

D5 Noise Abatement Fencing

Installation Instructions



Material Requirements

Shovel
Post Hole Digger (if required)
Stringlines
Measuring Tape
Pencil or Fine Tip Marking Pen
Spirit Level
Cement
Bracing
Steel Posts & Rails
D5 Fence Panel Materials
D5 Packing Strip
D5 Capping (for single sided fence)
Colour Matched Flashing (for double sided fence)
Self-tapping Pan Head Screws c/w 9mm head diameter (for steel fence)
Stainless Steel 12.5mm x 0.85mm thick c/w 5mm hole Washers (for high wind areas)

Step 1: Setting The Posts

Mark the line of the fence. Drive a stake into the ground at one end post position, and run a string line along the boundary the full distance; stake out the opposite end post. Then measure and stake all intermediate posts at equal distances. Posts are usually set 2.4m apart for a fence up to 2.4m high.

For fencing which is higher than 2.4m or in steep graded areas it is highly recommended to have drawings prepared by an engineer. Councils may require these drawings to be supplied with your submissions for approval.

To make sure all the posts will be in a straight line, set both corner posts first. Dig holes between 600mm-800mm deep (1/3 of fence height) x 300mm square.

When the fence is over 2.4m high please install the fence in accordance with the engineers report.

Before setting the posts in the holes, place a timber sole plate in the bottom of each hole. Stand the post on the sole plate, you'll need to brace the post temporarily so it stays upright and straight.

Alternately, a 50mm layer of concrete can be used instead of timber sole plate. Where posts are to be set in sandy soil, special post struts may be required. Fill the hole completely with a 50/50 mixture of soil and dry cement.

Check the post with your spirit level and adjust the braces if necessary to hold it square in place. Then firm the mixture by tamping down hard; finishing the mixture approximately 150-200mm below the ground line; sloping the mixture away from the post to allow the rain water to run off. Add water to the mixture in the ground to set the cement in the soil.

Then stretch two string lines between the two end posts to align the intermediate posts. They should be set flush with the stringline. Dig the holes and set each post in a mixture of soil and dry cement as you did for the end/corner posts.

IMPORTANT NOTE: When fixing allow for thermal expansion in the material and do not fix too tightly, each nail should be placed in the centre of the nailing slot and driven in till the head is just clear of the surface of the nailing strip.

Step 2: Fixing The Cross Rails

The top rail is fixed 200mm below the top of the post, the bottom rail set a maximum of 200mm above ground level and the mid-rails at 600mm maximum centres. Fix the rails with the joints of the rails butted together in the middle of a post, making sure rail joints are on staggered posts.



For a double sided fence a second set of rails will need to be fixed to the other side of the posts.

IMPORTANT NOTE: When fixing allow for thermal expansion in the material and do not fix too tightly, each nail should be placed in the centre of the nailing slot and driven in till the head is just clear of the surface of the nailing strip.

Step 3: Fixing D5 Panels

With steel framing is used we recommend using self-tapping pan head screws with a minimum head diameter of 9mm. In high wind areas it is recommended that stainless steel washers be used in conjunction with the above. (As per the material list)

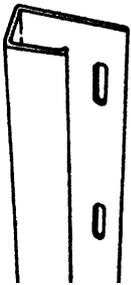


Single & Double Sided Fence

For both a single and double sided fence you will firstly need to dig a trench about 200mm deep along the base of the fence line so as the D5 panels can be dropped into it to ensure noise attenuation at the base of the fence line.

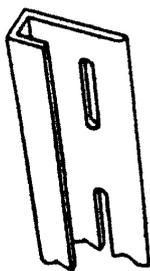
Single Sided Fence

1. Cut two lengths of capping the height of the fence and fix in place to the start and end posts ensuring both caps are vertical.



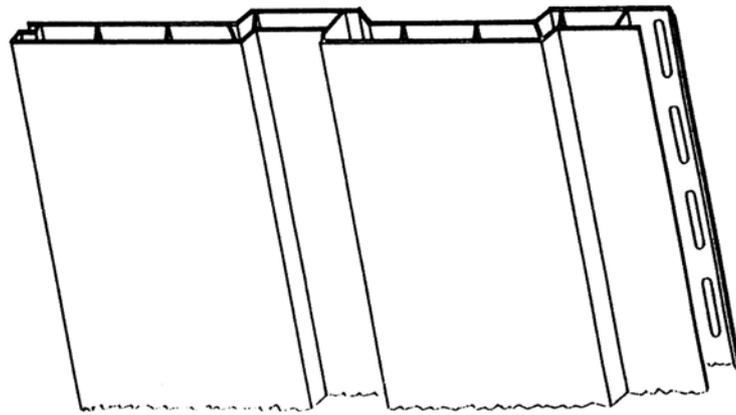
* 'Single fence capping – colour matched in uPVC

2. Cut one length of packing strip the height of the fence panel, locate the packing strip into the female side of the first panel and slide the first panel with the located packing strip into the vertical starter post cap.



Packing strip – inserted into slot of D5

IMPORTANT NOTE: When fixing allow for thermal expansion in the material and do not fix too tightly, each nail should be placed in the centre of the nailing slot and driven in till the head is just clear of the surface of the nailing strip.



D5 Panel

3. Ensure the panel is located in the capping on the starter post is vertical and to the fence height level at the top with the bottom dropped into the pre-dug trench (where the fence line is to one level but the ground undulates, then by varying the trench depth you will save cutting panels to the required height), fix the panel to each rail through the pre-drilled slots. **WARNING – do not fix tightly as the panels will marginally expand and contract vertically due to temperature variances.**
4. Continue along the length of the fence by mating the female section of each panel into the male section of the previously fixed panel, fixing each panel to each rail and thereby covering the previous fixing points.
5. For the final panel it may be necessary to width so as to be able to slide it down from the top so as the female mates with the male of the last fixed panel and the cut side is slid down into the capping which was fixed to the end post.
6. Screw fix the capping along the top of the fence every 300mm-400mm, cutting the final strip to length.
7. Backfill the trench and tamp the soil on both sides of the fence.

Double Sided Fence

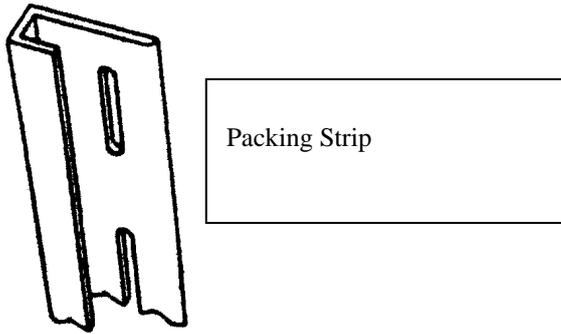
1. A piece of colour matched flashing will need to be manufactured to the width of the post + the width to the two rails + the width of the two D5 panels with the two sides of the flashing measuring approximately 45mm. (as per the below image).



* *Double flashing – manufactured from colour matched colourbond.*

IMPORTANT NOTE: When fixing allow for thermal expansion in the material and do not fix too tightly, each nail should be placed in the centre of the nailing slot and driven in till the head is just clear of the surface of the nailing strip.

2. Cut one length of packing strip the height of the fence and fix in place to the starter post via the pre-drilled hole slots ensuring the strip is vertical.



3. Slip the female section of the first panel into the male barb of the packing strip making sure it is level at the top, vertical and then fix to each rail via the pre-drilled hole slots.
4. Continue along the length of the fence as for step 4 above.
5. Cut the final panel down to size, slip into the male barb of the last panel and then fix through the cut side of the panel into the rail 20mm in from the edge. (The 45mm flashing will cover this fixing)
6. Repeat steps 2 – 5 for the other side of the fence.
7. Cut two lengths of colour matched flashing with either a mitred or square corner the height of the fence and push onto the start and end of fence line.
8. Fix the remaining flashing along the top of fence and screw fix the flashing at both ends and along the top every 300-400mm on both sides of the fence.
9. Backfill the trench and tamp the soil on both sides of the fence..

Notes: For a standard straight finish at the base, such as for infill work, fix the capping along the bottom rail, slide the panels into the capping on the first post as above and into the base capping, working along as above. When finished, level of the top of the panels if required and fix the top capping with tech screws.

For further information please contact our Sales department:-



Roly Bolton –
Ph. 0508 627232 – Mob. 027 492 7329
Email. roly@masada.co.nz
Website: www.masada.co.nz