FENCING
SELECTION &
INSTALLATION GUIDE

Colorbond®

Ⓜ Metroll®
BETTER SERVICE • BETTER BUILDING SOLUTIONS

CHOOSING THE RIGHT FENCE

It's important to select the right fence for your environment. Metroll fencing is 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 Metroll 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

REGION D

Refer to the Metroll Cyclonic Installation Guide for these Regions

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.
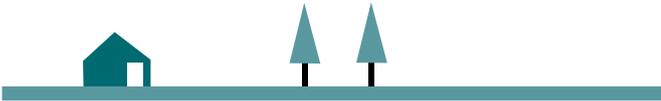
Category 2.5 Terrain with a few trees or isolated obstructions, for example terrain in developing outer urban areas with scattered houses.
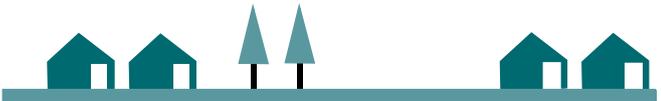
Category 3 Terrain with numerous closely spaced obstructions with heights typically between 3-10m, for example suburban housing.

STEP 3. CHOOSE YOUR FENCE STYLE & COMPONENTS

FENCE COMPONENTS

- **Posts** 1800, 2100, 2400, 2700 & 3000mm high
- **Rails** 2365 & 3125mm lengths*
- Post Caps
- Lattice Panels - 2355 & 3120mm lengths
- Under Fence Plinths- 2365mm lengths
- Gates
- Lattice Extension Kits
- Post Stiffeners
- SHS Posts
- Fasteners

*Metroll Newcastle Rails: 2370 & 3140mm

CONSULT YOUR METROLL BRANCH FOR PROFILE, SIZE & COLOUR AVAILABILITY

TRIMCLAD
ALL STATES

METLINE QLD, TAS
HARMONY WA

METLINE PREMIUM
NSW & VIC

METZAG
QLD, NSW, VIC & TAS

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 STEP 1: Determine your post footing).
- 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:
  a) Post holes of the correct size and concrete filled.
  b) The recommended number of self-drilling screws are used to fix posts together.

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
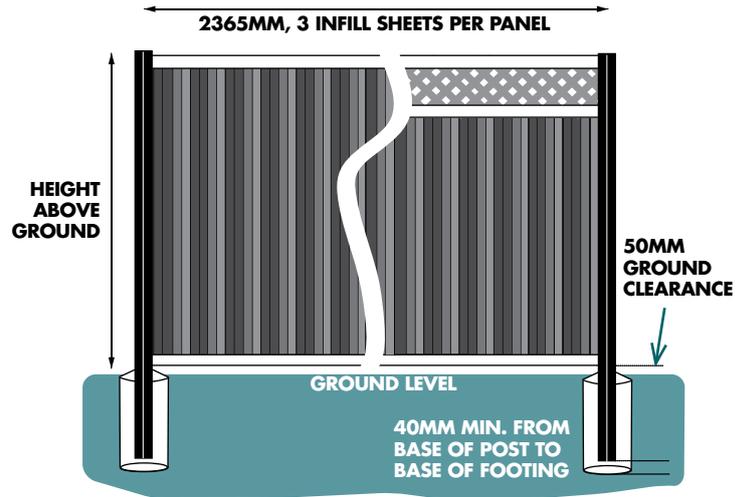- Tape Measure
- Safety Glasses & Gloves

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
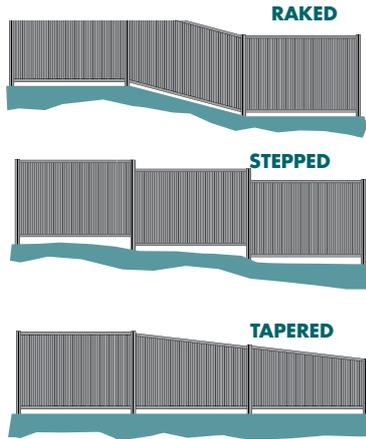
Use the table to identify the post length you require:

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

2365MM, 3 INFILL SHEETS PER PANEL

HEIGHT ABOVE GROUND

50MM GROUND CLEARANCE

GROUND LEVEL

40MM MIN. FROM BASE OF POST TO BASE OF FOOTING

DETERMINE YOUR POST LENGTHS

STEP 1. DETERMINE YOUR POST FOOTINGS

IMPORTANT!

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

*Metroll Newcastle 2370

STEP 2. CALCULATE THE REQUIRED POST LENGTH

FOOTING DEPTH LESS 40mm	+	HEIGHT ABOVE GROUND*	=	REQUIRED POST LENGTH

*HEIGHT ABOVE GROUND calculated by:
Infill panel height LESS 10mm + 50mm ground clearance + 300mm lattice panel (if used) + height of step where stepped installation used.

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.

PREPARING RAILS

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

HEIGHT (Y) MM	STD. RAIL LENGTH MM*	APPROX. ANGLED RAIL LENGTH 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

*Metroll Newcastle 2370

TRIM THE TOP & BOTTOM OF THE INFILL SHEETS

X = Y ÷ NUMBER OF INFILL SHEETS
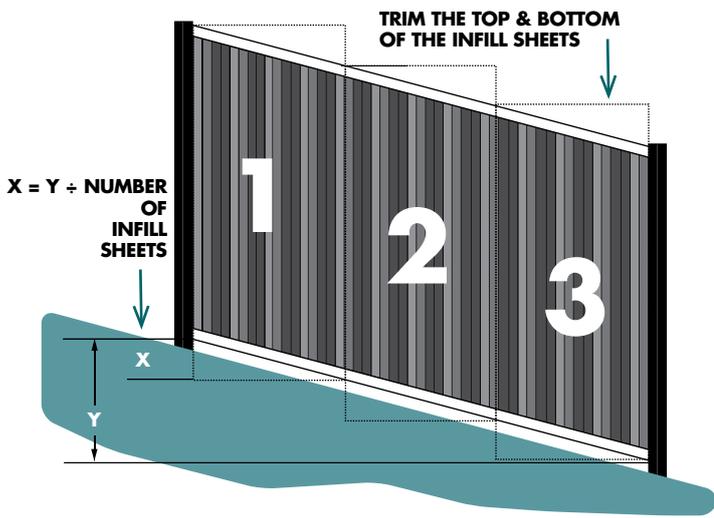
HOW TO DETERMINE THE CUT OF INFILL SHEETS

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.

1 INFILL SHEET WIDE

SPIRIT LEVEL

BOTTOM RAIL

MEASURE

TRIM AREAS
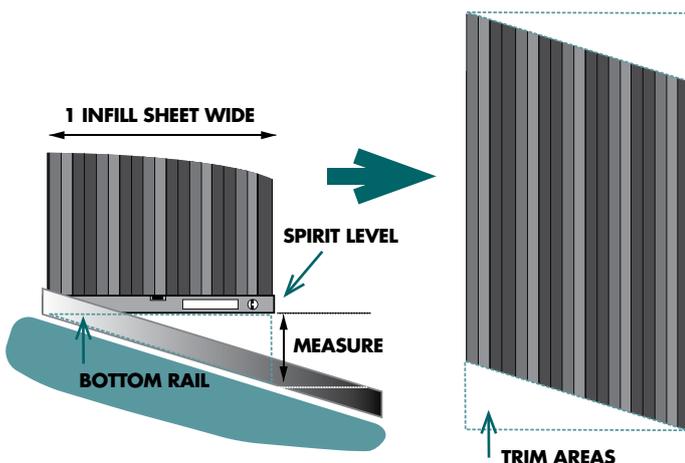
UNEVEN SITES & VERTICAL SLITTING

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 hang cutters, then bending and snapping the sheet.

POST FOOTINGS

Refer to the table on previous page, Step 1. Premixed concrete may be used (20MPa 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 x1 fence panel) to determine panel and component requirements.

EXAMPLE

43m of straight fence ÷ 2.365 = 18.18 panels

Option 1

18 Panels + 2 Posts.
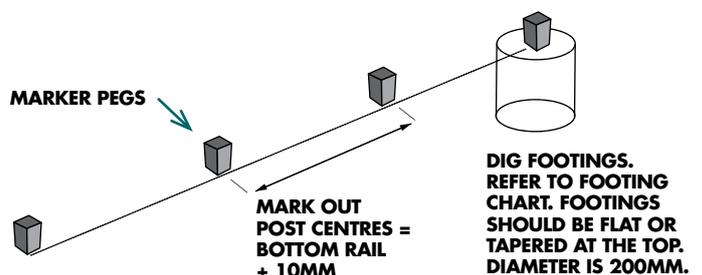1 rail cut into 2, 1 infill sheet trimmed to 430mm.

Option 2

17 Panels @ 2365mm (x3 sheets per panel) + 1 Panel @ 3125mm (4 sheets per panel).
Overlap sheets by 195mm per rib and trim the last sheet.
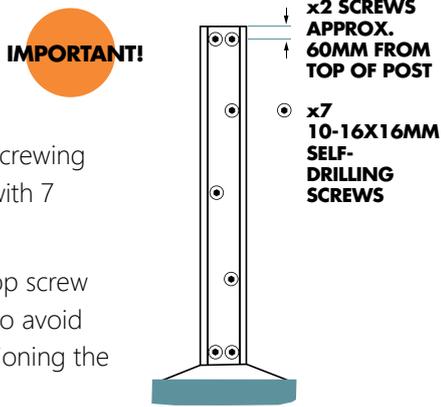
INSTALLING YOUR FENCE
STEP 1. MARK OUT THE POST HOLES

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

MARKER PEGS

MARK OUT POST CENTRES = BOTTOM RAIL + 10MM

DIG FOOTINGS. REFER TO FOOTING CHART. FOOTINGS SHOULD BE FLAT OR TAPERED AT THE TOP. DIAMETER IS 200MM.

STEP 2. ASSEMBLE POSTS

IMPORTANT!

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.

x2 SCREWS APPROX. 60MM FROM TOP OF POST

x7 10-16X16MM SELF-DRILLING SCREWS

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.

1ST POST
2ND POST
**BOTTOM RAIL**
50MM GROUND CLEARANCE
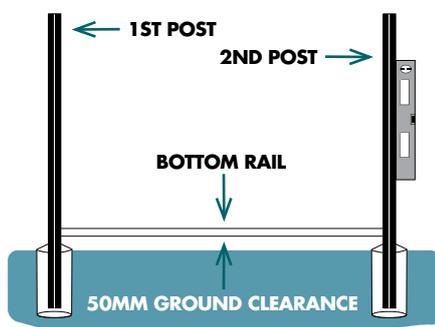
STEP 4. DETERMINE ENDS, CORNERS & JUNCTIONS

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

SHS SECTION
FENCE POST
JUNCTION OPTIONS
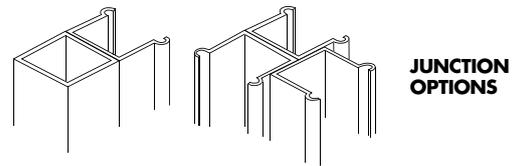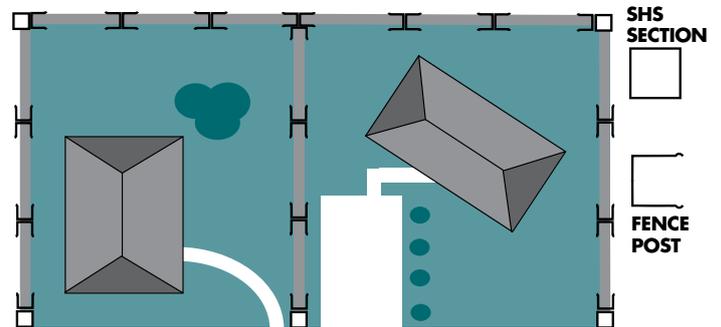
STEP 5. INSTALL INFILL SHEETS

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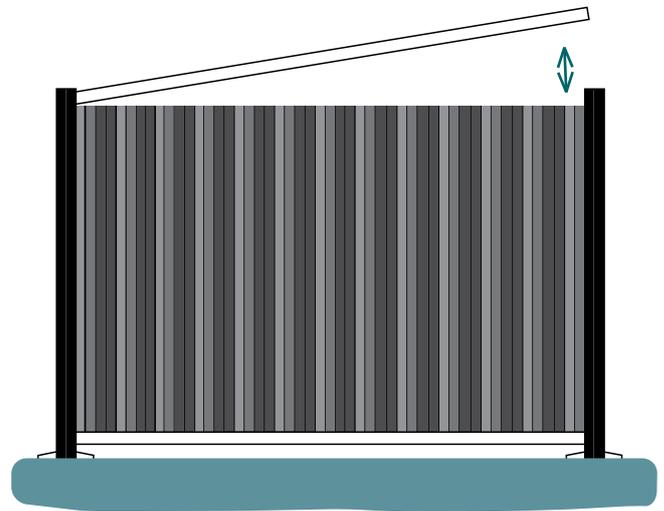
Allow for an overlap when inserting the second sheets. Refer to the below diagram:

METLINE PREMIUM / HARMONY 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 6. INSTALL LATTICE PANELS
(Where applicable)

Where lattice panels are used, measure and mark 305mm from the top of the post before installing infill sheets to allow for 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.

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.

TOP RAIL
LATTICE PANEL
TOP RAIL
x6 SCREWS
INFILL PANEL
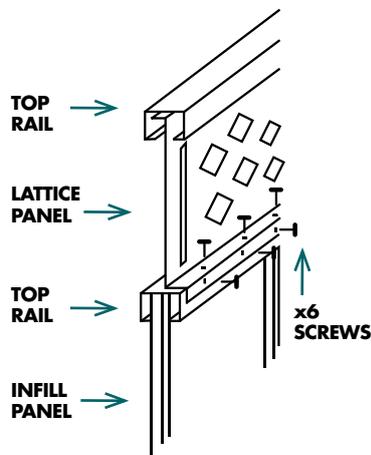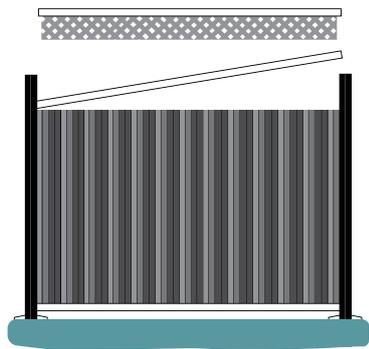
STEP 7. COMPLETING THE FENCE

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.
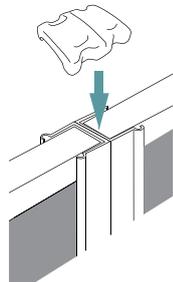
EXTENSIONS
ADDING A LATTICE PANEL KIT TO AN EXISTING FENCE

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

LATTICE PANEL KIT CONTENTS

x2 300mm Extension Sleeves
x1 Top Rail
x1 Lattice Panel

x6 10-16 x 16 Tek Screws
x1 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 under **Installing Your Fence**.
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 Steel 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.
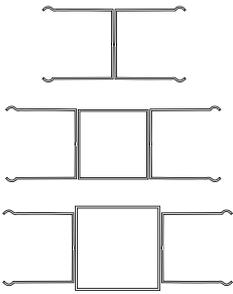

POST
BOTTOM RAIL
PLINTH
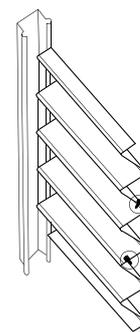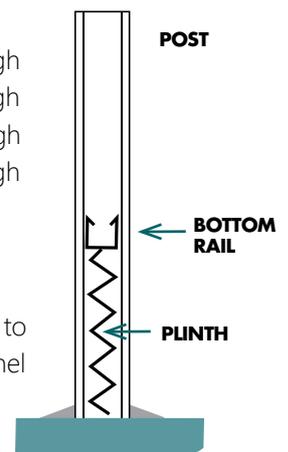
SCREW PLINTHS AT BOTH ENDS OF OVERLAP. SCREWS WILL BE CONCEALED IN THE POSTS.

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 50x50x1.6MM POSTS

2 PLINTHS HIGH
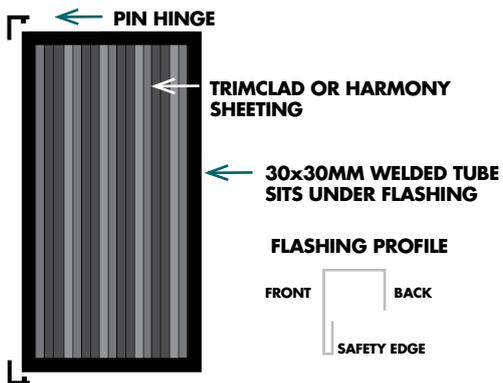**with 65x65x2.5MM POSTS**

GATES

Metroll 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 wither side and allows for a padlock.
- Drop bolts included with double gates.

PIN HINGE

TRIMCLAD OR HARMONY SHEETING

30x30MM WELDED TUBE SITS UNDER FLASHING

FLASHING PROFILE

**FRONT**   **BACK**

SAFETY EDGE

INSTALLING YOUR GATE

❶ 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.

MEASURE THIS DISTANCE AND SUBTRACT 35MM

POSTS ARE 50x50 OR 65x65 DEPENDING ON GATE SIZE
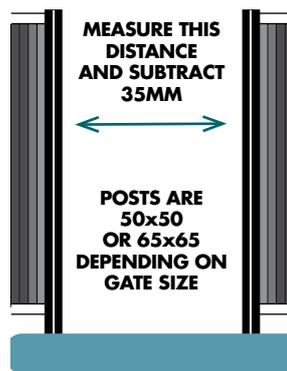
❷ Install the bottom hinge into position and tighten. Consider any slope to ensure the gate does not hit the ground when opening and closing.

**USING 2 SCREWS FIX BOTTOM HINGE APPROX. 20MM FROM GROUND LEVEL**

❸ 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.

INSTALL THE TOP HINGE THE HEIGHT OF THE GATE + 25MM

INSERT HINGE PLUGS INTO BOTH ENDS OF THE GATE
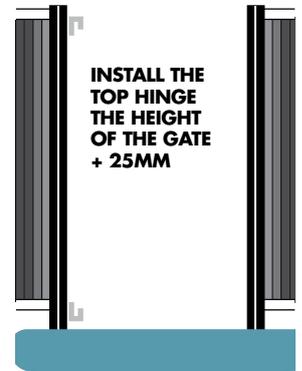
❹ Insert the 2 black plastic hinge plugs into the tubing at the top and bottom of the gate.
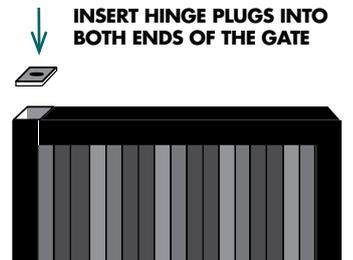
❺ Position the gate on the bottom hinge. Align the gate with the post and slide the top hinge into the hinge plug. Tighten the top hinge once in place.

SLIDE THE LOOSELY INSTALLED TOP HINGE DOWN INTO THE HINGE PLUG
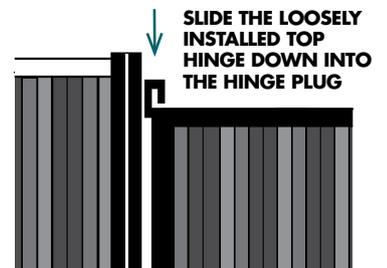
❻ Install the latch and striker on the inside of the gate. The striker is located on the gate and the latch on the post.

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.
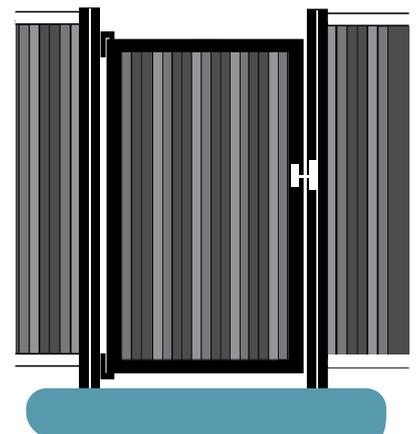
FENCE MAINTENANCE & WARRANTY

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.
- 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 10 Year 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.

THE 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 10 years from the date of installation against corrosion to perforation by weathering in the natural elements. BlueScope Steel also warrants that the paint system will not flake or peel due to natural weathering for up to 10 years. 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. That's peace of mind you can count on.

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.

QLD		NSW		VIC		TAS	
Cairns	07 4054 0888	Lismore	02 6622 6677	Preston	03 9480 3744	Launceston	03 6335 8555
Townsville	07 4779 8266	Tamworth	02 6765 4799	Laverton	03 8369 8300	**NT**	
Mackay	07 4968 1255	Newcastle	02 4954 5799	Geelong	03 5248 2006	Darwin	08 8935 9555
Rockhampton	07 4920 0900	Sydney	1300 766 346	Ballarat	03 5335 6416		
Bundaberg	07 4155 5999	Dubbo	02 6883 4800	Pakenham	03 8710 9300	**WA**	
Toowoomba	07 4634 6144	Wagga Wagga	02 5924 4500			Perth	08 9365 5444
Sunshine Coast	07 5493 7872	**ACT**				Bunbury	08 9796 9796
Brisbane	07 3375 0100	Canberra	02 6298 2777	**SA**		Albany	08 9841 6966
				Adelaide	08 8282 3300		

26 Metroll Branches Nationwide

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