INSTALLATION GUIDE

Eurostyle™
spanlok™
eurolok™

The following information provides a guide for the installation of the Roofing Industries Eurostyle™ spanlok™ and eurolok™ profiles when laid directly on purlins or girts / nogs, without a plywood substrate.

Roofing Industries
roof.co.nz

Eurostyle™ **spanlok™ and eurolok™**

An innovative range of standing seam wide tray roofing and cladding profiles, which have been specifically designed to attach directly to purlins and girts without the need for solid plywood support.

Available as a flat pan or with one or two swages incorporated into the pan (refer to drawings on the following pages). Note: the clip release swages beside the rib (on both sides of the pan) are permanent and cannot be removed.

Eurostyle™ spanlok™ and eurolok™ profiles are available in various material substrates and different protective coatings to suit NZ's range of exposure zones.

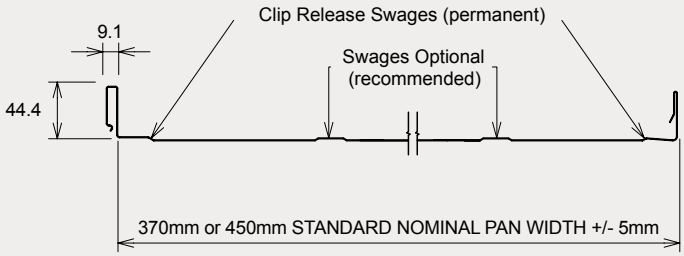
(Note: spanlok VP can also be produced in variable pan widths, subject to limitations, please contact Roofing Industries to discuss available options).

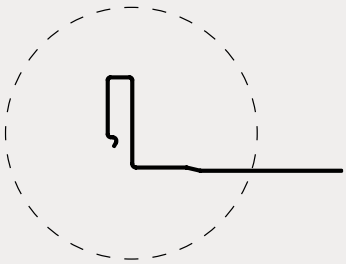
Profiles

spanlok™ (Both North and South Island)

- VP - 610mm coil Width: nominal cover – 455mm, nominal pan width – 450mm.
- VP - 525mm coil Width: nominal cover – 375mm, nominal pan width – 370mm.
- VP - 390mm coil Width: nominal cover – 235mm, nominal pan width – 230mm.
- VP - 340mm coil Width: nominal cover – 185mm, nominal pan width – 180mm.

Tolerance for the above nominal effective cover / pan width: ±5mm

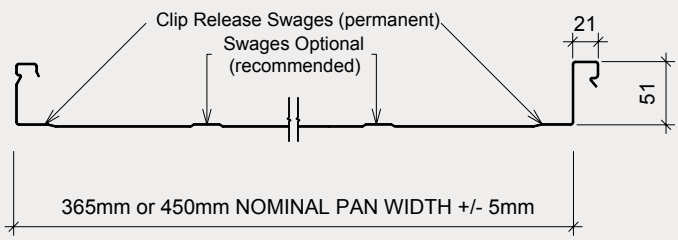


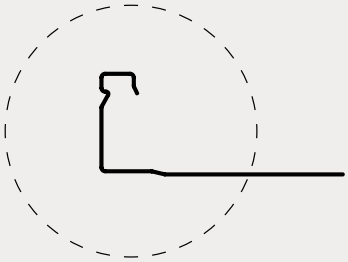


NOTE: Clip Release swage by the rib is permanent (on both sides of the pan)

eurolok™ (South Island only)

- 610mm coil Width: nominal cover – 455mm, nominal pan width – 450mm.
- 525mm coil Width: nominal cover – 370mm, nominal pan width – 365mm.





NOTE: Clip Release swage by the rib is permanent (on both sides of the pan)

The information contained here is to be read in conjunction with Roofing Industries Eurostyle™ spanlok™ and eurolok™ PT Statement (PTS) as well as the Metal Roof Manufacturers Inc (MRM) Code of Practice (COP) and MRM Installation Guide, where applicable. (Refer to references at the end of document).

Coatings

Selecting the right substrate is dependent on the environment in which the project is situated. Eurostyle™ spanlok™ and eurolok™ profiles are available in the following Pacific Coilcoaters and NZ Steel materials along with the full range of COLORCOTE® and COLORSTEEL® colours:

Steel Substrate

Base Metal Thickness (BMT): 0.55 mm

- Colorcote® Zinacore™
- Colorcote® Magnaflow™
- Colorsteel® Endura®
- Colorsteel® Maxx®

Aluminium Substrate

Base Metal Thickness (BMT): 0.90mm

(Note: Aluminium Eurostyle™ spanlok™ and eurolok™ are to be installed over a plywood substrate)

- Colorcote® Alumigard™
- Colorsteel® Altimate®
- *Ambro Euromax®

*Euromax®, from Ambro Metals, is a pre-painted aluminium material in 0.80mm BMT (for more information refer to Ambro Euromax® colours and technical information on Euromax https://www.ambrometals.com/).

Wind zones

Installation in wind zones up to high

To be installed in accordance with Roofing Industries PT Statement for Eurostyle™ spanlok™ and eurolok™.

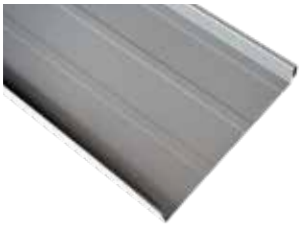
Installation of roofing industries Eurostyle™ spanlok™ and eurolok™ in very high and extra high wind zones.

In certain strong wind conditions, roof and cladding noise due to "flutter" may cause "drumming". For wind zones greater than High, Roofing Industries recommends consideration be given to the following in assisting with the mitigation of potential wind noise:

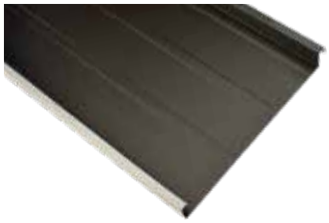
- Use Thermax B strips, 10mm maximum thickness (or packers) 25mm to 50mm wide, placed in the middle of a pan on all intermediate purlins / battens i.e. excluding the top ridge purlin (or top plate) and the bottom gutter purlin (or bottom plate) which have no Thermax B to allow for stop-ends and downturns of the pans. The Thermax B strip (or packers) will convex the middle of the sheet aiding in reducing wind flutter noise and mitigating canning.
- Reducing the purlin / battens spans to between 400 - 450mm (maximum) centres
- Including optional swages in the pan
- Moisture content is 18% or less (i.e. the maximum moisture content as specified in NZS3604 and the MRM COP)
- For purlins at maximum 450mm centres, bottom and top rows (and the periphery of the building) to be fixed every rib. To intermediate purlins in the body of the roof, the clips must be fixed to every second purlin alternating the purlins as the sheets are progressively laid across the roof.
- For wall cladding, use approved drained battens such as castellated timber batten, approved proprietary drained steel or polypropylene battens (as described above).
  A suitable separation layer is required between Eurostyle™ spanlok™ / eurolok™ and the treated timber.

  For VH and EH wind zones consider reducing the batten spacing to a maximum of 400-450mm centres, fixing all ribs to top and bottom battens and the peripheral areas, and alternating the clips to every second batten in the body of the wall, as the sheets are progressively laid across the wall. The clips are to be fixed through the drainage battens into the primary structure, unless structural drained battens are used.
- Be aware that temperature build-up of dark colours is higher than those of lighter colours and as a result darker colours will thermally expand more which can also cause roof noise and canning. Refer to the MRM COP for more information on roof noise. The MBIE document on roof cladding advises that noise from thermal expansion is normal and should be expected. Refer to MBIE - Guide to Tolerances, Materials and Workmanship in New Residential Construction.
- It is recommended on low pitch roofs to use a high fronted gutter (i.e. higher than the crest of the roofing profile) to protect the bottom edge of the roof cladding from high winds.

spanlok™
(with optional swage)



eurolok™
(with optional swage)



NOTE: in SED Wind Loads please contact Roofing Industries Technical Team for further advice.

Cavity

Roofing Industries Eurostyle™ spanlok™ and eurolok™ utilising a steel substrate can be laid directly on approved:

- Timber purlins
- Metal purlins
- Wall castellated timber battens
- Wall steel top hat battens
- Polypropylene ventilated battens (these need to be of an approved type which have sufficient strength to be able to support the clips when screwed through without deforming which could lead to distortion of the cladding sheets).

(For further information please contact Roofing Industries to discuss options).

Direct fix

Woven filament mat

When laid directly on treated timber purlins, battens or plywood a suitable separation barrier inserted between the incompatible materials is required. Alternatively, Eurostyle™ spanlok™ and eurolok™ may be installed on a fully supporting plywood structure if required.

Roofing Industries Eurostyle™ spanlok™ and eurolok™ roof cladding in an aluminium base metal, should be laid on a fully supported plywood substrate. When installing Eurostyle™ spanlok™ and eurolok™ roof cladding over a plywood substrate, drainage and ventilation between the roof sheeting and roofing underlay should be provided by using an approved woven filament mat, installed in accordance with manufacturers recommendations.

Overhangs

The maximum overhang for all Eurostyle™ spanlok™ and eurolok™ profiles is 100 mm. Point of access and expected roof traffic loads must also be considered.

The minimum recommended overhang into gutter is 50 mm.

Solar Panels

Clip-on solar panels may be installed and for the wider tray profile or a PVL laminated may be used.

Refer to the MRM COP for more information on mounting solar collectors.

Canning

Canning is the visible waviness or undulations in the flat areas of a metal roof cladding, wall cladding or wide flat panel flashings. The apparentness of these undulations can be affected by several factors such as the angle of viewing, direction and clarity of the light, sheet length, colour and temperature. In addition, the high gloss levels of brand-new sheets can highlight these undulations but with time natural weathering reduces reflectivity which in turn reduces the visible effect of canning.

The property / building owner, builder and specifier must be aware that these undulations can occur in wide pan profiles. Please note canning is aesthetic in nature only and does not affect the performance or material warranty of the cladding.

The inclusion of optional swaging may assist in reducing canning. Some paint finishes, colours and / or higher gloss levels can show more canning than others and as such lower gloss paint finishes are recommended.

Please note the MRM COP states the following in respect of canning:

> *"The use of both types of fully supported metal roof cladding without structural ribs gives rise to undulations in the wide flat pan, which are not only to be expected but an architectural feature of fully supported cladding.*
>
> *A perfectly flat metal surface cannot be obtained when using wide flat panels, and designers should be aware that fully supported roof or wall cladding will reflect light unevenly, particularly when it is new, and it will not change by increasing the thickness of the cladding."*

It is also covered in MBIE's Guide to tolerances for New Residential Construction, which states:

- Oil canning is a common occurrence with products which have standing seam or wider profiles patterns. This is not considered a defect and will become less apparent with weathering.
- Creases from secret fix clips are not considered a defect and will become less apparent with weathering.

Frame tolerance

It is important that the structure is suitable for the installation of roof / wall cladding. Particular attention should be paid to the squareness of the structure and alignment of the purlins and framing, which is required to be within acceptable tolerance.

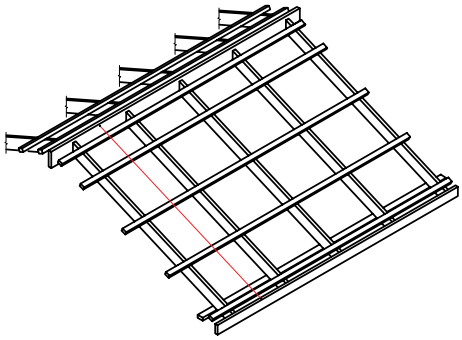
Sheets should be laid square and regularly checked to correct any misalignment. Laying out of square will result in saw-toothing of the eaves line. Saw-toothing of greater than 5 mm must be trimmed back to form a straight line.

Eurostyle™ spanlok™ and eurolok™ unsupported, requires a tighter substrate (purlins / battens) tolerance

Compared with other standard metal profile roof / wall claddings. Eurostyle™ spanlok™ and eurolok™ laid directly onto purlin / cavity battens requires alignment of the purlin / batten to be within a 5mm tolerance to mitigate purlin creasing.

For more information on fixing of clips fixing refer to the PT Statement

For sheet lengths greater than 12m for Aluminium and 18m for steel-based material, please contact Roofing Industries Technical team.



Stringline to check tolerance of substrate framing:
NOTE: Deviation of no more than 5mm

Top sheet over clip and rib

Clip over rib, has a clearance of 3mm

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