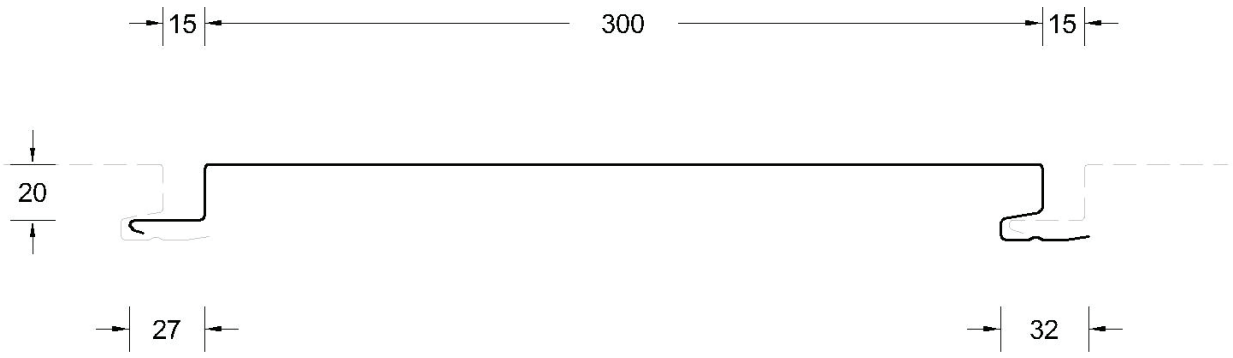
DIMONDCLAD INTERLOCK PANEL

PRODUCT TECHNICAL STATEMENT



With its clean lines, flat panels and express joints and channels, Dimondclad Interlock Panel creates a distinctive shadow effect. It's ideal for those seeking sleek, contemporary architectural façade for their home or commercial project. Dimondclad Interlock Panel cladding gives a smooth finish, hiding joints and fixings for a seamless look and feel.

SHEET TOLERENCES

Cover: 300mm ± 5mm - Sheet length: +10mm, -0mm (Steel)

Cover: 300mm +10mm, -15mm – Sheet length: +0mm, -15mm (Aluminium)

RECOMMENDED PRODUCT/DESIGN USE

- **Pan Cover (mm):** 300mm
- **Applications:** Residential / Industrial / Commercial 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 BMT (base material thickness).
- **Material Thickness:** Steel 0.55mm, Aluminium 0.90mm.
- **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	Aluminium H36
Thickness (BMT) mm	0.55	0.90
Nominal Weight/lineal metre (kg/m)	2.77	1.48
Drape curved – min. radius (m)	N/A	N/A
Substrate Required – Minimum Thickness 12mm	Extra High and SED wind zones	
(1) Purlin spacings for curving (m)	N/A	N/A
(2) Machine curved - min. radius (mm)	N/A	N/A
(3) Drip edge/grab flashing is required	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 and 0.90mm
(3) Based on 1.1kN point load support, but not intended for roof access.
N/A – Not available.

Roll-forming facility location: Auckland, Christchurch
Sheet lengths: Dimondclad Interlock Panel Standard Production maximum length is 9 metres.

WALL LOAD SPAN TABLES

DIMONDCLAD INTERLOCK PANEL LOADSPAN TABLES			
	Wall		
0.55mm End Span	800	950	950
0.55mm Internal Span	900	1100	1200
SLS Design Load (KPa)	**2.03**	**1.3**	**0.94**
0.90mm Alu End Span	800	950	950
0.90mm Alu Internal Span	900	1100	1200
SLS Design Load (KPa)	**1.7**	**1**	**0.6**

DIMONDCLAD INTERLOCK PANEL CLADDING TESTING

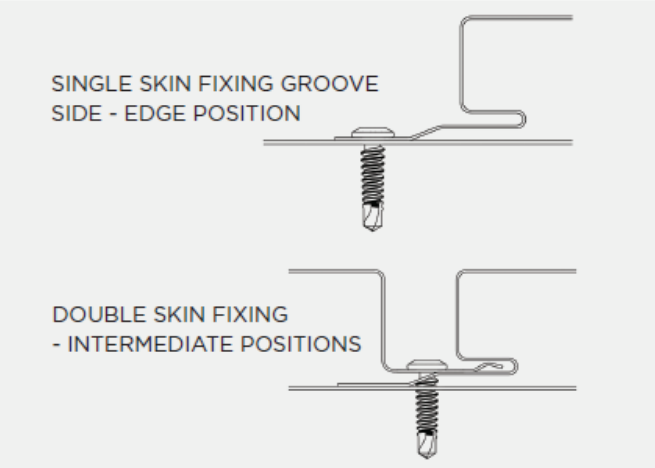
Dimondclad Interlock Panel is tested to AS15621.1:2018. The Table above shows wind pressure capacity based on the direct pressure (airbox) test method.

SPRING CURVING

Dimondclad Interlock Panel is not suitable for spring curving applications. It is important that the structure behind the Dimondclad Interlock Panel cladding is the one flat plane, so any installation distortions are reduced.

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.



NZS3604	
Wind Zone	SLS Design Load
High	1.32kPa
Medium	0.93kPa
Low	0.6kPa

NZS3604	
Wind Zone	SLS Design Load
Extra High	2.09kPa
Very High	1.72kPa

(1) 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 10g x 65 Pan head screw	ST 10g x 45 Wafer head screw
Aluminium Direct fix	N/A	N/A
Aluminium On 20mm (nom.) Cavity Batten	TT 10g x 65 Pan head screw	ST 10g x 45 Wafer head screw

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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Place of Manufacture: Aotearoa New Zealand

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Contact us

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dimond.co.nz

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