

## PRODUCT DESCRIPTION

Brownbuilt 900's strong angular ribs resist bucking, offers good resistance to foot traffic whilst maintaining an eye-catching aesthetic. Primarily used in large scale commercial buildings, BB900 also creates a good looking wall cladding. When inverted BB900 Reverse Run can be used as a horizontal or vertical wall cladding offering wide ribs with narrow pans; enhancing the design of your project.

## DESIGN GUIDELINES

### Recommend use when:

- Roof pitch is 3° and above
- Max purlin spacing does not exceed the wind uplift load from the BB900 load span charts
- Specify coating on steel to match the environment
- Can be used as wall cladding either vertically or horizontally with a capillary groove
- Specify fixing type and length to be used with the correct purlin material
- Ensure there is an allowance for thermal expansion on sheet lengths above 20m
- Can be installed on top of cavibat ventilation batten

## BUILDING CODE COMPLIANCE

The product will, if employed in accordance with the supplier's installation and maintenance requirements, assist with meeting the following provisions of the building code for a period of 15 years:

- Clause B2 Durability: Performance B2.3.1
- Clause C3 Fire affecting areas beyond the fire source: Buildings C3.3
- Clause E2 External moisture: Performance E2.3.1, E2.3.2
- Clause F2 Hazardous building materials: Performance F2.3.1

## EVIDENCE MEETS NZBC

Test information available from Pacific Coilcoaters and New Zealand Steel, and past history of use of long run metal roofing and cladding products in New Zealand indicate that, provided the product use and maintenance is in line with the guidelines contained in the current literature referenced, Dimond® Roofing long run metal roofing & wall cladding systems can be expected to meet the performance criteria in clause B2, C3, E2, and F2 of the New Zealand Building Code, for a period of not less than 15 years.

## SUPPORTING EVIDENCE

The product has and can make available the following additional evidence to support the above statements:



NZ Metal Roofing Manufacturers Association Inc. (NZMRM)  
[Code of Practice](#)



## ENVIRONMENTAL

Manufactured from coated steel produced by New Zealand Steel at Glenbrook from Ironsand mined off North Island's West coast and Zinalume<sup>®</sup> coated.

COLOURSTEEL<sup>®</sup> is factory painted at New Zealand Steel, Glenbrook or if its ColorCote<sup>®</sup> its painted at Pacific Coilcoaters Penrose. ColorCote<sup>®</sup> MagnaFlow<sup>™</sup> base coated steel and coating is imported from Asia, but painted at Pacific Coilcoaters in Penrose. Both NZ sites operate within strict environmental controls and recycle cleaning and washing water and control that is exhausted into the environment.

Dimond<sup>®</sup> 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.

Aluminium is imported from overseas and painted at New Zealand at Pacific Coilcoaters.

Duraclad<sup>®</sup> is manufactured in Auckland under tight environmental controls.

## COATINGS & CLASSES

Manufactured using different paint coatings available from New Zealand Steel or Pacific Coilcoaters depending on the durability required for the environment the roof or wall will be installed in, in accordance with AS/NZS 2728. As a guide for areas 1m to 50m of breaking surf, use ColorCote<sup>®</sup> AlumiGard<sup>™</sup> or plain unpainted aluminium. Sites within 50m to 100m of breaking surf COLOURSTEEL<sup>®</sup> MAXX<sup>®</sup> can be used, then at 100 m (Category 4) ColorCote<sup>®</sup> MagnaFlow<sup>™</sup> (ZM8) can be used, beyond 200m (Category 3) then ColorCote<sup>®</sup> ZinaCore<sup>™</sup> (ZR8) or COLOURSTEEL<sup>®</sup> ENDURA<sup>®</sup> and beyond can use Zinalume<sup>®</sup>.

Refer to environmental literature available from Pacific Coilcoaters or New Zealand Steel or contact Dimond<sup>®</sup> Roofing on 0800 766 377.

Duraclad<sup>®</sup> is recommended for use in special areas such as fertiliser works or very severe marine.

## SPANS

Product	Material	Thickness BMT (mm)	Roofing Max. Span End Span (m)*	Roofing Max. Span Internal (m)*	Walls Max. Span End Span (m)	Walls Max. Span Internal (m)
BB900 (min. pitch 3°)	Steel (G550)	0.40	1.50	2.20	1.90	2.90
		0.55	2.30	3.40	2.70	4.10
		0.75	2.70	4.00	N/A	N/A
	Aluminium (H36)	0.70	1.10	1.70	1.60	2.40
		0.90	1.90	2.80	2.20	3.30
Duraclad <sup>®</sup> (GRP)	1.70	0.80	1.20	1.40	2.00	

GRP = Glass reinforced Plastic.

Spans for roofing where the maximum serviceability wind uplift load does not exceed 1.5 kPa or under foot traffic is suitable for Restricted Access  
Spans for walls are limited by an acceptable appearance or a serviceability wind uplift load of 1.0 kPa.

\*For more information, please refer to Dimond Roofing website <http://www.dimond.co.nz/products/brownbuilt-900>

## FIXINGS

Purlin Material	Screw Fastener			
	Roofing Rib		Wall Cladding Plan	
	Screw Length* (mm)	Designation (gauge-TPI x length mm)	Screw Length* (mm)	Designation (gauge-TPI x length mm)
Timber	75	T17 - 14g - 10 x 75	50	Roofzip M6 x 50 HG-Z4
Steel	65	Tek - 14g - 10 x 65 Tek - 12g - 14 x 68	20	Tek - 12g - 14 x 20

\*If sarking, cavity batten or insulation is used over the purlins or for wall cladding fixed through a cavity batten, into the stud, the screw length will need to be increased by at least the sarking, insulation or cavity batten thickness.

## FIXINGS CONT.

The Limit State Load/Span Capacity Chart is based on 6 screw fasteners/sheet/purlin without the use of load spreading washers (except for Duraclad® material, which must be fitted with profiled metal washers and 36mm EPDM seals).

Where screws are used without load spreading washers, the profile's load span ability is reduced by 60%.

Spans may require the specification and use of side lap stitching screws.

Materials	Thickness (mm)	Maximum Side Lap Fastener Spacing (mm)
Steel	0.40	1500
	0.55	2000
	0.75	2400
Aluminium	0.70	1500
	0.90	2000
Duraclad® (GRP) Rib height greater than 30mm	1.70	1000

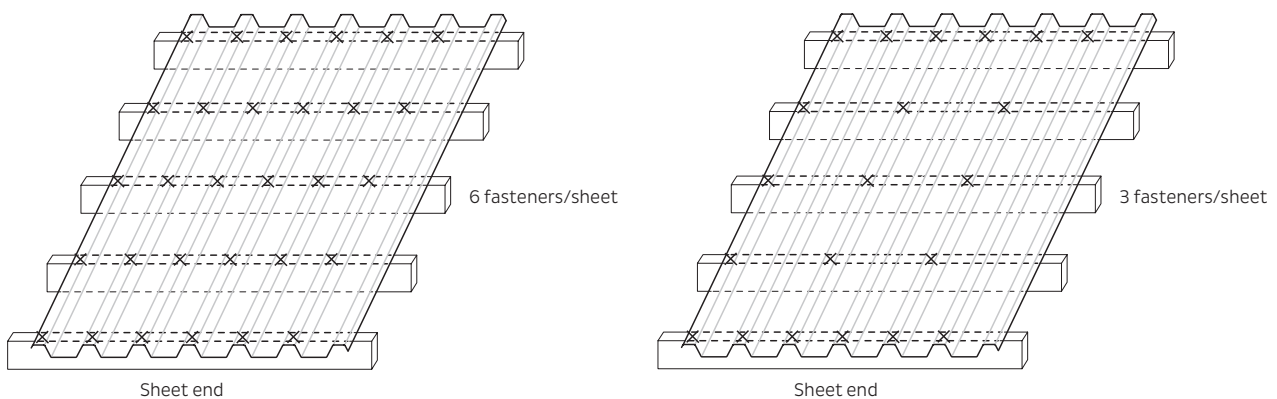
We recommended side-lap fasteners for stitching sheets together are:

### Metal Sheeting

10 - 16 x 16mm	Hex head	Tek screws
10 - 12 x 20mm	Hex head	Type 17 screws

## INSTALLATION REQUIREMENTS

### Brownbuilt 900 Fastener Layout Options



Can be installed over plastic cavibat battens.

For more information, please refer to Dimond® Roofing website:

<http://www.dimond.co.nz/products/brownbuilt-900>

## SPECIAL CONDITIONS

Manufactured in Auckland.

When used as wall cladding a Capillary groove is formed in underlap edge to reduce risk of side lap leakage.