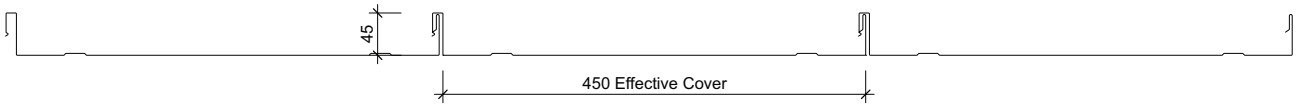
DIMOND HERITAGE TRAY® PROFILE INFORMATION



**Photovoltaic Laminate please refer to note

Cover (mm)	450
Sheet width (mm)	465
Minimum Pitch	3° (approx. 1:20)

All dimensions given are nominal

Sheet Tolerances

Sheet width: ±5mm
Sheet width for aluminium +0, -15mm. If sheet cover widths are critical, advise Dimond® Roofing at time of order.
Sheet length: +10, - 0mm. For horizontal wall cladding where notified at time of order of intended use, tighter tolerances can be achieved +3, -0.

Material Options	Steel	Aluminium
Thickness (BMT) mm	0.55	0.90
Nominal weight/lineal metre (kg/m)	2.77	1.48
Drape curved roof - min. radius (m)	n/a	n/a
Machine curved - roof min. radius (mm)	No	No
Swages in profile pans required (all Wind Zones)	Yes	Yes
Substrate required	No	No
Vented underlay required* (e.g. Tyvek Metal)	Yes	Yes
Use in SED (Specific Engineering Design) Wind Zones	No	No
Drip edge flashing required (see detail het 4130 - 4131)	Yes	Yes

***Vented underlay laid full cover over purlins or in continuous 75mm wide strips (used in conjunction with standard underlay laid full cover) over purlins is required in all High, Very High and Extra High Wind Zones, except when used as the top sheet for the Tricore® system or in conjunction with the NC Wall Batten in all Wind Zones, where 8mm thick x 75mm wide x 350mm long foam strip (centred between clips) is adhered atop the Dimond Galvanised Roof Rail or to the outside face of the NC Wall Batten.**

Roll-forming facilities at: Auckland, Christchurch and Invercargill

Curving facilities: n/a

Sheet lengths: Heritage Tray® is custom run to order. Where long sheets are used, consideration must be given to:

- Special transportation licences
- Should be run on-site
- Site access for special lifting equipment
- Fixing techniques to accommodate thermal expansion

This roofing system is to be installed by RoofingSmiths or a Dimond Recommended Installer.

**NOTE
Photovoltaic laminates (PVL's) can be installed on to this profile at an additional cost when the cladding is completed and other trade have finished or it can be installed at a later date.
Laminates are 348mm wide and available in 5.910mm and 2.585mm lengths. Lead time of 16 weeks
Laminates cannot be installed on raking sections of roofs
Consult with Dimond® Roofing 0800 Dimond (0800 346 663) for further information

The Dimond Roofing Heritage Tray profile is only available in a fixed cover width, and cannot be manually folded. When the profile is used as wall cladding, careful attention is required to sheet set-out and sheet width tolerances to ensure the sheet modules align to wall openings.

SOUND REVERBERATION: Extreme wind events may cause sound reverberation of Heritage Tray pans. It does not cause detriment to product performance.

OIL CANNING: Oil Canning is the visible waviness in the flat areas of metal roofing and walling. Oil canning produces an aesthetic effect inherent in standing seam tray profiles and profiles/flashings with wide flat elements. It does not cause detriment to product performance.

Oil canning can occur during the forming and installation processes and during thermal expansion of the roof sheeting during its life cycle. The effect can be more or less pronounced depending on **differing light and sun angle conditions and the coating gloss levels.**

For Heritage Tray, oil canning can be reduced by the vented roof underlay (e.g. Tyvek Metal), in addition backer rods under the tray can also be used. There are several options to reduce the oil canning effect in tray type profiles and flashings, for example, a) increasing the thickness of the material, b) using stiffening swages in wide flat elements and c) limiting flat elements to less than 150mm width. For further information, please refer to the New Zealand Metal Roof and Wall Cladding Code of Practice, Section 12.3.

Dimond Roofing

HERITAGE TRAY® LIMIT STATE LOAD/SPAN CAPACITY CHART

(span in mm, distributed ultimate load in kPa)

Serviceability Category

		Unrestricted-Access Roof		Wall	
		Fix clip to every purlin	Fix clip to every second purlin	Fix clip to every purlin	Fix clip to every second purlin
G300 Steel 0.55mm	End Span (mm)	500	500	600	600
	Internal Span (mm)	500	500	800	800
	Ultimate (kPa)	4.7	3.9	3.5	3.1
5052, H34 Aluminium 0.90mm	End Span (mm)	500	500	600	600
	Internal Span (mm)	500	500	800	800
	Ultimate (kPa)	2.8	2.2	2.0	1.8

Notes

1. Category 1 maximum spans are based on static point load testing as a guide, and further limited by practical experience of roof performance under dynamic foot traffic loads. Category 3 maximum spans are limited as a guide to achieving satisfactory appearance for wall cladding.Loads given are based on 4 screw fasteners/sheet/purlin.
2. Loads given are based on 1 clip per purlin, and alternative (second) purlin clipping, i.e. hit 1, miss 1. Clips are required to be fitted to all end and valley purlins, under any situation.
3. Loads given are limited to a maximum of 4.7kPa. If design requirements exceed this limit, Contact Dimond® Roofing for specific advice.N/R = not recommended.
4. End span capacities given in this table are based on the end span being the same as the internal span.
5. **Design Criteria for Limit State Capacities**

   a) Ultimate Limit State
   No pull through of fixings or fasteners withdrawal resulting in sheet detachment due to wind up-lift (outward) loads.
6. **System Design**
   The span capacity of Heritage Tray® is determined from the Heritage Tray® Limit State Load/Capacity Chart using the section of the chart appropriate to grade and type of material, and to the category of serviceability selected from the two categories below. It is recommended that to obtain a dependable design strength capacity for the ultimate limit state, a reduction factor of Ø = 0.8 is applied.

   The capacities given do not apply for cyclone wind conditions.

   Serviceability Requirements
   While these categories are given for design guidance to meet the serviceability limit state criteria, foot traffic point load damage may still occur if there is careless placement of these point loads.

Service Category	Description
1. Unrestricted-access roof	Expected regular foot traffic to access the roof for maintenance work and able to walk anywhere on the roof. No congregation of foot traffic expected.
7. **Wind Pressure Guide**
   As a guide for non-specific design the following S.L.S. design loads in accordance with the MRM Roofing Code of Practice can be used for buildings less than 10m high, otherwise AS/NZS 1170.2 should be used

   Low wind zone = 0.68kPa, Medium wind zone = 0.93kPa, High wind zone = 1.32kPa, Very high wind zone = 1.72kPa and Extra high wind zone = 2.09kPa.

Heritage Tray® Design

Fasteners that are used to secure Heritage Tray® clip down as a roof cladding must penetrate into the purlin a minimum of 30mm for timber and 6mm for steel purlins. For wall cladding the clip fasteners must be long enough to pass through the substrate, cavity batten and into the main frame by 30mm for timber and 6mm for steel.

Galvanised Clip Fixing Requirement 2 fixings per clip				
Purlin or frame material	Roof		Wall (over vented cavity batten, 18 - 25mm thick)	
	Base material		Base material	
	Steel	Aluminium	Steel	Aluminium
Timber	Class 4 10g x 45mm wafer head	Class 4 10g x 45mm wafer head	Class 4 10g x 65mm wafer head	Class 4 10g x 45mm wafer head
Steel	Class 4 10g x 25mm #2sq/drive wingtec	Stainless steel 10g x 25mm #2sq/drive wingtec	Class 4 10g x 40mm #2sq/drive wingtec	Stainless steel 10g x 25mm #2sq/drive wingtec

Design

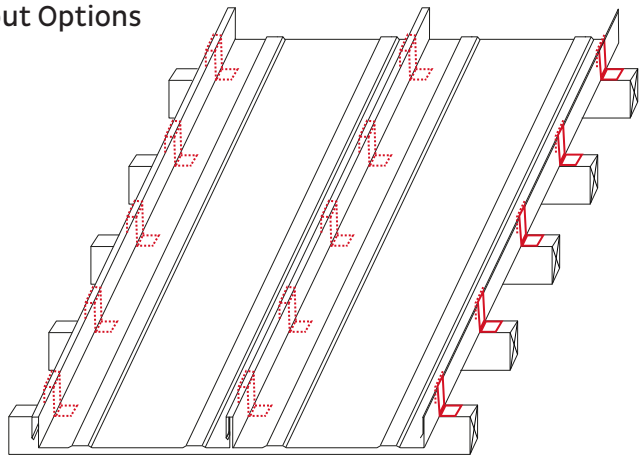
Clip fasteners must be fixed closer together on the periphery edges of all roofs in areas of High to Extra High Wind Zones.

Heritage Tray is not suitable for use in SED (Specific Engineering Design) Wind Zones.

Minimum pitch for Heritage Tray is 3 degrees.

Heritage Tray® Fastener Layout Options

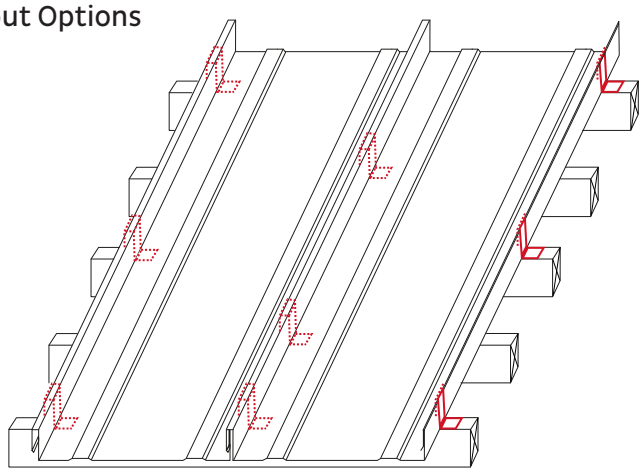
Fix all clipping
500mm purlin centres
Very High/Extra High Wind Zones



Sheet end

Heritage Tray® Fastener Layout Options

Alternate clipping
500mm purlin centres
Low - High Wind Zones



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