Web www.Archtech.co.nz Email: info@archtech.co.nz
Ph **0800 252 383**

Weatherboard Step Panel

INTRODUCTION

ARCHTECH is the first and only supplier of roll formed Step Weatherboard Panel in New Zealand. It is ideal, low-maintenance alternative to timber weatherboard. With the appeal of a classic paneling, simplicity of installation, our metal weatherboard is a very cost effective and attractive system that can gives classic finish for existing or new buildings.

The system belongs to the rain-screen sector (wall cladding installed with a pressure equalised, ventilated air space). It will require vapour barrier or waterproof membrane behind the supporting framework. The system can only be used on even, vertical walls.

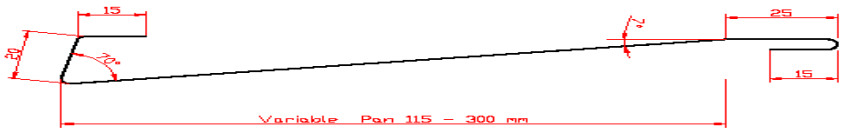
APPLICATION

Weatherboard Step Panels are ideal for use on new or existing buildings. They are installed as conventional weatherboard planks, resembling the look of a Bevel Back Weatherboard wood paneling.

Areas of application include:

- Façade
- Chimney cladding
- Interior feature walls

PANEL DETAILS



- Suitable for wall cladding ONLY
- Variable Pan size from 115 – 200 mm
- Max panel length - 6.0 m for pre-painted steel; 4.0 m for any other material
- Can be manufactured in full range of materials:
  - Copper
  - Stainless Steel
  - Titanium Zinc
  - Aluminum
  - VITOR, ZENEX or LUX (pre painted steel)

DIMENSIONS

Panel dept is fixed to 20 mm. (allow for 25 - 30 mm stand off)

Maximum panel length will depend on the material chosen. Thermal expansion / contraction are the key deciding factors. We will recommend max 4.0 lengths for Copper, Zinc, Aluminum or Stainless Steel. For any pre-painted steel we will recommend 6.0 m maximum.

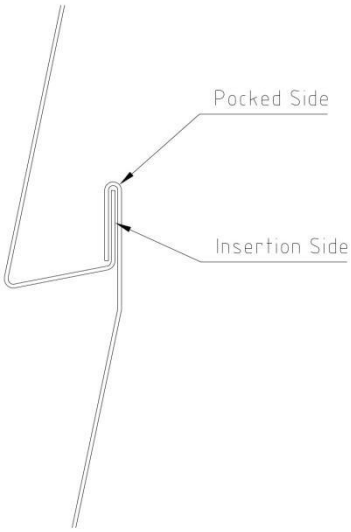
DESIGN CONSIDERATIONS

Weatherboard Step Panels can be only installed Horizontally. Special attention is needed to position any penetrations in the walls so that they are aligned with the joints - horizontally and /or vertically. Because of waterproofing requirements, Weatherboard Step Panel cannot be notched around any penetrations. Please consult with A R C H T E C H for specific design considerations.

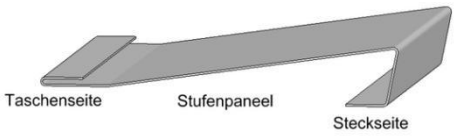
SUPPORTING FRAMEWORK

A. Metal sub-frame

The system can be fixed on a metal framework composed of adjustable brackets and cladding rails made of galvanized steel or aluminium. The brackets fixed to the structure are used to adjust the cladding rails (minimum thickness 2,5 mm for aluminium) which act as a support for the cladding. The minimum support of the rails is 40 mm. Screws protected against corrosion) and rawl plugs are used according to the framework manufacturer's specification. Consult our technical department for further information.



Setting out, assembling the angle brackets, fixing the insulation and installing the panels must be carried out in accordance with the appropriate manufacturer's recommendations.



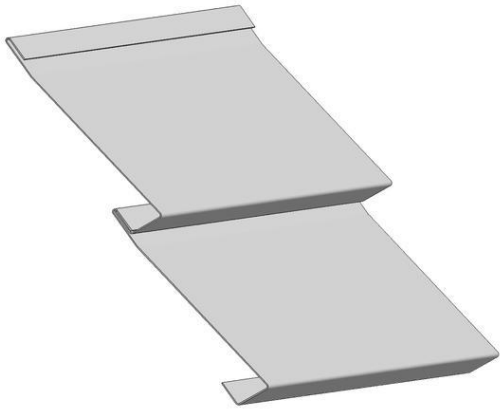
To meet the requirements for mechanical resistance (intrinsic weight and resistance to wind pressure), the maximum centre to centre distance between the brackets is 600 mm. The elbow brackets are fixed in place to provide cross fixing in the longitudinal direction of the panels.

Transverse Joints - For horizontal fixing, the framework must provide a minimum support surface of 100 mm. For vertical fixing, one rail must be placed at each side of the joint.

B. Timber Framework

The timber supports used as supports for fixing the cladding must be soft wood (e.g. pine). They should be sufficiently durable to meet the conditions of use dictated by the façade in question. Any wood treatment products (fungicides, insecticides) must be water based. The timber supports must present a minimum supporting surface of 40 mm for fixing the panels. To fix timber battens to the support, galvanized (adjustable or non-adjustable) steel brackets are used.

The timber framework and any thermal insulation used must be fixed in compliance with local standards to ensure a flat support for the cladding.



The maximum centre to centre distance of the battens is 600 mm. These battens must be positioned so that they are perpendicular to the longitudinal direction of the profiles.

Ventilation at the top and bottom of the cladding is provided by air inlets and outlets which should be protected by a perforated grid. Sections are calculated to ensure satisfactory ventilation. For horizontally fixed panels or panels fixed vertically with reinforcement on the back (in accessible area), there must be a minimum continuous space of 20 mm between the insulation (if any) and the edges of the weatherboard panels.

FIXINGS

Weatherboard Step Panel is fixed with concealed U-clips to the supporting framework.

THERMAL EXPANSION AND CONTRACTION

The rate of thermal expansion and contraction varies between the metals and also the color of the product. To accommodate this standing seam trays are fixed with combination of fixed and sliding clips.

MATERIAL	EXPANSION	70^0 C CHANGE OVER 10 M TRAY
	mm/m-C	mm
Steel	0.011	7.7
Aluminum	0.023	16.1
Zinc	0.022	15.4
Copper	0.017	11.9

Factors that can affect the lengths of panels are:

- Manufacturing location
- Access to work area
- Design and detailing
- Choice of profile

Please consult with ARCHTECH for advice on maximum panel lengths.