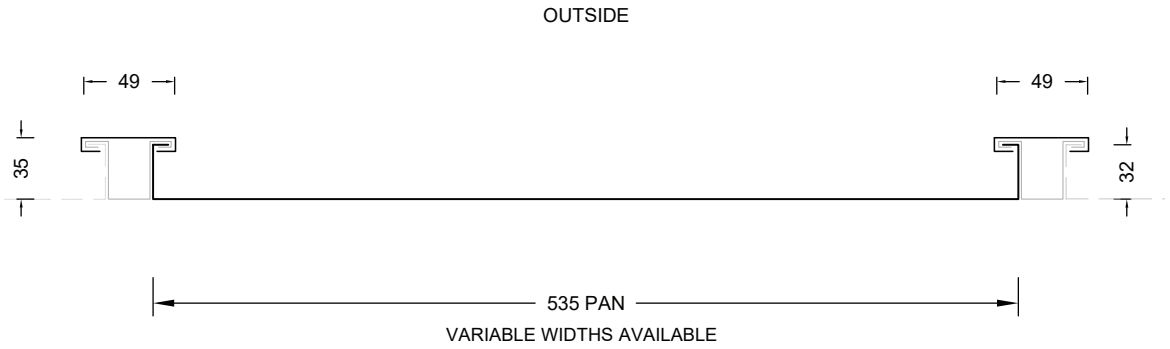
DIMOND EUROTRAY® ROLL SEAM

PRODUCT TECHNICAL STATEMENT



With shadowed elegance, this simple but stylish profile can be formed from steel-based materials as well as copper and zinc. Creating a slightly softer finish and larger effect than Eurotray® Roll Cap, Eurotray® Roll Seam can be machine curved to allow for more expensive detailing.

SHEET TOLERENCES

Cover: ± 5mm - Sheet length: +10mm, -0mm (Steel)

Cover: +10mm, -15mm – Sheet length: +0mm, -15mm (Aluminium, Copper and Zinc)

RECOMMENDED PRODUCT/DESIGN USE

- **Minimum Pitch:** 3 degrees
- **Pan (mm):** 535mm Variable is available Refer www. roofspec@dimond.co.nz
- **Applications:** Residential / Industrial / Commercial Roofing and Wall Cladding
- **Materials:** Specified coating and material based on environmental conditions in accordance with E2/AS1. Available in metallic coated and pre-painted steel in 0.55mm - Aluminium 0.90mm – Copper and Zinc 0.70mm BMT (base material thickness).
- **Material Thickness:** Steel 0.55mm, Aluminium 0.90mm and Copper, Zinc 0.70mm
- **Colours:** Available in pre-painted ColorCote® ZinaCore™, MagnaFlow™ and AlumiGard® COLORSTEEL® MAXAM™, Altimate®, UniCote® LUX Refer to www.colorcote.co.nz, www.colorsteel.co.nz, www.unicote.com.au
- **Durability:** All material selections must be compatible with the prevailing environmental conditions and adjacent materials. Areas not naturally exposed to rain will require scheduled maintenance.

ENVIRONMENTAL PRODUCT DECLARATION

Dimond Roofing® has been implementing green building principles across the industry for several years now and has developed a fully realised environmental sustainability pathway to reach our goal of reducing our carbon emissions by 30% by 2030. Dimond Roofing® has met the criteria for “Level A” certification for the Global GreenTag™ GreenRate™ ecolabel and as part of Dimond’s Toitū carbonreduce® accreditation, essential Scope 1 & 2 emissions, are being measured as well as voluntarily measuring Scope 3 emissions.

Dimond Roofing® profiles are accredited with Eco Choice Aotearoa when manufactured from COLORSTEEL®. All manufacturing sites have been Audited by NZ Steel.

Dimond Roofing® recycle all steel scrap waste and offcuts which can then be remelted down and reused in other steel-based products. At the end of its useful life as a roofing profile can be recycled back by remelted down.

NEW ZEALAND BUILDING CODE COMPLIANCE

When used in accordance with Dimond Roofing installation and maintenance requirements, facilitate with meeting the following provisions of the NZBC:

- **B1 Structure:** Performance clauses B1.3.1, B1.3.2, B1.3.3 (a) (b) (c) (g) (h), B1.3.4 (b) and (d)
- **B2 Durability:** Performance clauses B2.3.1(b) and (c)
- **C3 Fire affecting areas beyond the fire source:** Performance clauses C3.4(a) and C3.9
- **E2 External moisture:** Performance clauses E2.3.1 and E2.3.2
- **F2 Hazardous building materials:** Performance clause F2.3.1
- **G12 Water Supplies:** Performance clauses G12.3.1 and G12.3.2

To comply with the performance clauses of NZBC E2 all cladding to be installed in accordance with:

- Acceptable Solutions NZS E2/AS1 or an Acceptable Alternative Solution
- MZ Metal Roofing Manufacturers Code of Practice
- Dimond Roofing Specification; details available on www.dimond.co.nz

Dimond Roofing is not subject to any warning or ban under section 26 of the Building Act 2004.

MAINTENANCE

In general, NZ metal roofing materials exposed to rain washing can be expected to comply with NZBC B2 without manual washing, or replacement of protective finishes.

Areas not directly exposed to rain, such as soffits, wall cladding under eaves, the undersides of gutters, fascia's, and sheltered areas like garage doors, will require scheduled maintenance.

Refer to ColorCote® Minimum Maintenance Schedule and COLORSTEEL® Maintenance Recommendations Brochure.

MATERIAL CLADDING TESTING AND PREFORMANCE

All cladding testing is carried out in accordance with the NZMRM Code of Practice – Testing and MRM Standards.

Material Options	Steel G300	Aluminium H34	**VM Zinc	**Copper H/H
Thickness (BMT) mm	0.55	0.90	0.70	0.70
Nominal Weight/lineal metre (kg/m)	2.77	1.48	3.06	3.84
Drape curved – min. radius (m)	40	70	40	40
Substrate Required – Minimum Thickness 12mm	Yes	Yes	Yes	Yes
Vented Underlay	R	R	R	R
(1) Purlin spacings for curving (m)	0.600	0.600	600	600
(2) Machine curved - min. radius (mm)	2500	N/A	600	600
(3) Drip edge/grab flashing is required	Yes	Yes	Yes	Yes

**Please contact Dimond Roofing 0800 DIMOND (0800346 663) for availability

(1) Recommended maximum purlin spacings at minimum radius.
(2) Only available in BMT's 0.55mm, **0.70mm and **0.90mm
(3) Based on 1.1kN point load support, but not intended for roof access.
R – Recommended i.e. Tyvek Metal but not limited too.
N/A – Not available.

Roll-forming facility location: Auckland, Christchurch and Invercargill
Curving facility location: Invercargill - Transportable
Sheet lengths: Eurotray® Roll Seam is custom run to order
Also available to be manufactured on site.

Where long sheets are used consideration must be given to:

- Special transportation licences for sheets over 25m
- Site access for special lifting equipment
- Fixing techniques to accommodate thermal expansion.

ROOF LOAD SPAN TABLES

Clip Fixing Table NZMRM CoP 15.4.9A	
Wind Zone	Purlin Centre (mm)
Low to Very High	600
Extra High	400

PROVISION FOR EXPANSION

- Non-ferrous tray roofing expands at about twice the rate of ferrous metals, the design of the clip allows the material to move freely therefore sliding clips are not required.

FASTENERS

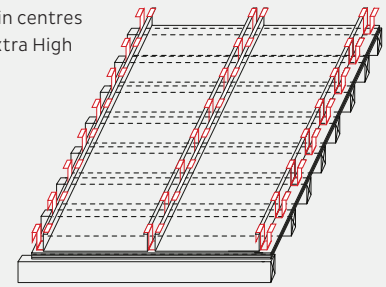
The durability of the fasteners should equal or exceed that of the material being fastened, and the fastener metal or coating must be compatible with the cladding material if in contact. Refer to NZS E2/AS1 table 20 for compatibility requirements.

The minimum embedment of 30mm is the requirement for screws fixing into timber and minimum of three threads to pass through steel. When fastening through cavity battens, thermal break materials etc ensure the length of the screw is increased to accommodate the extra material.

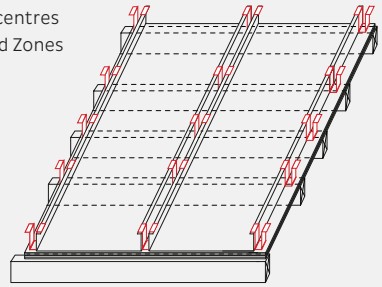
Common Fastener Lengths – Roof Cladding – 12mm Plywood Substrate (STD)				
Cladding Material	Timber Purlins (mm)	Timber Purlins with 20mm (nom.) Cavity batten	Steel Purlins up to 2.5mm (minimum 3 threads) (mm)	Steel Purlins up to 2.5mm (minimum 3 threads) (mm) With 20mm (nom.) Cavity batten
Steel	TT 12g x 55 with neo washer	TT 12g 65 with neo washer	ST 12g x 35 with neo washer	ST 12g x 35 with neo washer
Aluminium	TT 12g x 55 with neo washer	TT 12g 65 with neo washer	ST 12g x 35 with neo washer	ST 12g x 35 with neo washer
VM Zinc	TT 12g x 55 with neo washer	TT 12g 65 with neo washer	ST 12g x 35 with neo washer	ST 12g x 35 with neo washer
Copper	ST 12g x 50 304 stainless steel with neo washer	TT 12g x 65 304 stainless steel with neo washer	ST 12g x 65 304 stainless steel with neo washer	ST 12g x 50 304 stainless steel with neo washer

(1) Class 5 fasteners are recommended with steel-based material
Note: Use a minimum 75mm long driver to set the screw

400mm purlin centres
Very High/Extra High
Wind Zones



600mm purlin centres
Low - High Wind Zones



Can be installed as a wall cladding with a substrate over vented cavity battens

Common Fastener Lengths – Wall Cladding		
Cladding Material	Timber Dwangs (mm)	Steel Girts up to 2.5mm (mm)
Steel - Direct fix	N/A	N/A
Steel - On 20mm (nom.) Cavity Batten	TT 12g x 65 with neo washer	ST 12g x 55 with neo washer
Aluminium - Direct Fix	N/A	N/A
Aluminium- On 20mm (nom.) Cavity Batten	TT 12g x 65 with neo washer	ST 12g x 55 with neo washer
VM Zinc - Direct fix	N/A	N/A
VM Zinc - On 20mm (nom.) Cavity batten	TT 12g x 65 with neo washer	ST 12g x 55 with neo washer
Copper - Direct fix	N/A	N/A
Copper - On 20mm (nom.) Cavity batten	TT 12g x 65 304 stainless steel with neo washer	ST 12g x 50 304 stainless steel with neo washer

N/A – Not available
(1) Class 5 fasteners are recommended with steel-based material

DESIGN DETAILS

Design details covering residential & commercial roof & wall claddings are available at www.dimond.co.nz in PDF, DWG & RVT files under each product section.

PUBLICATIONS

To achieve the product's full potential, it must be designed, installed, and maintained in accordance with Good Trade Practice. For more information, please refer to:

NZS E2/AS1: www.building.govt.nz

NZMRM: New Zealand Metal Roofing and Wall Cladding Code of Practice – www.metalroofing.org.nz

NZMRM: Installation Guide – Metal Longrun Roofing and Cladding - www.metalroofing.org.nz

RANZ: How to Guides - www.ranz.co.nz

Pacific Coil Coaters: Choose the Right Roof www.colorcote.co.nz

Pacific Coil Coaters: Maintenance Schedule www.colorcote.co.nz

Pacific Coil Coaters: Environmental Product Declaration www.colorcote.co.nz

New Zealand Steel: Environmental Categories, Warranty & Product Maintenance Recommendations Brochure www.colorsteel.co.nz

New Zealand Steel: Maintenance Recommendations Bulletin - www.colorsteel.co.nz

New Zealand Steel: Installers Guide www.colorsteel.co.nz

UniCote LUX: Performance - www.unicote.com.au

UniCote LUX: Technical & Warranty – www.unicote.com.au

BRANZ: Good Profiled Metal Roofing and Wall Cladding - www.branz.co.nz

MBIE: Guide to tolerances, materials and workmanship in new residential construction 2015 - www.mbie.govt.nz

THERMAL NOISE

All profiled metal roofs and wall cladding can produce thermal noise from time to time. This occurs as the roof expands and contracts due to temperature changes, with darker colours potentially increasing the noise. The NZMRM Code of Practice addresses this issue.

According to the MBIE's 2015 "Guide to Tolerances, Materials, and Workmanship in New Residential Construction," noise from metal roofing's thermal expansion is considered normal and should be expected.

OIL CANNING

Differential thermal movement between wide, flat surfaces and ribs or corners within a metal sheet can create a visual effect known as oil canning. This refers to the visible waviness or undulations in the flat sections of metal cladding, roofing, or walling. Oil canning is an inherent architectural characteristic of flat metal surfaces and is not indicative of any performance issues with the product.

It may occur during the forming and installation processes, as well as throughout the roof's lifecycle due to thermal expansion. The visibility of oil canning can vary depending on lighting conditions, sun angles, and the gloss level of the coating.

For more details, please refer to Section 12.4 of the New Zealand Metal Roof and Wall Cladding Code of Practice.

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