

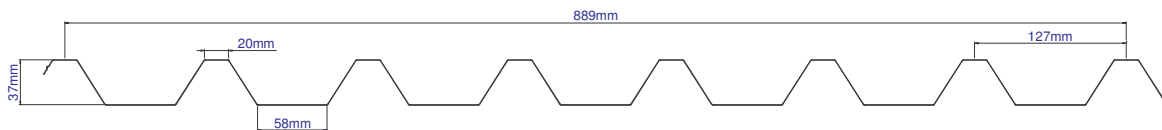


V8 - Technical Information

V8 roofing and cladding is a medium size commercial rib profile developed for mid scale buildings. V8 gives clean lines and strong looks for the classic balanced profile.

FEATURES

Dimensions



Note the dimensions shown are nominal and can vary due to material and thickness

Unique Lap Design

To prevent sheet creepage, lap collapse and uncoupling of the over and under sheet leading to potential water ingress, Calder Stewart have developed an asymmetric under leg to maximize stiffness, producing a superior interlocking design with a triple chamber anti-capillary design which allows even wind blown water to be prevented from entering the roof space.

Bold Looks

Calder Stewart have developed the classic look of this medium height profile to give a balanced good looking profile, whilst still providing medium to high purlin spacings for cost effective building applications.

Material Choice

A range of material from Galvanised, Zinalume™ coated, pre-painted steel to plain and pre-painted aluminium in a range of thicknesses can be rollformed to provide solutions for any application

Drape and Crimp Curving

V8 roofing can be drape curved to a minimum radius of 50 metres.

Curved roofs may not comply with the requirements of E2 and specific advice should be sought from Calder Stewart.

Translucent Sheeting

Translucent sheeting is available for roof or wall cladding (not crimp curving). It is available in various grades including fire retardant, heat reflective, chemical resistant and coloured sheeting. It is also available in twin sheet to provide an insulated construction.

Note translucent sheeting requires special design and spacing of support members – see Alsynite™ Website (www.alsynite.co.nz) for technical details including spanning, thermal expansion and fixing.

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website www.roofer.co.nz

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V8 Cladding

The product can be specified as reverse run this giving a stronger pan up look and should be specified as **V8Clad** when ordering. Note this is only applicable for wall cladding due to the reduced water carrying capacity.

DESIGN

New Zealand Building Code

Developed with the changes to E2/AS1, the profile provides an acceptable solution when fixed in accordance with Calder Stewart's installation specifications.

Being an asymmetric trapezoidal profile with a high water carrying capacity it is capable of being used to 3 degrees. A technical opinion is available to support its use at pitches of less than 6 degrees in snow areas.

Spanning Data

Information contained in the quick guide span tables applies to sites complying with the following criteria;

- a) The roof pitch is less than 10 degrees
- b) Overall height of the building does not exceed 10 metres.
- c) Terrain Category 3. "Terrain with numerous closely spaced obstructions having the size of domestic houses; and well developed industrial areas."
- d) The building is at least twice as wide as high.
- e) The general surrounding terrain is flat
- f) The site elevation is less than 500 metres above mean sea level.
- g) The site does not overlook sea or lakes or located on or near cliff tops, hillsides and ridges.

For limited trafficability roofs in accordance with the above:

End Span 1.2 metres, Internal Span 1.7 metres for 0.40mm steel and 0.9mm aluminium

End Span 1.8 metres, Internal Span 2.7 metres for 0.55mm steel

Note: for situations outside of the above and for comprehensive load graph and design information contact Calder Stewart Roofing:

Section Properties

Cover is 889mm

Section Inertia 121167mm⁴ (0.40mm BMT)

 159508mm⁴ (0.55mm BMT)

Mass per Metre 4.56kg/m² (0.40mm BMT)

6.18kg/m² (0.55mm BMT)

Load Span for Roofs, these may be applied to any area and are for roofs with restricted access. A restricted access roof is where there is only occasional foot traffic (ie maintenance) and that such access is limited to walking on purlins carefully across two crests. Walkways will be installed where regular access is required and "Restricted Access" signs placed at access points.

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TABLE 1 ALLOWABLE SPAN 0.55MM (G550) STEEL

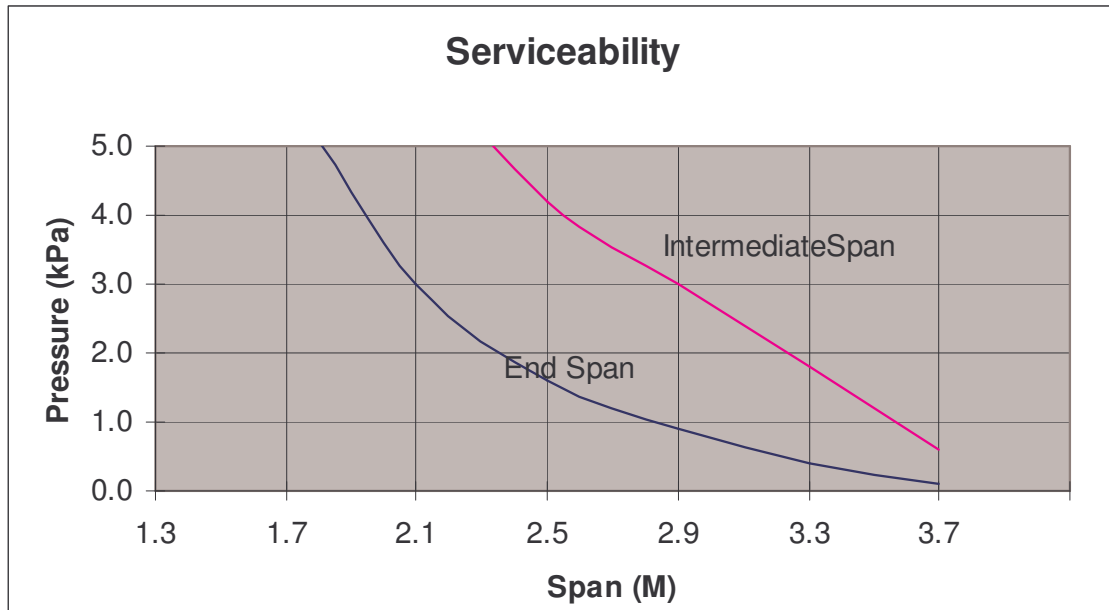
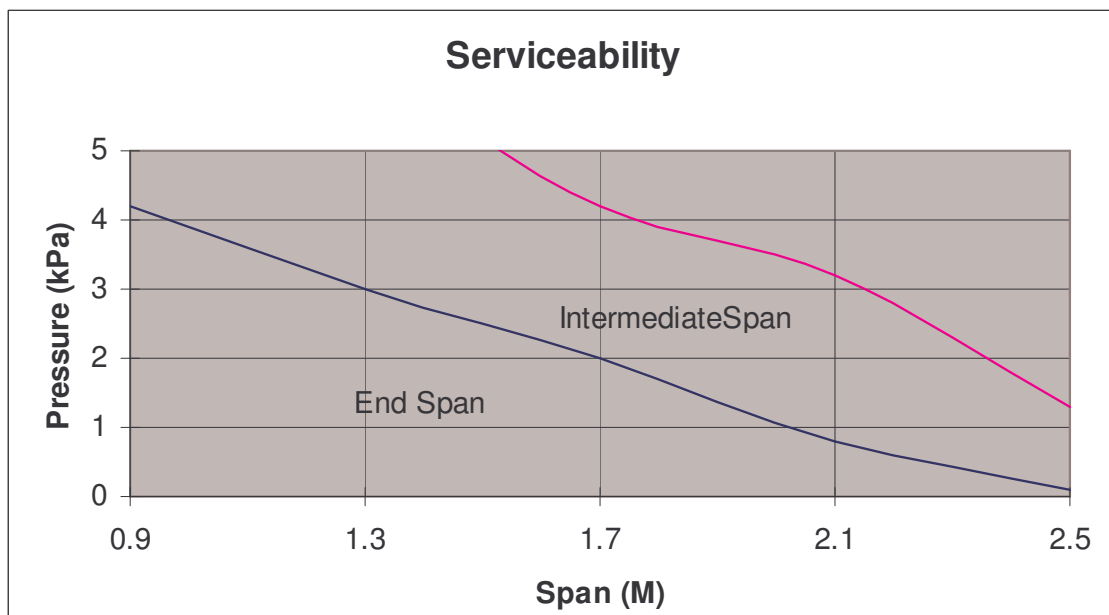


TABLE 2 ALLOWABLE SPAN 0.40MM (G550) STEEL or 0.9mm (3/4 HARD) ALUMINIUM



Durability

All materials selected and supplied by Calder Stewart Roofing are warranted to exceed the requirements of clause B.2.3 (1) of the first schedule to the Building Regulations 1992 for 15 years durability, providing the materials selected are suited to the environment and designed, detailed, and fixed in compliance with Calder Stewart Instructions, the Roofing Code of Practice and good trade practice.

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Thermal Properties

All materials expand due to heat. Steel expands 0.114mm/m and aluminium expands 0.23mm/m for every 10°C rise.

All roofing experiences solar gain and on a dark coloured roof this may result in surface temperatures in excess of 80°C, therefore for lengths over 12m all fixings should have oversized holes predrilled before fitting fasteners (see fixing table).

Lengths

V8 roofing and cladding is made to custom long run lengths. Where these exceed 16 metres, they may require special transport and handling facilities. For lengths over 24m, special Land Transport Safety Authority permission should be sought at design stage.

Handling, Storage and Installation

Inspect sheets on delivery for damage. Care must be taken to avoid damage by handling and storage. Do not drag sheets over each other and always store under cover and clear of the ground. Should sheets become wet during transportation, in storage, or on site, they must be dried on fillets or cross stacked to allow air circulation between sheets. Failure to observe this procedure will cause staining on uncoated or pre-painted material. The subsequent service life could be substantially reduced. Do not handle sheets roughly or carelessly. Long lengths of roofing must be lifted using a load spreading beam, always ensuring loads are secure before lifting and that slings do not deform edges of sheets.

For pre-painted steel and aluminium/ zinc coated products, specific attention is drawn to the installation and compatibility issues including:

1. Use of non-marking rubber soles when walking on the roof
2. Removal of ALL swarf, debris and dust from the roof to prevent staining subsequent to installation
3. Do not attempt to over paint or touch up minor scratches which have not penetrated the Zinalume substrate as these may fade differentially to the original coating
4. End laps on lengths of roofing must be sealed with a bead of neutral cure silicon sandwiched between the surfaces and held by rivets or other suitable fasteners

Installation should be carried out by a competent person ideally registered with the Roofing Association of New Zealand.

Flashings

Flashings should be designed in accordance with E2/ AS1 (Third Edition) or the Roofing Code of Practice and must be manufactured from material compatible with the roof.

Fixing

Fasteners shall be AS3566 class 4 as a minimum and Calder Stewart Roofing should be contacted where copper, zinc, stainless steel or aluminium are to be used. In addition in severe marine or industrial applications or where differential metals are involved specific comment by Calder Stewart Roofing is required.

- Spans in excess of 2 metres require mid-span screws or 4.8mm bulb type rivet

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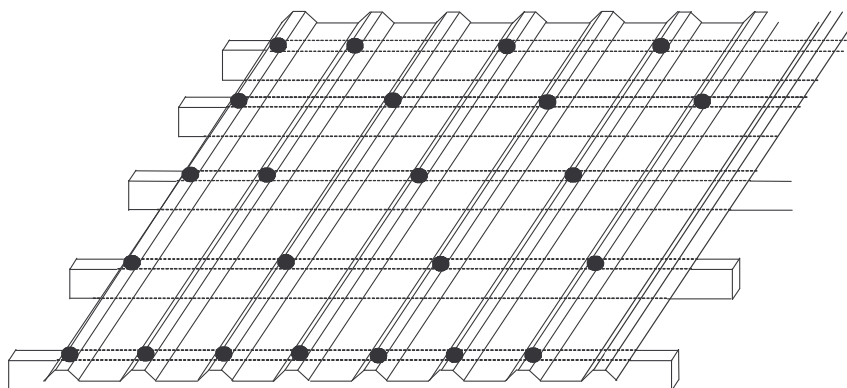
- In addition, profiled metal washers shall be fitted to these spans
- All crests to be fixed for end sheets and severe locations, alternating 2 crests plus lap for intermediates up to 1.5 metres purlin spacing (0.40mm material) and 2.0 metre purlin spacing (0.55mm material)
- Pan fixings shall be placed adjacent to the left hand rib. Where central fixing is used for aesthetic reasons purlin spacings will be reduced by 30%.

FIXING TYPE	UP TO 11M	12M TO 18M	OVER 18M
WALL CLADDING (PAN FIX) – STEEL PURLIN	12g x 20mm Steeltite fitted with neoprene washer	12g x 20mm Steeltite fitted with neoprene washer	N/A
WALL CLADDING (PAN FIX) – TIMBER PURLIN	12g x 35mm Timbertite fitted with neoprene washer	12g x 35mm Timbertite fitted with neoprene washer	N/A
ROOFING (CREST FIX) – STEEL PURLIN	12g x 55mm Steeltite fitted with neoprene washer	12g x 55mm Steeltite fitted with neoprene, 36mm EPDM and load spreading washer (pre-drill with 10mm dia hole)	12g x 55mm Steeltite fitted with neoprene, 36mm EPDM and load spreading washer (pre-drill with 10mm dia hole)
ROOFING (CREST FIX) – TIMBER PURLIN	14g x 75mm Timbertite fitted with neoprene washer	14g x 75mm Timbertite fitted with neoprene, 36mm EPDM and load spreading washer (pre-drill with 12mm dia hole)	14g x 75mm Timbertite fitted with neoprene, 36mm EPDM and load spreading washer (pre-drill with 12mm dia hole)
ROOFING CLEAR SHEET (CREST FIX) – STEEL PURLIN	14g x 55mm Steeltite fitted with neoprene, 36mm EPDM and load spreading washer(pre-drill with 14mm dia hole)	14g x 55mm Steeltite fitted with neoprene, 36mm EPDM and load spreading washer (pre-drill with 16mm dia hole)	N/A
ROOFING CLEAR SHEET (CREST FIX) – TIMBER PURLIN	14g x 75mm Timbertite fitted with neoprene, 36mm EPDM and load spreading washer(pre-drill with 14mm dia hole)	14g x 75mm Timbertite fitted with neoprene, 36mm EPDM and load spreading washer (pre-drill with 16mm dia hole)	N/A

Note: Load Spreading Washer – Hylton Parker MS900 or equivalent.

Fastener Pattern

4 fixings per sheet, fully fix periphery of building. In very high wind zone fix every crest.



MAINTENANCE

Regular maintenance is a requirement of both the material suppliers and the New Zealand Building Code and maintenance programmes should include the roof:

- Avoid the product being prolonged contact with moisture and debris.
- Regularly hose down and clean any areas showing accumulation of dirt salt other contaminants. Always use a non-abrasive brush. For moderate environments this should be carried out at least annually.
- Avoid contact with, or discharge from dissimilar metals.

Failure to observe these guidelines may result in voiding the warranty and affect the durability of the product.

DISCLAIMER

The information in this brochure is, to the best of our knowledge, correct at the time of publication. Calder Stewart Roofing reserves the right to alter the information in this brochure at any time. Product dimensions may vary from those shown and are for guidance only. Where the information required is critical, Calder Stewart Roofing should be contacted. General terms and conditions of sale are available upon request.



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