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smarttray™ Roofing Systems

Smarttray™ 510 standing seam single and double lock

introduction

The **smarttray™** 510 standing seam profile is a popular choice to provide enhanced depth and dramatic shading effects as needed. All sheets/trays are roll-formed, and are available in variable tray width and seam sizes.

A sought after feature of standing seam roofing is the ability to adjust tray widths to suit project requirements.

Its also not uncommon to have designers mix various sizes of trays together to create something different.

However in order to keep costs in check we recomend tray widths of 510 or 530mm as these relate to standard coil widths supplied to the industry.

Depending on seam height, a minimum pitch of 3° or 5° is achievable. This enables designers to use the profile to successfully conform to height restrictions on most residential projects. It looks equally attractive on a 45° pitch roof or used as a wall cladding.

Please consult with Architectural Metalformers as early as possible in the design process regarding your roofing requirements.

alternative solution

All **smarttray™** standing seam tray products are considered alternative solutions under the current building code. Please consult Architectural Metalformers who will asist you with the relevant required technical information to succesfully specify the product.

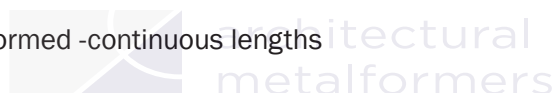
product overview

smarttray™ standing seam panels are formed to the exact measurements required and installed over a solid plywood base with approved roofing underlay.

minimum pitch 3° for a 38mm seam,
 5° for a 25mm seam

materials Copper, Zinc, Colorcote™ Aluminium and , Colorcote™ Zinalume™

lengths roll formed -continuous lengths



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width, seam	228–510mm effective cover with a 38mm seam	
	228–530mm effective cover with a 25mm seam	
thickness	Copper	0.5mm, 0.55mm, 0.6mm, 0.7mm, .09mm
	Zinc	0.7mm, 1.0mm, 1.5mm
	Aluminium ARX	0.7mm, 0.9mm
	Colorcote™ Zinalume™	ZRX 0.55mm ZR8 0.55mm

> profile options

The **smart tray™ 510** standing seam profile is available in a 25mm or 38mm high seam profile in either single lock or double lock.

> Fixing and seaming options

Panels are fixed with a sliding clip system and are seamed together using a specialised seaming tool offering 2 seaming options

- > single lock : creates the impression of a batten style profile through light shading without the added expense associated with a true batten cap.
- > double lock: creates a finer rib detail and is recommended for extreme high wind zones.

All options are suitable for urban, rural and coastal locations.

> applications

smart tray™ 510 standing seam panels are suitable for all forms of roofing in the residential and commercial sectors.

> design considerations

When specifying **smart tray™ 510** standing seam roofing, consideration should be given to the following:

- > Material type
- > Roof pitch
- > Roof shape
- > Wind loading
- > Venting of plywood substrate
- > Environmental factors, urban, rural or coastal

> availability

Selecting panel sizes that use standard coil widths ensures a faster cost effective solution and eliminates any delivery issues. Non standard coil sizes may require up to three months lead time from our overseas based suppliers.

Please contact Architectural Metalformers for specific stock information

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> flashing details

Robust flashing design, manufacture and installation are the key to a total waterproof solution. All these crucial steps are controlled and overseen in-house.

We use flashing methodologies that are well proven in Europe and the USA for hundreds of years and our flashings comply and often surpass E2 regulations.

> plywood substrate

All **smart tray™ 510** standing seam roofing requires a solid plywood substrate. We recommend a minimum of 15mm H3 plywood installed.

For all torch on compatability requirements please refer to www.ecoply.co.nz

please refer to the installation category in the main menu for a thorough plywood installation specification.

> underlay and fixings

We install an approved roofing underlay between the plywood substrate and our **smart tray™** standing seam sheet. We fit all trays with concealed sliding clips that are fixed using 316 stainless steel collated nails.

Depending on the pitch, the clips are fixed between 400-500mm centres and have a dual function: To allow the mechanical resistance of the roof and free expansion of the metal itself.

For copper and zinc we use marine grade 316 stainless steel clips

For Colorcote™ Aluminium and steel we use Colorcote™ Zinalume™ clips.

> thermal expansion and contraction

By using the sliding clip system detailed above, we allow for expansion and contraction without the associated “oil canning” as seen in some tray roofs.

The following is the expansion rate of various metals over a 70°C temperature change for a 10m length of product.

Copper	11.9mm
Zinc	15.4mm
Aluminium	14.8mm
Zinalume™	7.7mm



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additional technical information

- > The minimum pitch for smart tray™ 510 standing seam roofing is 3° or 5° depending on the seam height selected. If a lesser pitch is required please contact Architectural Metalformers technical department.
- > To avoid excessive heat buildup, all roofs (especially skillion) would require venting. Please consult with our technical team in this regard prior to formalising your design.



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smart tray™ standing seam 38 - Anthra zinc



smart tray™ standing seam 38 - Colorcote ARX aluminium



smart tray™ standing seam 38 – copper



smart tray™ standing seam 38 – copper

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smart tray™ standing seam 38 – Colorcote ARX aluminium



smart tray™ standing seam 38 – copper with seamless ridge (right)



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smart tray™ standing seam 25 - Anthra zinc



smart tray™ standing seam batten cap - copper



smart tray™ standing seam 38 - copper



smart tray™ standing seam 38 - ARX aluminium



smart tray™ standing seam 25 - copper



smart tray™ standing seam 38 - copper

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smart tray™ standing seam 38 – copper



smart tray™ standing seam 25 – copper



smart tray™ standing seam 38 – Colorcote ZMX metal



smart tray™ standing seam 25 – copper