



TECHNICAL MANUAL

ULTRALIGN Extruded Aluminium Cladding & Battens*

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1.1 About This Manual:

This manual has been developed to effectively assist fabricators and contractors to work with ULTRALIGN. Due to the uncontrollable conditions onsite and different methods of job scope, as well as the variable skills and judgment of installers and the quality of equipment, tools, etc, the suggestions and recommendations contained in this manual are provided without warranty. The information and recommendations herein are believed to be correct at time of publishing.

BLUECHIP reserves the right to revise the contents of this manual without prior notice. Any construction or use of the product must be in accordance with all local zoning and/or building codes and in accordance with the current NCC at the time of use. Except as contained in a written warranty certificate, the supplier does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.

1.2 Company Background:

Founded in 2003 by five brothers, BLUECHIP has grown every year since to become one of Australia's leading suppliers of architectural building envelopes. BLUECHIP's product range covers the complete system from the structure out including all types of cladding materials, composite decking, sub-framing, insulation, waterproofing and fixings.

With offices in Sydney, Melbourne and Perth, BLUECHIP has supplied more than 3,000,000m² of materials to Australian projects since 2003. Our commitment to innovation and ongoing investment in R&D ensures BLUECHIP will continue to lead the market with BCA/NCC compliant facade solutions in the years ahead.

For architects and consultants, BLUECHIP's wide range of different materials and 'complete-system' approach enables the creation of inspiring high-performance facades. For builders and contractors, BLUECHIP's large local stock, well established supply chains and genuine appreciation for our clients means you can trust us to deliver as promised every time.

1.3 Company Details:

Company: Blue Chip Group Pty Ltd
ABN: 98 162 282 064
Head Office: 16 Ashby Close, Forrestfield WA 6058
Phone: 1300 945 123
Email: sales@bluechipgroup.net.au

***Please Note:** This manual covers ULTRALIGN cladding profiles but does not specifically cover ULTRALIGN 2-piece battens. ULTRALIGN 2-piece battens can be fixed to; a solid structural wall, a structural framing system, a suspended ceiling system or any other suitable structural support in accordance with site specific engineering and any other relevant codes, standards or NCC requirements. Reference the latest version of ULTRALIGN Span Tables to assist with detailing.



1.4 Product Description:

Extruded Aluminium Cladding & Battens

ULTRALIGN intelligent aluminium facade system is available in a range of solid aluminium profiles providing a reliable and attractive modern facade alternative to other commercial cladding products. ULTRALIGN products have been specifically designed by experienced commercial facade professionals to meet the demands of today's facade industry. Australian made using the finest raw materials and finish options, ULTRALIGN offers an unprecedented level of quality, reliability, and longevity with an extensive range of colours, textures, and finish options, available in both standard and custom sizes.

AS 1530.1 Non-Combustible

ULTRALIGN products are made of 100% solid aluminium which is totally non-combustible to AS 1530.1. Architects, engineers, and tenants can be assured ULTRALIGN will not burn or contribute to fire spread.

Intelligent Installation

The ULTRALIGN profile has been intelligently designed to provide excellent usability such as multi-angle mating and it has one single swarf-free contact point for superior consistency and weather-proofing.

Prefinished System

The entire ULTRALIGN range is pre-finished. This means there is no requirement for painting or onsite finishing. Our finish options are attractive and durable – guaranteed to stand the test of time.

100% Australian Made

ULTRALIGN is a 100% Australian owned, designed and made product, which contributes to it's outstanding quality and fast lead times. Using ULTRALIGN aids all aspects of the Australian economy

Environmentally Sustainable

ULTRALIGN solid aluminium is a 100% recyclable product. Energy, emissions, wastage and materials are saved in every aspects of the product from manufacturing, to, delivery, installation and recycling.

Minimal Fabrication

ULTRALIGN panels can be ordered to custom lengths which eliminates additional fabrication. Panels are simply interlocked and tightened, then fixed. This also optimises usability and decreases waste.

Incredible Aesthetics

ULTRALIGN profiles all have their own unique look with classic shadow lines, sharp step features or bold standing seams. Add in any anodised, powdercoat or wood grain finish and the options are limitless.

Industry Leading Warranty

ULTRALIGN's 20-year product warranty is one of the longest of any facade product on the market today. Clients can be confident that their facade will remain attractive and durable for years to come.

1.5 More Information:

<https://www.bluechipgroup.net.au/facade-cladding-perth/extruded-aluminium-cladding-perth.html>



2.1 Technical Data – Physical Properties:

ITEM	TEST STANDARD	UNIT	RESULT
Alloy Grade / Temper	Actual	-	6063 T5
Material Density	Actual	Kg/m ³	2,709
Magnesium Content	Actual	%	0.7
Silicon Content	Actual	%	0.4
Thermal Expansion	Actual	mm/m/°C	0.025
Weight per Lineal Metre			
▪ 155 x 18mm Groove	Actual	Kg	1.347
▪ 205 x 30mm Cabin	Actual	Kg	1.823
▪ 205 x 48mm Seam	Actual	Kg	2.090
▪ Base Clip for Battens	Actual	Kg	0.507
▪ 50 x 50mm Batten	Actual	Kg	1.062
▪ 100 x 50mm Batten	Actual	Kg	1.618
▪ 150 x 50mm Batten	Actual	Kg	2.281
▪ 200 x 50mm Batten	Actual	Kg	3.763
▪ 250 x 50mm Batten	Actual	Kg	5.252
▪ 300 x 50mm Batten	Actual	Kg	6.065

3.1 Deemed-to-Satisfy Non-combustible:

ULTRALIGN is deemed-to-satisfy non-combustible as per the requirements of the NCC 2019, clause C1.9(e)(v) and is compliant for use as external cladding or internal lining on any building of types A, B & C construction, classes 2-9.

3.2 Fire Performance – ULTRALIGN Timber-look Coating:

ITEM	TEST STANDARD	UNIT	RESULT
Non-combustible	AS 1530.1	CSIRO*	Pass
Non-combustible (DTS) – NCC 2019	NCC C1.9(e)(v)	CSIRO*	Pass
Ignitability Index	AS 1530.3	AWTA*	8
Spread of Flame Index	AS 1530.3	AWTA*	0
Heat Evolved Index	AS 1530.3	AWTA*	0
Smoke Developed Index	AS 1530.3	AWTA*	4
Group Number	NCC 2019 C1.10	Equivalence	<1

3.3 Fire Performance – Standard Powdercoat Colours:

ITEM	TEST STANDARD	UNIT	RESULT
Non-combustible	AS 1530.1	CSIRO*	Pass
Non-combustible (DTS) – NCC 2019	NCC C1.9(e)(v)	CSIRO*	Pass
Ignitability Index	AS 1530.3	CSIRO*	0
Spread of Flame Index	AS 1530.3	CSIRO*	0
Heat Evolved Index	AS 1530.3	CSIRO*	0
Smoke Developed Index	AS 1530.3	CSIRO*	3
Group Number	NCC 2019 C1.10	Equivalence	<1

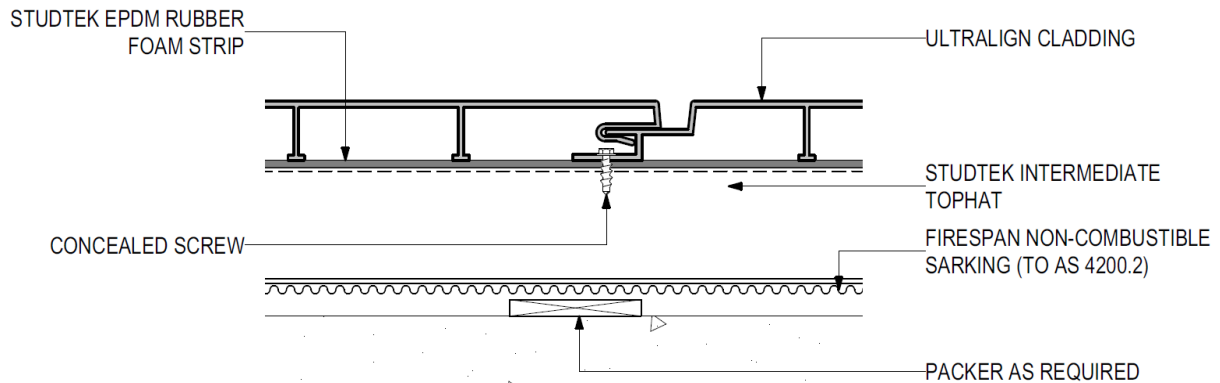
*CSIRO and AWTA are both NATA accredited Australian based laboratories as per the requirements of NCC 2019



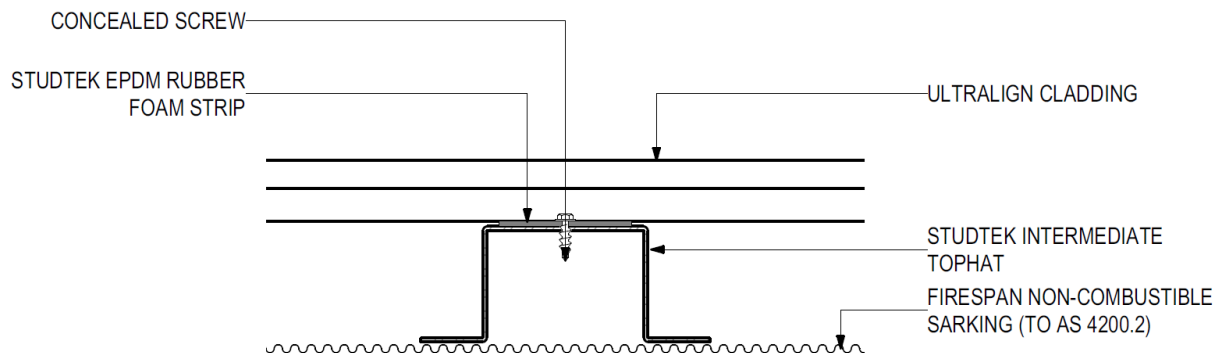
4.1 Installation:

ULTRALIGN can be installed either vertically or horizontally using secret-fix screws to STUDTEK steel top-hats or timber framing. Use CLADTRIM extrusions for all junctions and other details;

Vertical Installation (Typical Plan Detail):



Horizontal Installation (Typical Plan Detail):



ULTRALIGN installation details are available in PDF and CAD on request. The ULTRALIGN installation details are provided for conceptual purposes only. These are not the only methods that can be used to attach ULTRALIGN, nor can they be used generically without consideration for each individual application. Good design engineering may preclude the choice of details used.

4.2 Acceptable System Components:

Sarking (Delete if using SINIAT WD as below – recommended):

Shall be FIRESPAN deemed-to-satisfy non-combustible sarking tested by a NATA accredited laboratory to AS 1530.1. Install and tape in accordance with AS 4200.2 to all cladding areas.

Rigid Sheathing Board (Best practice in lieu of Sarking):

Shall be SINIAT WD 12.5mm deemed-to-satisfy non-combustible, vapour permeable material which assists in achieving a 60/60/60 FRL when installed as per manufacturer's directions.

Cladding Trims:

Shall be CLADTRIM colour-matched trim system supplied by Blue Chip Group Pty Ltd and installed as required to waterproof the façade in accordance with the manufacturer's details.



Sub-framing System:

The sub-framing system to be attached to the main structure in a manner to ensure all applied loadings to the cladding is transferred back to the main structure. Size and spacing of top hat members shall be determined according to applied loads and deflection limitations. Top-hat spacings shall be maximum 600mm to adequately support the cladding system.

Acceptable Sub-framing manufacturers are:

- STUDEK Facade Framing, 1300 945 123, sales@bluechipgroup.net.au.

Trim Sealant:

All junctions are to be filled and sealed with PROLASTIK silicone based non-stain sealant to manufacturer's specifications immediately prior to installing the outside CLADTRIM profile.

4.3 General Fixing & Maintenance Instructions:

- ULTRALIGN is to be secret fixed using screws supplied by BLUECHIP.
- ULTRALIGN can be installed either horizontally or vertically.
- ULTRALIGN wood decors are equivalent to natural wood surfaces meaning that different grain textures are possible within a single shipment (plain and/or mottled). In order to obtain a uniform overall finish, we recommend considering this fact and, for example, laying out the cladding profiles before starting with the installation to ensure satisfactory appearance.
- ULTRALIGN boards should be at ambient temperature prior to any cutting or installation.
- All ULTRALIGN boards should be ordered approx. 50mm longer than required onsite to allow for trimming at each board end to remove 20-25mm of uncoated or blemished material resulting from the production and coating process.
- When installing ULTRALIGN vertically, leave a minimum 10mm gap at the base of the cladded wall between the board and any surface that meets the board in a perpendicular line or plane to the cladding being installed. The same applies above and below a horizontal join in the cladding installed using the CLADTRIM Z-shape Joint Profile.
- ULTRALIGN can be cut to length with standard high-quality aluminium cutting tools. Recommended blades are a specialised aluminium saw blade with a high number of teeth.
- ULTRALIGN should be acclimatized as required onsite to ensure moisture and temperature equilibrium with the surrounding environment prior to installation.
- The sub-frame shall be level and aligned and installed perpendicular to cladding direction over water-proof membrane at maximum 600 mm centres. The sub-frame shall be minimum 20mm thick to provide adequate ventilation behind the cladding. The back-ventilation cross-section may not be regularly diminished by battens or other objects. The ventilation inlets and outlets must have consistent widths of at least 20 mm.
- Drivers should be adjusted to a low or medium torque setting when fixing screws into the cladding and screws should not be overdriven but may only be screwed in until the screw head rests against the surface.



General Fixing & Maintenance Instructions (Continued):

- The CLADTRIM corner profiles shall be installed as required and fixed at maximum 600mm centres by pilot drilling and screwing with countersunk stainless-steel screws. Sealant and flashings should be used as required to ensure water proofing.
- To install the CLADTRIM colour-matched extrusions the base section is to be fixed to the wall or sub-frame first and then after ULTRALIGN cladding is installed sealant should be applied as required to ensure water proofing before the external CLADTRIM piece is clipped into place until it is flush with the cladding face.
- The ULTRALIGN cladding shall be fixed at maximum 600 mm centres by inserting screws through the grooved v-slot in the cladding boards.
- The cladding shall be installed with a minimum 10mm spacing between all trims, joints, end stops and between any permanent structure and/or penetration to allow for thermal expansion and contraction of the material.
- The cladding shall be installed as per the latest version of the ULTRALIGN Install Details allowing for any site-specific expansion and contraction requirements and using colour-matched CLADTRIM extrusions for all junctions and abutments.
- The cladding shall be installed as per the latest version of the ULTRALIGN Draft Specification allowing for any site-specific requirements to ensure the desired long-term performance and aesthetics are achieved.
- The cladding system shall be installed in accordance with the latest version of the Australian NCC/BCA as well as any other government regulations or requirements at any given time and for any particular project.
- To install the CLADTRIM colour-matched cover strip the base section is to be fixed to the wall or sub-frame first and then after ULTRALIGN cladding is installed sealant should be applied as required to ensure water proofing before the external CLADTRIM piece is clipped into place until it is flush with the cladding face.
- The cladding shall be cleaned and maintained as required to avoid any accumulation of surface contaminants and to maintain the desired performance and appearance.
- The supporting wall must be watertight.
- There must be ventilation / drainage at the base of the wall.

Important Information:

The instructions in this brochure are for illustration purposes only and are not meant to replace a licensed professional. Any construction or use of the product must be in accordance with all local zoning and/or building codes. The consumer assumes all risks and liability associated with the construction or use of this product. The consumer or contractor should take all necessary steps to ensure the safety of everyone involved in the project, including, but not limited to, wearing the appropriate safety equipment. Except as contained in a written warranty, the supplier does not provide any other warranty, either express or implied, and shall not be liable for any damages, including consequential damages.