Terrain with a few trees or isolated obstructions, for example terrain in developing outer urban areas with scattered houses.



Category 3 Terrain with numerous closely spaced obstructions with heights typically between 3-10m, for example suburban housing



STEP 3

Choose Your Fence Profile & components

FENCE COMPONENTS

- Posts 1800, 2100, 2400, 2700 & 3000mm high
- Rails 2365 & 3125mm lengths
- Infill sheets 1200,1500, 1800, 2100mm height
- Fasteners Tek screws
- Posts 1800, 2100, 2400, 2700 & 3000mm high

Fence panel infill sheet profiles



TRIMCLAD®



METLINE®
Neighbour friendly



METZAG®
Zig zag both sides

BEFORE YOU BEGIN

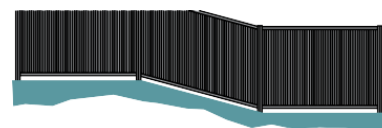
- Check for underground services before you dig.
- Ensure you have the right components and tools.
- Check council regulations on boundary fencing.
- Identify the soil type to determine the concrete required for the job (See: Determine your post footing, Step 1).
- Read this guide completely to ensure you understand the process. Pay particular attention to items marked IMPORTANT as they will ensure the satisfactory long-term performance of your fence. These items include:

EQUIPMENT

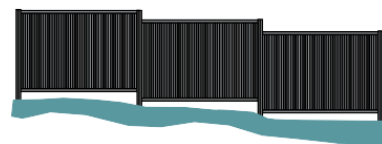
- Self-drilling Screw Gun/ Drill
- Spirit Level
- Tin Snips or Nibbler
- Rubber Mallet
- String Line & Marker Pegs
- Shovel / Spade
- Marker (NOT lead pencil)
- Concrete
- Hacksaw
- Rivet Gun
- Post Hole Digger
- Tape Measure
- Safety Glasses & Gloves

INSTALLATION TYPES

If the ground is not level where your fence is being installed you will need to consider if the fence will be stepped or raked. You will also need to taper the end of your fence over the last two panels where there is no corner, unless you live in Wind Region A or Terrain Category 3 of Region B.



RAKED



STEPPED



TAPERED

DETERMINE YOUR POST LENGTHS

IMPORTANT!

STEP 1

Determine Your Post Footings

FENCE HEIGHT

	1500	1800	2100	
Post Length	2100	2400	2700	QUANTITY OF 20KG CONCRETE BAGS REQUIRED PER HOLE
Rail Length*	2365	2365	2365	
Wind Region		A,B		
Terrain Category		2, 2.5, 3		
Soft Clay, Loose Sand	200 dia. x 900mm deep			3
Med - Dense Sand, Gravel, Stiff Clay	200 dia. x 600mm deep		200 dia. x 900mm deep	2
Rock	200 dia. x 300mm deep			1

STEP 2

Calculate The Required Post Length

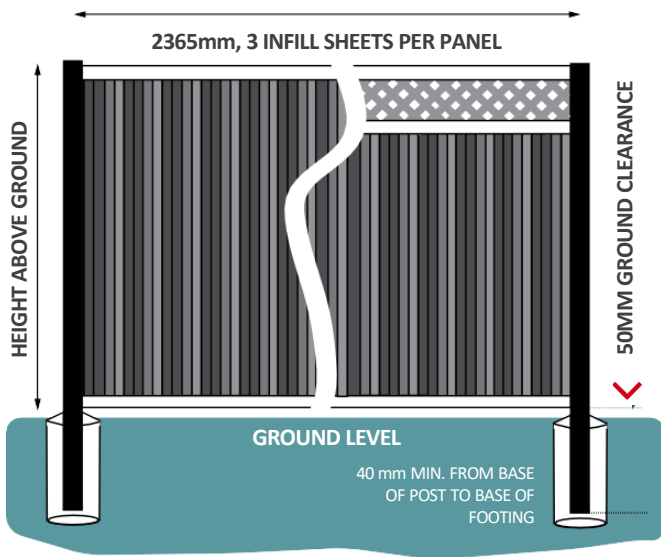


*HEIGHT ABOVE GROUND CALCULATED BY:

Infill panel height LESS 10mm + 50mm ground clearance + lattice panel (if used) + height of step (where stepped installation used).

Use the table to identify the post length you require:

YOUR CALCULATED POST LENGTH (mm)		ORDER THIS POST LENGTH (mm)
≤	≥	
2100	2100	2100
2211	2510	2400
2511	2810	2700
2811	3110	3000



Preparing Rails

Small rakes less than 150mm do not require an increase in rail length. Refer to the following:

HEIGHT (Y) (mm)	APPROX. ANGLED RAIL LENGTH (mm)*	INFILL CUT HEIGHT (X) (mm)	INFILL CUT HEIGHT (X) (mm)
150	2365	2355	50
200	2365	2358	67
250	2365	2363	83
300	2365	2369	100
400	2365	2384	133

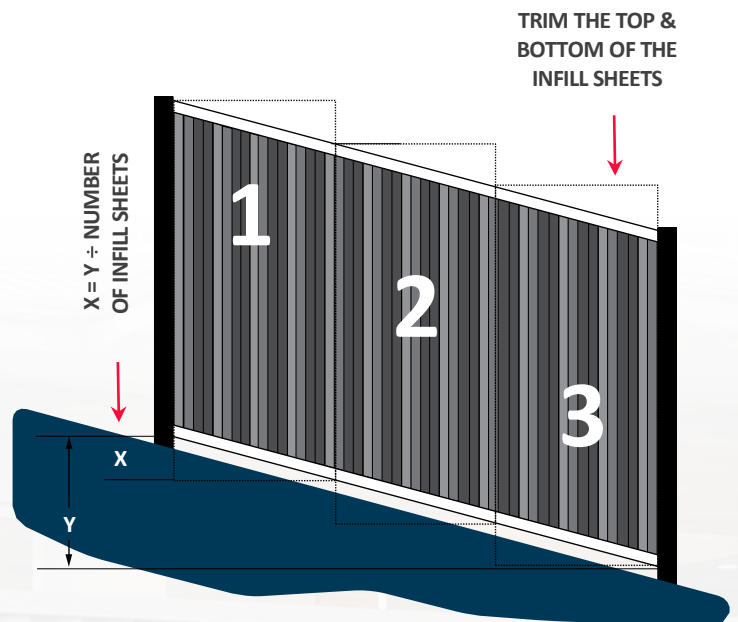
RAKED FENCES

Determining Rail & Infill Sheet Lengths

It is recommended that you rake out your fence on sloping or uneven ground rather than stepping the panels. This achieves a better finish and provides for a stronger fence.

Raked fences may require additional preparation of rails and infill sheets. Longer rails and sheets may be required for raked sites.

Where the rake is small the rail increase is not required. Rail length and infill sheet cuts are determined by the height of the raked section.



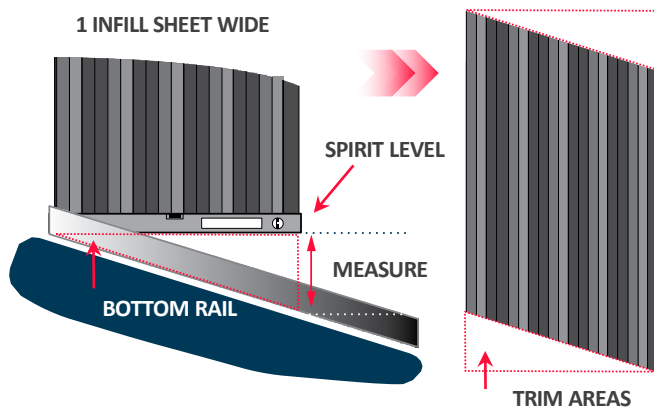
How To Determine The Cut Of Infill Sheets

- 1 Place a spirit level inside the rail at the high end.

- 2 Measure across the width of a sheet. From this point measure the height from the bottom of the level to the inside of the rail. This determines the angle of the cut.

- 3 Where possible match the angle of the top of the rail to that of the bottom rail. The top rail angle can be adjusted if desired, but note that the post height will increase. Make allowances for this when fixing posts in the ground

- 4 Measure the height of the cut required from the base of the infill sheet. Do the same at the top of the sheet to ensure angles match. Ensure you measure from edge to edge of the infill sheet. Placing all 3 infill sheets together and cutting once will ensure uniformity.



Uneven Sites & Vertical Slitting

If a slope is greater than 1:8 this may reduce the 3-sheet coverage to a point where one of the sheets may require vertical slitting. On COLORBOND® and ZINCALUME® sheets this can be achieved using a straight edge and scoring with tungsten tipped hand cutters, then bending and snapping the sheet.

POST FOOTINGS

Refer to the table on previous page. Premixed concrete may be used (20 Mpa min) Mix your concrete as per manufacturers instructions or use the following as a guide: 3 parts 20mm Aggregate : 2.5 parts Sand : 1 part Cement

Posts In Limestone Walls

Installation of post footings requires drilling suitable holes into the limestone wall to sufficient depth. Footings 127mm diameter x 600mm deep minimum and/or two courses depending on the type of wall construction are recommended.

Limestone walls must be of sufficient strength to withstand wind loading. This strength is dependent on the quality and strength of the limestone blocks and of the mortar bonds.



IDENTIFYING THE BEST FIT FOR YOUR FENCING

- 1 Determine the linear meterage.

- 2 Identify if you require one straight fence run or several fence runs.

- 3 Divide the meterage by 2.365 (width of 1 fence panel) to determine panel and component requirements.

EXAMPLE

43m of straight fence ÷ 2.365 = 18.18 panels

OPTION 1

18 panels + 2 posts.
1 rail cut into 2, 1 infill sheet trimmed to 430mm.

OPTION 2

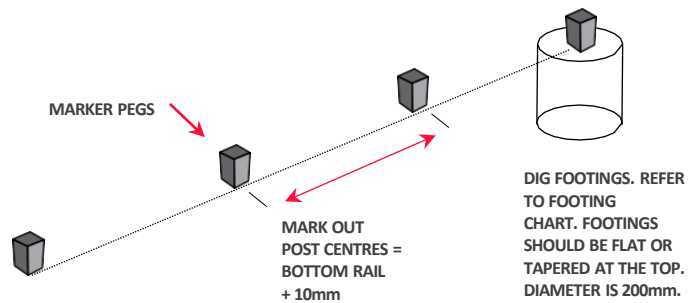
17 panels @ 2365mm (3 x sheets per panel) + 1 panel @ 3125mm (4 sheets per panel).
Overlap sheets by 195mm per rib and trim the last sheet.

INSTALLING YOUR FENCE

STEP 1

Mark Out The Post Holes

Run a string line the length of the fence and dig the first hole.



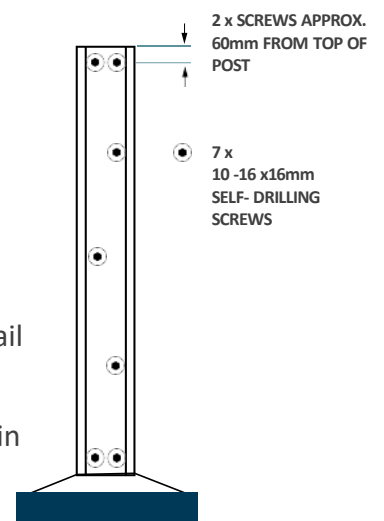
IMPORTANT!

STEP 2

Assemble Posts

Assemble posts by screwing them back-to-back with 7 staggered screws.

HINT: Position the top screw below your top rail to avoid catching when positioning the top rail in place



STEP 3

Install Posts

Prepare The First Post

1 Take a single post measure down the height of your fence and mark - this is the bottom rail position.

2 Place in footing and adjust to correct height ensuring the footing is 40mm deeper than the end of the post.

3 Concrete the post in making sure the bottom rail mark is no more than 50mm above the ground.

4 Pack the concrete hard against the post and use a level to ensure the post is vertical. Ensure the top of the concrete tapers away from the post to allow for drainage.

5 Clean off any concrete splashes and allow to set.

Place Remaining Posts

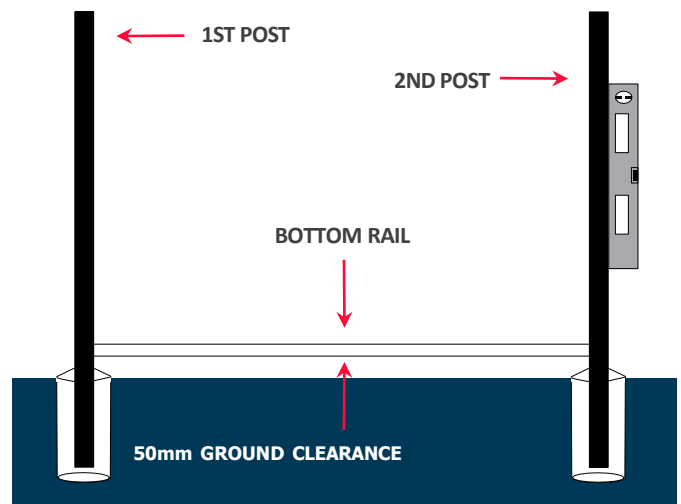
1 While the first post is setting lay a string line, mark out and dig the remaining holes at 2365mm centres*. Use the bottom rail as a guide. Remember raked fences may require longer rails.

2 Position gate posts if required.

3 Place the second post into the hole and insert a bottom rail between the posts using the marks to position. Ensure the rail is inserted fully into the posts and that there is a gap of 50mm between the bottom rail and the ground. Placing a packer under the rail can assist while the rail is then screwed into position.

4 Place the top rail into the posts and fix with self-drilling screws on both sides of the post. Do not fully tighten as these screws must be removed to insert the sheets. Use a level to position posts in line and at the correct height. Concrete in the second post.

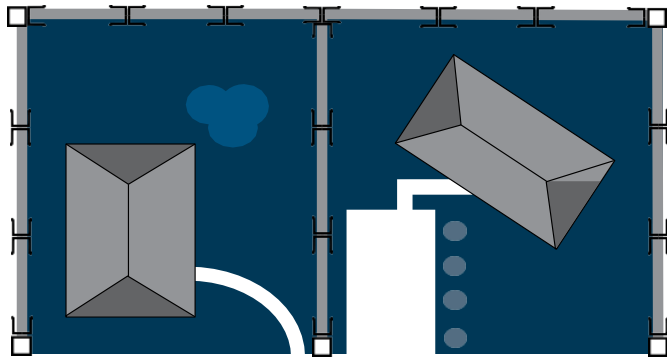
5 Continue to install the framework until completed. Do not install the infill sheets at this time



STEP 4

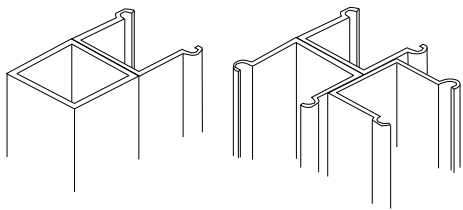
Determine Ends, Corners & Junctions

HINT: Use a powder coated SHS post as a corner for a neater finish. Available from ClickSteel in 50 x 50 and 65 x 65.

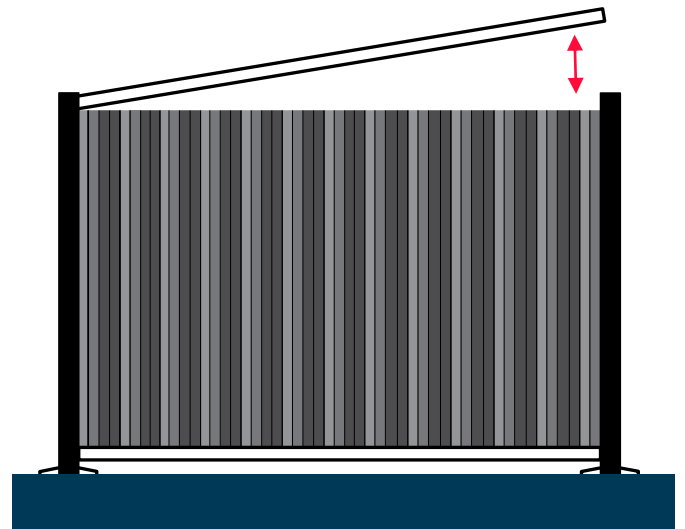


□ SHS SECTION

┌┐ FENCE POST



JUNCTION
OPTIONS



Allow for an overlap when inserting the second sheets. Refer to the below diagram:

METLINE OVERLAP



TRIMCLAD OVERLAP



Once the 3rd sheet is in place step back and assess the panel. Make adjustments where required to ensure rails are aligned and the overall panel looks right. Screw the top rail in place once satisfied.

STEP 5

Install Infill Sheets

Allow the concrete to set for a minimum of 24 hours. Remove the screws on one side of the top rail and hinge it up to slid the infill sheets into the bottom rail. Lower the top rail over the sheets to help hold the sheets together

STEP 6

Install Lattice Panels

(Where Applicable)

Where 300mm lattice panels are used, measure and mark 305mm from the top of the post before installing infill sheets to allow for the positioning of top rail that sits over the lattice panel.

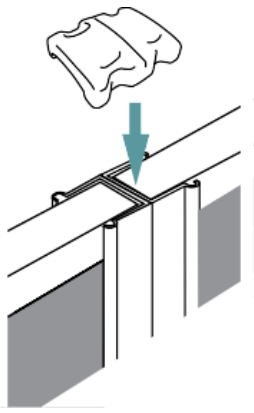
Place top rail over the top edge of the lattice panel. Insert the rail and lattice into the top of the panel ensuring the ends are inserted into the posts. Slide the 2nd top rail in and position over the lattice.

STEP 7

Completing The Fence

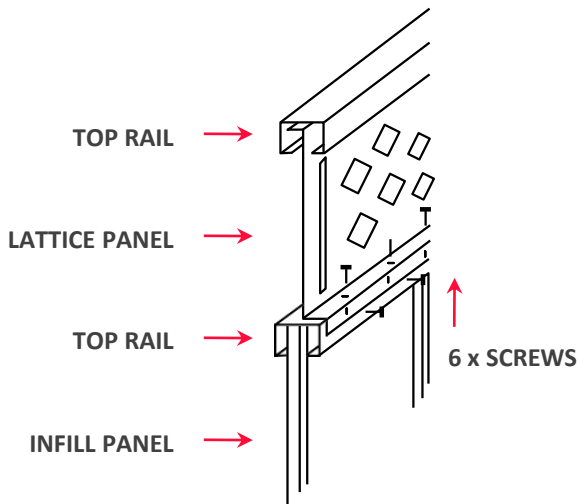
Before screwing any rails into position step back and assess the fence. Check infill sheets run parallel to the posts; ensure overlaps are tidy and flush and rails are aligned. Make adjustments as required and then screw the rails into position. Rinse the fence clean of swarf.

Fix optional post caps to your fence using hex head screws or silicone sealant. For single posts use a knife to cut the post cap in half using the guide on the underside.



Fix the base of the lattice panel to the middle of the rails with 6 screws. Fix the top rail to the posts with screws at each end.

Hose down with water once completed to ensure filings and swarf is removed



EXTENSIONS

Adding A Lattice Panel Kit To An Existing Fence

ClickSteel extension kits allow you to add lattice to an already installed ClickSteel fence. Extension kits contain the items required for one fence panel.

Lattice Panel Kit Contents:

- 2 x 300mm Extension Sleeves
- 1 x Top Rail
- 1 x Lattice Panel
- 6 x 10-16 x 16 Tek Screws 1 x Optional Post Cap

ADDING A PLINTH TO YOUR FENCE

Plinths have many uses and are ideal where there are varying heights between properties. They can fill gaps under your fence and act as a retaining wall for low volumes of soil. Plinths are 2365mm lengths.

Installation

- 1 Follow steps 1 to 3 of **Installing Your Fence (Pg 4)**.
- 2 Concrete in your first post.
- 3 Insert the plinth into the post at the bottom of the panel.
- 4 Install the bottom rail to the required position and screw the rail and the plinth to the post. Continue to install the remainder of the panel.

When installing more than one plinth, lay the plinths on the ground and stack them to the required height. Screw the plinths together at both ends and install them as one unit.

NOTE: Plinths are not made from COLORBOND® steel and are excluded from BlueScope material warranties.

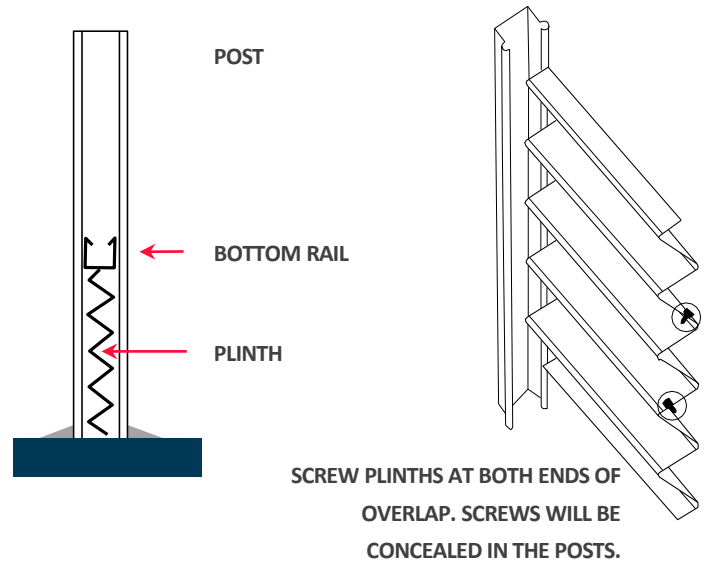
Plinth Overlaps & Heights

- 1 Plinth = 155mm high
- 2 Plinths = overlapped 265mm high
- 3 Plinths = overlapped 375mm high

4 Plinths = overlapped 485mm high

5 Plinths = overlapped 595mm high

NOTE: Where more than one plinth is to be installed a 50 x 50 x 1.6mm SHS post must be used in between the standard fence posts to strengthen the fence for every panel where this occurs.

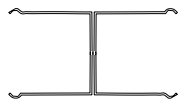


Retainer Wall Application

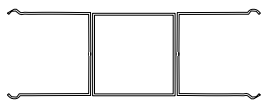
The plinth can be used as a retainer wall. The maximum height is 5 plinths high (600mm). Depending on the height of the wall posts may require reinforcement and footings may need to be increased.

All plinth walls should be backfilled with blue metal or crushed concrete to allow for drainage.

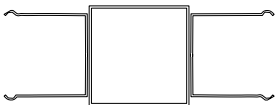
Plinths have a smaller radius on one side to allow for fit when stacking. The product name is on the smaller radius side.



1 PLINTH HIGH WITH STANDARD POSTS



2 PLINTHS HIGH WITH 50 x 50 x 1.6mm POSTS



2 PLINTHS HIGH WITH 65 x 65 x 2.5mm POSTS

GATES

ClickSteel gates are manufactured to requested sizes up to 2100mm H x 1600mm W for single gates, or 3200mm W for double gates. The frames are welded making them strong and ensuring they do no twist, bend or break. Gates are available in the fence colour range and with lattice tops.

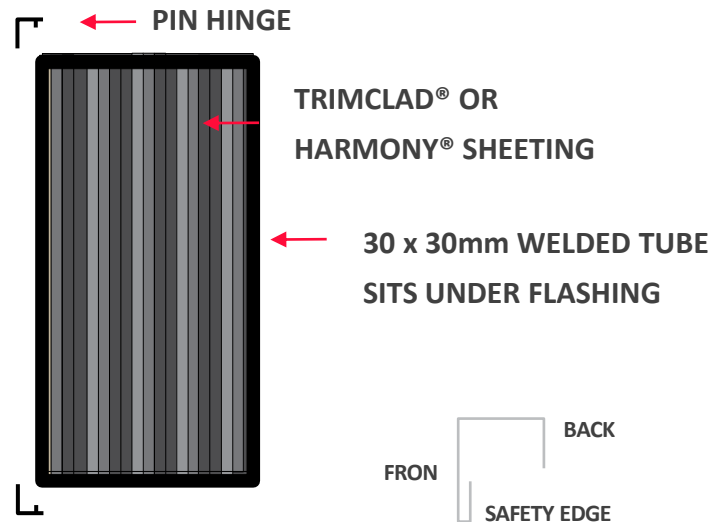
Posts are available in 50 x 50 x 1.6mm for smaller, single gates and in 65 x 65 x 2.5mm.

Components

- 30 x 30mm galvanised, welded frame.
- Trimclad or Harmony sheeting.
- Edges flashed in a COLORBOND® trim featuring a safety edge to the front of the gate.
- Heavy duty pin hinges that slide into the top and bottom of the gate allowing for easy installation. Adjustable hinges are available on request.

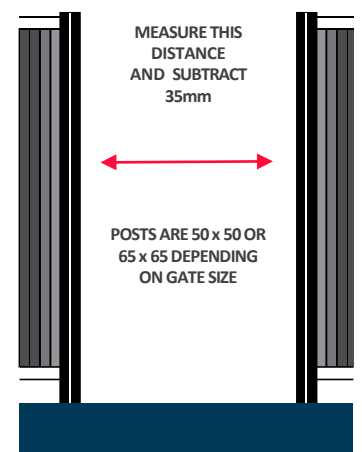
- Lever handled latch and striker allows for gate to be opened from either side and allows for a padlock.

- Drop bolts included with double gates

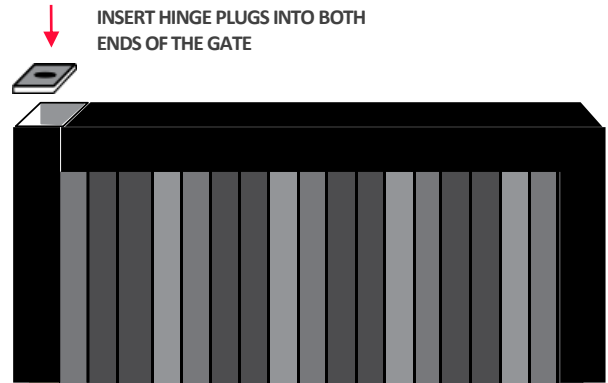
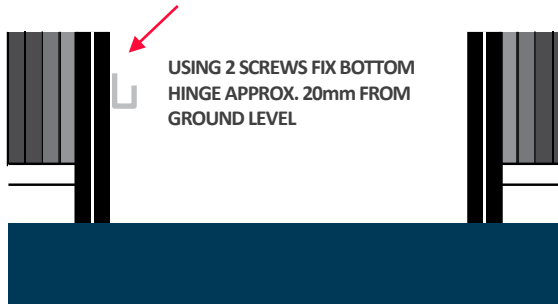


Installing Your Gate

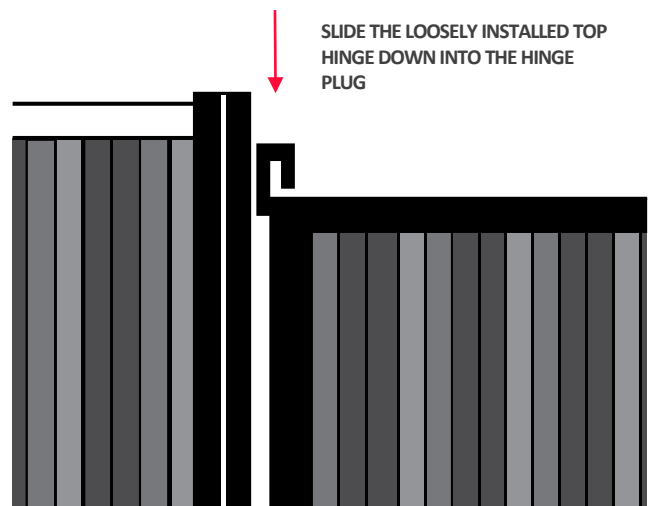
- 1 Once you have two fixed points between which the gate is to hang (normally two gate posts), measure the distance between the two points and subtract 35mm to allow for the hinges and latch. The measurement is the final width the actual gate needs to be.



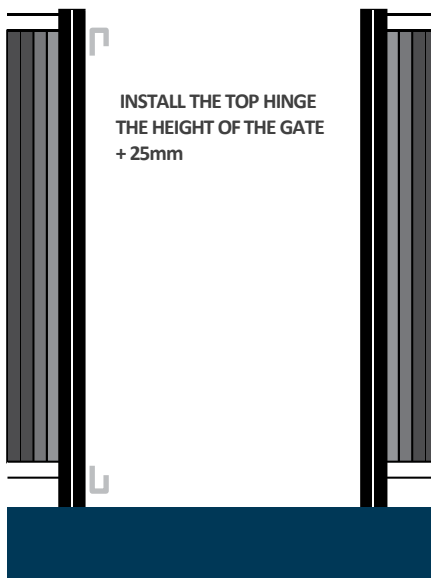
- 2 Install the bottom hinge into position and tighten. Consider any slope to ensure the gate does not hit the ground when opening and closing



- 5 Position the gate on the bottom hinge. Align the gate with the post and slide the top hinge into the hinge plug. Tighten the top hinge once in place



- 3 From the bottom hinge measure up the post the height of the gate plus 25mm. Loosely install the top hinge so that it can slide up and down.



- 4 Insert the 2 black plastic hinge plugs into the tubing at the top and bottom of the gate.

- 6 Install the latch and striker on the inside of the gate. The striker is located on the gate and the latch on the post. Include the lever if the latch is to be accessible from both sides. Install the lever through the latch hole so that it extends between the gate and post to the other side of the gate allowing the latch to be lifted



- Don't spray the fence with garden sprays or fertilisers as this will damage your fence. Wash the fence immediately with water should this occur.
 - Don't use touch up paint on your fence. Minor scratches should be left alone. Alternatively, the infill sheet can be replaced. Touch up paint weathers differently to COLORBOND® steel and will **void** the BlueScope Steel Material Warranty.
- Don't allow your fence to come into contact with bare steel, lead, copper, chemically treated
- or green timber as these are not compatible with COLORBOND® steel.

MAINTENANCE & WARRANTY

To keep your fence looking its best, simply hose it down periodically with water. A soft broom can be used to remove cobwebs. Pay particular attention to the area under the top rail which is sheltered from natural washing by rain

Important

- Don't allow soil, garden fill or dirt to build up against the bottom rails and posts of your fence as this will retain water and lead to corrosion. Adequate drainage is needed to ensure that water does not pond in the bottom rail. Drainage holes exist for this purpose.
- Don't use your fence as a retaining wall as it is
- not designed for this purpose.

COLORBOND® STEEL WARRANTY

Eligibility

Availability and duration of warranties depend upon a number of factors, including location and how products are installed. The online warranty system considers the specifics of your product and will determine if you are eligible for a warranty and for how long.

What Does The Warranty Cover?

Depending on eligibility and product application, BlueScope Steel offers a Fencing Warranty of up to 15 years from the date of installation against corrosion to perforation. A warranty against flake and peel for up to 15 years may also apply. All warranty periods are conditional on other factors being met. Your official BlueScope Steel Warranty Certificate will advise what your warranty covers and for how long*.

Apply Online

BlueScope Steel is committed to quality service and support. By applying online, you will ensure your warranty is permanently on record.

How to apply for your warranty certificate

- 1 Go to www.bluescopesteel.com.au/warranties
- 2 Sign up and register your details
- 3 Follow the prompts to complete your registration

Visit Our Website

 www.clicksteel.com.au



COLORBOND®, BlueScope, the BlueScope brand mark and ® colour names are registered trade marks of BlueScope Steel Ltd. *Warranty subject to exclusions, application and eligibility criteria. For full terms and conditions and to determine the eligibility of your fence for the warranty visit bluescopesteel.com.au/warranties or call BlueScope on 1800 022 999. All reasonable care has been taken in the compilation of the information contained in this brochure. All recommendations on the use of our products are made without guarantee as conditions of use are beyond the control of ClickSteel. It is the customers responsibility to ensure that the product is fit for its intended purpose and that the actual conditions of use are suitable. ClickSteel pursues a policy of continuous development and reserves the right to amend specifications without prior notice. ClickSteel and the Logo are registered trademarks of Metroof Contracting Pty Ltd..