TRS INTERLOCKING PANELS

INTRODUCTION

The panels are simply connected by the use of an interlocking groove, giving the elegant appearance of a recessed joint. Interlocking Panels do not require a plywood substrate, they are fixed onto 20 mm cavity battens using mechanical fixings which are concealed in the joint.

This system can be installed either horizontally or vertically over synthetic building wrap and 20 mm cavity battens. (same as timber weatherboards)

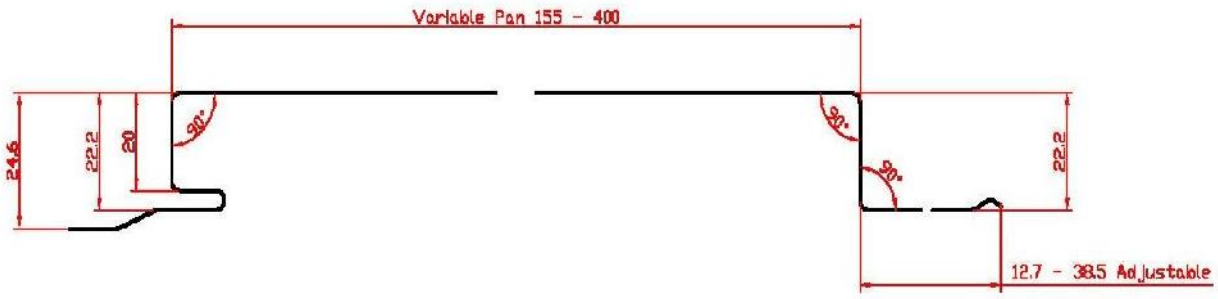
APPLICATION

Interlocking panels are ideal for use on new homes or existing buildings. They are installed as conventional weatherboard planks, resembling the look of a Rusticated Weatherboard wood paneling.

Areas of application include:

- Façade
- Soffits
- Fascias
- Chimney cladding
- Interior feature walls

PANEL DETAILS



Suitable for wall cladding ONLY

Negative joint size 2 – 25 mm (Recommend 12 mm min)

Variable Pan size from 155 – 260 mm unsupported.

Pan size over 260 mm will require back support. We will use fire rated POLYFOAM 24 mm.

Max panel length - 6.0 m for pre-painted steel (depending on panel width & Colour); Please consult for any other material

Can be manufactured in full range of materials:

- Copper
- Stainless Steel
- Titanium Zinc
- Aluminum
- VITOR+, VITOR ZX or LUX 0.55 Steel

DIMENSIONS

Panel dept is fixed to 25 mm. Flat pan is variable from 155 to 260 mm with no back support. For pan width over 260 mm, backing is required. Max width 400 mm.

Recessed joint width is adjustable from 2 to 25 mm. (Recommend 12mm min)

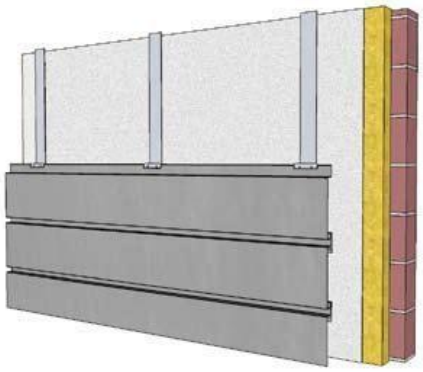
Maximum panel length will depend on the material chosen. Thermal expansion / contraction are the key deciding factors. We will recommend max 4.0 lengths for Copper, Zinc, Aluminum or Stainless Steel. For any pre-painted steel we will recommend 6.0 m maximum. (depending on colour and panel width)

DESIGN CONSIDERATIONS

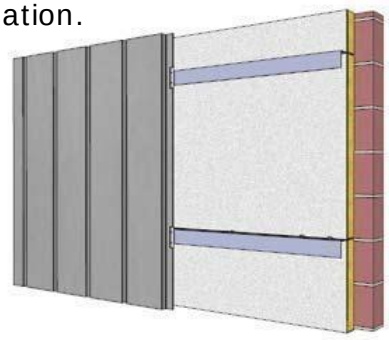
Interlocking Panels can be installed Horizontally, Vertically or Diagonally. Specific feature of this cladding is that it is installed from top to bottom when used Horizontally. Special attention is needed to position any penetrations in the walls so that they are aligned with the recessed joints - horizontally and /or vertically. Because of waterproofing requirements. Please consult with The Roofing Store for specific design considerations.

SUPPORTING FRAMEWORK

A. Metal sub-frame



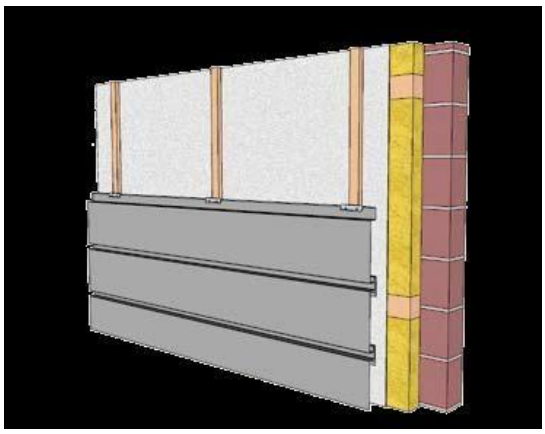
The system can be fixed on a metal framework composed of adjustable brackets and cladding rails made of galvanized steel or aluminum. The brackets fixed to the structure are used to adjust the cladding rails (minimum thickness 2,5 mm for aluminum) which act as a support for the cladding. The minimum 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.

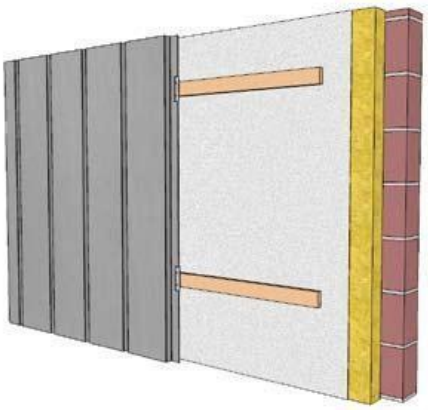
Transverse Joints - For horizontal fixing, the framework must provide a minimum support surface of 100 mm. For vertical fixing, one rail must be placed at each side of the joint.

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 dry and 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.

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FIXINGS

Interlocking panels are fixed with concealed screws direct to the framework. If the material chosen is copper, titanium zinc, aluminum or stainless steel and the length is exceeding 5.0 m, special sliding clips will be necessary. Please consult with The Roofing Store for further fixing schedule. All fixings to Comply with the NZ Building Code, dependant on chosen material & Site conditions. Minimum Class 4 fixings In Galv or Stainless - Min 10gauge x 55mm Wafer Head screws. Fixings through battens to framing unless battens are 45mm structurally fixed.

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 interlocking panels are fixed with combination of fixed and sliding clips.

MATERIAL	EXPANSION	70^0 C CHANGE OVER 6 M
	mm/m-C	mm
Steel	0.011	4.62
Aluminum	0.023	9.66
Zinc	0.022	9.30
Copper	0.017	7.14

Factors which can affect the lengths of the trays are:

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

Please consult with The Roofing Store for advice on maximum panel lengths and fixing schedule.

TESTING

The product has been tested in Australia in accordance with Australian Standard AS 4040.2-1992 & therefore satisfies AS/NZS 1562.1:1992 Design & Installation of sheet proof and wall cladding - metal. Internal bracing and substructure spacing at the design stage will be required to achieve higher wind loads. (if Required) Water Tight testing in Accordance with E2/VM1 a Satisfies requirements as per AS/NZS 4284:2008.

INSTALLATION

Installation to be carried out by a Capable and trained installer. All fixings to be concealed and tolerance for material thermal movement must be allowed for during installation. We recommend installing a "breathable vapor Barrier" (synthetic underlay) behind the Batten substructure to act as a second line of defense to stop any water ingress as well as allowing the building to "breathe". Flashings associated with the installation are to comply with E2AS1 & the NZ Build Code of Practice. Flashings must be fixed in the traditional concealed method with allowance for thermal expansion.