

Standing Seam by ARCHTECH

INDEX:

1. Introduction
2. Technical Specification
3. Specification Information

INTRODUCTION

Standing Seam system is a wide tray roofing system roll formed on-site if necessary, in single length trays, hidden fixed to solid substrate such as plywood or timber sarking. Trays are seamed together using variety of seam and cap methods, depending on functional and aesthetical requirements.

Standing seam allows a much greater flexibility in design than any other metal cladding. Shapes can vary from the standard parallel tray to a conical tray with straight or curved sheets. It is possible (when using appropriate material) to produce complex design to enhance the profile appearance of any particular building envelope.

Standing seam is an ideal cladding for roof, façade, soffit and fascia areas. Using traditional European techniques standing seam will enhance style or type of building. Because of standing seam flexibility complex designs and shapes can be handled relatively ease, for example turrets, curved roofs and facades. It is unique system, which in combination with the designer imagination will create a lasting visual impression.

APPLICATION

Standing seam is ideal for use on new homes, reroofing, and existing buildings where a stylish versatile cladding system is desirable.

Areas of application could include:

- Roof
- Façade
- Turrets
- Domes
- Soffits
- Fascias

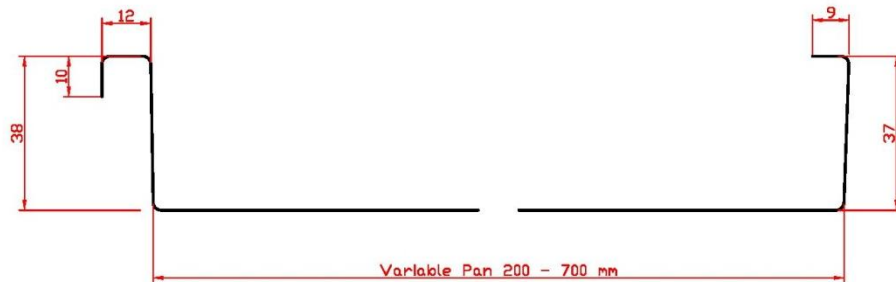
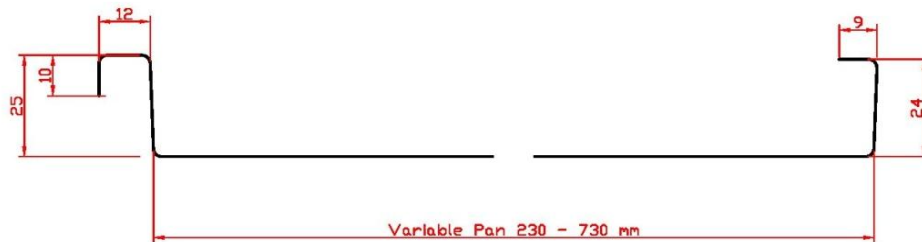
Standing seam is also ideal for creating features as :

- Chimney cladding
- Flashings
- Interior feature walls
- Pillar and column surrounds
- Gable and infill
- Gothic style homes
- Entrance canopies

SEAM OPTIONS

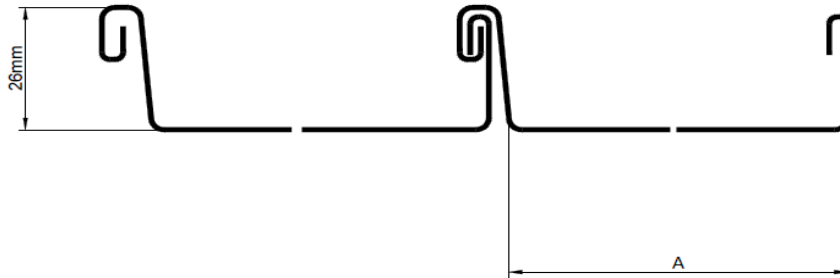
Standing seam is available in variety of profiles. We can offer four as most popular, flexible in design, cost effective for manufacture and installation.

1. ANGLE SEAM



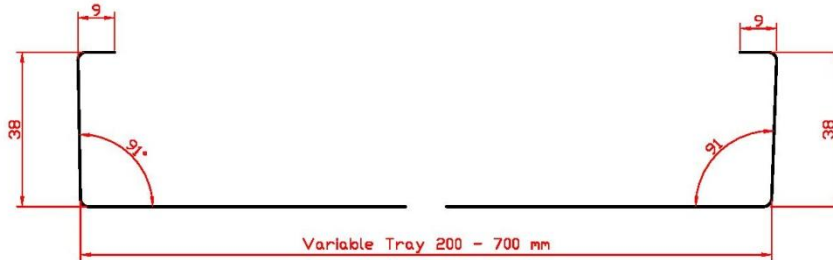
- Suitable for wall cladding and roofs with a minimum pitch of 5°
- Variable pan from 200 to 730 mm
- Choice of Seam heights – 1 inch (25.4mm) or 1 ½ inch (39 mm)
- Can be manufactured in full range of materials:
 - Copper
 - Stainless Steel
 - Titanium Zinc
 - Aluminum
 - VITOR, ZENEX or LUX

2. Double standing seam



- Suitable for wall cladding and roofs with a minimum pitch of 3°
- Variable pan A from 230 to 730 mm
- Choice of Seam heights -1 inch (25.4 mm) or 1 ½ inch (39 mm)
- Can be manufactured in following materials only:
 - Copper
 - Stainless Steel
 - Titanium Zinc

3. Roll Cap or Roll Seam



- Suitable for wall cladding and roofs with a minimum pitch of 4⁰
- Seam heights - 1 ½ inch (39 mm)
- Variable Pan size from 200 – 600 mm
- Can be manufactured in full range of materials:
 - Copper
 - Stainless Steel
 - Titanium Zinc
 - Aluminum
 - VITOR, ZENEX or LUX

Minimum pitches are dependent on factors like tray lengths, local conditions like snow zones, wind and rainfall intensities. Please consult with us for recommendations.

DIMENSIONS

A maximum tray length depends on the material used, roof pitch and local conditions.

DESIGN CONSIDERATIONS

When using standing seam consideration should be give to the following:

- Material type
- Preferred profiles
- Rib centers
- Roof shape
- Roof pitch
- Radius of curved roof
- Wind loads
- Snow and rainfall zones

SOLID SARKING

Standing seam requires either solid timber or plywood sarking for total support. We recommend plywood minimum 15 mm thick or solid timber sarking 25 mm thick, eliminating the need of purlins. Please consult with the local authorities for treatment requirements. Please note to prevent damages to your roof oil based treatments must be avoided.

UNDERLAYS

We recommend use of anti-abrasive breathable type underlay over solid sarking. Refer to the local range of products availability such as THERMAKRAFT or similar.

FIXING ON PLYWOOD OR TIMBER SARKING

Plywood or the solid timber sarking should be fixed with screws to the rafters. No nails, staples or other type of fixings should be used as consideration should be given to the possibility of nail popping. Screws should be at 150 mm spaced around the edges and 250 mm spaced on the intermediate support. Plywood should be fixed with 3mm space between the sheets to allow for expansion and 10-20 mm between the timber planks for the solid sarking allowing for ventilation.

Ventilation for the roof space is strongly recommended to avoid condensation beneath the roofing trays.

WINDLOADS

Because standing seam profile is fixed to solid sarking and it is protected from any wind loads from underneath (apart from structural) standing seam profile is only subject to wind suction load.

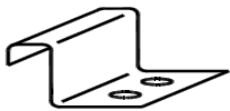
For wall cladding and high wind load areas thicker gauge materials and / or narrower tray widths should be used. We can recommend suitable materials and sizes. Please consult with us.

FIXINGS

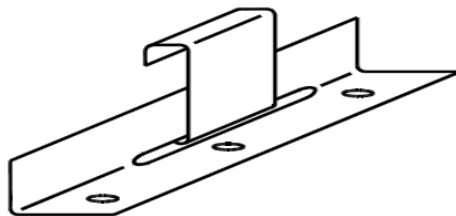
Standing seam profiles are fixed to the substrate with concealed metal clips. The clips are screwed or nailed with a special roofing nails straight into the sarking. For Angle and Double standing seam screws or nail can be used. For Roll Cap and Roll Seam are fixed with head self-drilling screws.

We recommend use of stainless steel nails only and galvanized screws due to contact with treated timber.

FIXING CLIPS



Fixed clip



Sliding clip – 2 parts



Roll cap / seam clip

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

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 ARCHTECH for advice on maximum tray lengths.

STANDARD DETAILS

A full design service is available from ARCHTECH. Please contact us!