



**architectural**  
**CLADDING**  
AUSTRALIA PTY LTD



**Introduction to Aluminium and Innovative Profiles**

Architectural Cladding Australia has long been associated with Non-Ferrous Metals, Titanium Zinc and Copper in the Australian building industry. Our unprecedented experience in this field have prompted us to look globally for alternative Non-Ferrous materials, to assist the architect and developer achieving budget constraints while retaining a quality finish.

Years of research have allowed Architectural Cladding Australia to introduce and offer an optimum grade of Pre-painted Aluminium for roofing and cladding, with superior European quality, which is available in Silver Grey and Satin Black. Customised nonstandard colours are available subject to quantity.



## Efficiency of Aluminium

Aluminium has a built in corrosion resistance where it can stand unprotected in the most aggressive of elements. Being both durable and versatile the unique properties of Aluminium ensure that it is age resistant and nonsensitive to UV rays while still reflecting heat.

With exceptional spanning capabilities, durability, corrosion resistance and recyclability, it has become an essential product for the building industry in Australia. With little or no maintenance required Aluminium retains its high residual value and provides a low cost solution over the life of the building.



## Performance

In regards to performance under fire, aluminium sheeting is non-combustible and non-flammable. Due to its low melting point of (640 degrees) aluminium self-venting occurs directing heat into the atmosphere, resulting in localised damage.

Aluminium sheeting has a natural noncorrosive resistance and a higher resistance to denting than other metals due to its greater energy absorption properties and greater strength.

Aluminium will not shatter or rupture when hit by hailstones as it absorbs the impact of the object thereby minimising physical damage and maintaining water tightness. Due to its high electrical conductivity, if the roof is correctly earthed, aluminium offers protection from electrical storms. When aluminium is exposed to air/water a hard oxide film will form to protect against any atmospheric conditions and effectively stifles the rate of further attack.



## Thermal Reflectivity

Aluminium has a thermal conductivity four times that of steel and therefore heat is conducted away from aluminium faster resulting in a cooler surface (the use of light colours on painted roofs will help reduce the thermal absorbency of up to 30° between light and dark coatings.) Aluminium is recognised as the best reflector of thermal heat, ultraviolet rays and electro magnetic waves.

The co-efficient of expansion of aluminium roofing sheeting is 2.4mm per metre at 100°C. Which is approximately 1 mm/linear metre over 40 degree temperature changes, this is approximately double that of steel.



## Environmentally Friendly

Only 5% of original energy used to produce aluminium is needed for recycling. Aluminium can be recycled for generations without limitations and is the third most commonly occurring element in the earth's crust.

The European manufacturers of Architectural Cladding Australia's Aluminium utilise mostly hydroelectric power supply resulting in a neutral carbon footprint.

# Roofing & Cladding Profiles

Architectural Cladding Australia provides three classic profiles to complement your next roofing or cladding project. From the traditional Standing Seam and Heritage Corrugated 18mm roofing profiles to the new CLIPTRAY 25mm Roofing and Facade profile.

With a host of cladding options from the classic Cassette panel to the contemporary ACA Express Panel, Architectural Cladding Australia have the solution for your next project. All Architectural Cladding Australia profiles are available in Titanium Zinc, Copper and Aluminium. In addition to their specialist profiles they also manufacture composite cladding in Titanium Zinc and Aluminium.

## ACA CLIPTRAY 25mm The Latest Champion in the Stable of Profiles (Recommended for Roofing and Cladding Installations)

Cliptray 25mm system is designed specifically to compliment the durable and cost effective properties of aluminium whilst providing building designers with an opportunity to develop innovative angular roof shapes allowing roofs to become the aesthetic feature of a building.

Cliptray 25mm extreme resistance to wind uplift and excellent thermal properties are a few of the key benefits of this superior weather proof roofing solution.

The lightweight of aluminium, combined with Cliptray's highly efficient installation method, achieve's continuous lengths up to 12m for roofing and 4m for cladding.

(for excessive lengths contact supplier)



### Key Features

- Roll formed concealed fix roofing & cladding system
- Traditional European 'Standing Seam' appearance
- Ribs are 25mm high & pans can be varied
- To achieve a smooth finish a maximum pan width of 490mm for roofing & cladding is recommended
- Varying pan widths for vertical & horizontal applications
- A maximum length of 12m is recommended due to the length of the pre-slotted fixing points and the thermal properties of the material (2.4mm per meter at 100°C)
- Sheets are installed onto a continuous ventilated support such as plywood 19mm for roofing & 15mm for cladding applications
- Material thickness 0.7mm

### Material: (SPECIFICATION IN ALUMINIUM)

Aluminium Alloy 5754 H42 0.7mm thickness with factory applied PVDF paint finish comprising 3 layers of paint with clear coat giving a total thickness of 32 micron. Protected with a 75micron removable PE film to painted surface. Theoretical mass: 2.71 kg/m<sup>3</sup>

### Testing: ACA ClipTray 25 mm has been tested in accordance with:

1. Australian Standard AS 4040.2-1992 "Method of testing sheet roof and wall cladding for non-cyclonic regions" and has been found capable of withstanding wind pressure of 8.5kPa.
2. AS 4040.3-1992 "Method of testing roof sheet and wall cladding, method 3- Resistance to Wind Pressure for Cyclonic Conditions.
3. AS/NZ 1170.2:2002 Structural design action- Debris Impact Test

(At the time of writing ACA is the only Australian Manufacturer to have carried out the above tests on their Non Ferrous range of Products.)

## TRADITIONAL STANDING SEAM 25mm DOUBLE LOCK (Recommended for Roofing and Cladding Installations)

The Double Lock Standing Seam system is a roof and facade covering system. The traditional design offers architects freedom in their design as it can adapt and complement almost any roof shape.

By forming a double fold on the up-stands, the Standing Seam profile allows long strips of profiled metal to be assembled creating distinctive shadowline effect. The Standing Seam sheets are laid on continuous ventilated decking and anchored using fixed or sliding concealed fixing clips.

The low height of the seams (25mm) contributes to the agility and uniformity of the roof. When dealing with more complex designs this system portrays a more technologically advanced appearance.

This system is particularly suitable for very large cladding surfaces and for structures located in regions of harsh climate, which are often subject to snowfall (mountainous or continental climate), strong winds, and heavy rain.



### Key Features

- Standard panel widths are a maximum of 530mm
- Perfect for both renovations, new residential & commercial buildings
- Ease of installation with the use of seaming machines, significantly reduces installation time
- Optimum water & wind resistance performance
- Pitch options from 3° to a vertical installation
- Installed on minimum 19mm ventilated plywood with waterproof breathable vapour membranes
- Material thickness 0.7mm

## ACA EXPRESS-PANEL 25mm (Recommended for Wall Cladding and Soffit Lining)

ACA Express-Panel 25mm is a clean, modern concealed- fix cladding systems with an attractive recess or express joint between panels.

The contemporary sleek profile of the ACA Express-Panel ensures it is the perfect choice to complement any building. Providing flexibility in design the express joints can be adjusted to suit the application and design of the project.

### Key Features

- Standard panel widths are - 200mm, 250mm or 300mm
- Can also be manufactured in various widths, giving a modern random effect
- The design option of staggered joints or splayed applications is available
- The express joints can be adjusted from 5mm to 30mm
- Perfect when a long flat appearance is required
- Due to the design this panel is in essence a rain screen & requires diligent installation (see installation)
- Maximum length of 6m is recommended due to the length of the pre-slotted fixing points & the thermal properties of the material (2.4mm per meter at 100°C)
- The Top Hat Substructure (1.15mm subject to engineering) should be fixed at a maximum of 600mm centres - subject to wind loading
- Material thickness 0.9mm



**Material:** Specification for Aluminium Alloy 5754 H42 0.9mm thickness with factory applied PVDF paint finish comprising 3 layers of paint with clear coat with a total thickness of 32 micron. Protected with a 75 micron removable PE film to painted surface. Theoretical mass: 2.71 kg/m<sup>3</sup>

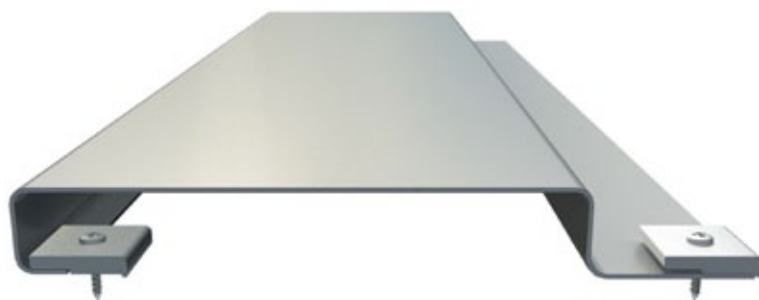
**Testing:** The product has been tested in accordance with: Australian Standard AS 4040.2-1992 "Method of testing sheet roof and wall cladding for non-cyclonic regions" and has been found capable of withstanding wind pressure of 7 Kpa.

Internal bracing and substructure spacing at the design stage will be required to achieve higher wind loadings. For further information kindly contact us.

## CASSETTE PANEL (Recommended for Cladding)

The Cassette Panel is an external cladding system. This versatile open jointed system is based on the Rain-screen principle. It is suitable for horizontal or vertical application on low to high-rise buildings, for both new and refurbishment projects.

The cassettes are bent and fixed with invisible clips to a steel framework, which is secured to the load bearing structure. The Cassette system offers an innovative facade solution that provides a modern and flat appearance.



### Key Features

- Perfect for new construction or renovations
- Can be applied on vertical walls (slope of 90°) & soffits
- According to the configuration of the system the Cassette Panel is suited to all wind zones
- The Cassette Panel can also be manufactured in Corten 1.6mm thick & in aluminium 1.2mm

**Cassette Dimensions**

Visible Height (joint excluded)	Visible Length (joint excluded)
220 to 600 mm	200 - 4000 mm
601 to 700 mm	200 - 3000 mm
701 to 875 mm	200 - 2000 mm*



## FLATLOCK PANEL (Recommended for Cladding)

Flat Lock Panels often referred as the Ship-Lap Panel offers a simple yet elegant cladding solution that provides a longitudinal flat seam. The system uses a simple interlocking fold on all four sides and can be installed either horizontally or vertically.

This solution is suitable for all buildings up to 30m in height, subject to wind loading. The pre-formed panels are easy to install.



### Key Features

- Perfect for new construction or renovation projects in a horizontal or vertical installation method
- For buildings higher than 30m, material must be tested for wind loads
- Maximum length of 3m
- Ideal for curved facades, horizontal panels can go to a radius  $\geq 10m$  and vertical panels a radius  $\geq 3m$
- The maximum recommended Centre-to-Centre Panel dimensions are 360mm
- Sheets are installed onto a continuous ventilated support such as plywood 19mm for roofing & 15mm for cladding applications
- Material thickness 0.7mm

## TRADITIONAL STANDING SEAM SINGLE LOCK (Recommended for Cladding)

Single lock standing seam system is used for façade application. It has a taut and regular appearance. The procedure consists of welting the sheets to one another, along their entire length by single folding the panel's side upstands together.



### Key Features

- Standard panel widths are a maximum of 530mm
- Perfect for both renovations & new buildings
- Can achieve lengths of up to 4m vertically
- The system can be installed either horizontally or vertically
- Installed on minimum 15mm ventilated plywood with water proof, breathable, vapour membranes
- Pitch can be applied from 60° to 90°
- The recommended Centre-to-Centre Panel dimensions are 430mm
- 0.7mm to 0.8mm in thickness

## DECORATIVE SPECIALISED PRODUCTS

Architectural Cladding Australia have a reputation of thinking "outside the square." These pressed designs are in flat sheet and then manufactured into any of the specialist profiles e.g. Cliptray 25mm and ACA Express Panel 25mm etc.

The Batten Panel is a Cladding Panel created as an alternative to the contemporary timber batten cladding. These innovative ideas have become most popular with designers who are looking for the WOW factor.

### Key Features

- Perforated Heritage Corrugated 18mm is available rollformed from Aluminium & Titanium Zinc
- Perforated Flat Sheets are also available in Corten, Titanium Zinc & Aluminium
- Popular for sun screens, giving one the protection from the sun as well as privacy
- The customized panels (e.g Custom Batten) can be developed to suit specific project requirements
- Pressed panels are available in Basket Weave, Golf & Aqua designs

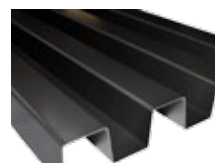
BASKET WEAVE



CUSTOM BATTEN

GOLF

AQUA



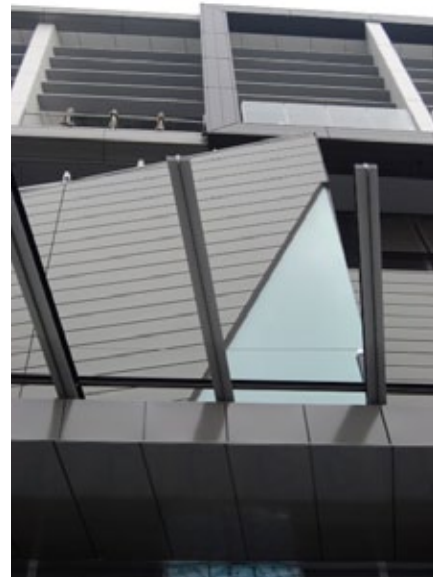
# Installation Instructions

Architectural Cladding Australia's experienced team are always on hand to provide technical support to the design team.

Installations of the Architectural Cladding Australia's profiles are to be carried out by a duly authorised and trained installer. Installation details are available on request. All fixings to be concealed and tolerance for material thermal movement must be allowed for during installation.

Architectural Cladding Australia further recommend installing a waterproof, breathable, vapour membrane between the cladding and the timber support. This will allow for the plywood to breathe and offer a second line of defence against moisture ingress.

Flashings and accessories associated with the installation are available from Architectural Cladding Australia and must be fixed in accordance with the traditional concealed method allowing for thermal expansion.



## Skilled Installers

For skilled installers or for more information regarding becoming an Architectural Cladding Australia's accredited installer please contact Architectural Cladding Australia.

## Contact Us

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All efforts have been made to ensure information is as accurate as possible. Please do not hesitate to contact Architectural Cladding Australia if you have any queries.