



Interlocking • Aluminium • Façade

NEW ZEALAND
TECHNICAL INFORMATION
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DOCUMENT TRACKING

VERSION #	DATE	CHANGES
1.0	01/02/22	Initial Issue - New Zealand

1. ABOUT THIS GUIDE

This manual has been developed to inform fabricators and contractors with an effective installation resource when working with Fairview's express installation cladding system, Stryüm.

The guide will provide easy to follow technical information. As uncontrollable conditions of the job scope alter, this guide is a comprehensive resource for users/installers. Paneltec recommends seeking the advice of a professional prior to installation.

The information and recommendations contained herein are believed to be correct at time of publishing 01/02/2022. Paneltec reserves the right to revise the contents of this manual.

2. INTRODUCTION

2.1 ABOUT STRYÜM

- Contemporary appearance, striking design
- Premium Product: Made in Australia, superior quality
- Solid Aluminium - non-combustible, certified to AS530.1 and AS1530.3
- Easy installation
- Concealed fixing method
- Ventilated rainscreen façade
- Limitless colours including textured woodgrain and authentic anodised finishes

2.2 KEY FEATURES

PRODUCT DNA	Solid Aluminium
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FINISH	Unlimited Powdercoat finishes, innovative textured woodgrain finishes and authentic anodised finishes.
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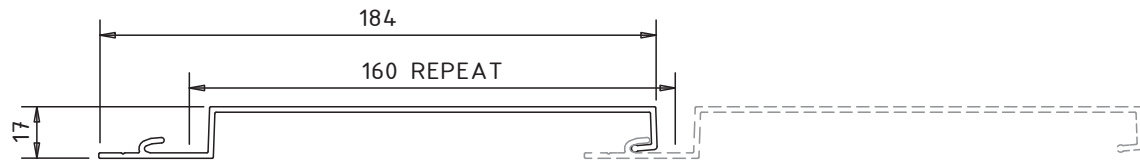
FIXING SYSTEM	Interlocking panels with concealed fixings for express installation.
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APPLICATION	Unrestricted use on any project, such as mixed-use developments, residential construction, and large-scale government infrastructure projects like hospitals.
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WARRANTY	15-year warranty, subject to standard terms and conditions.
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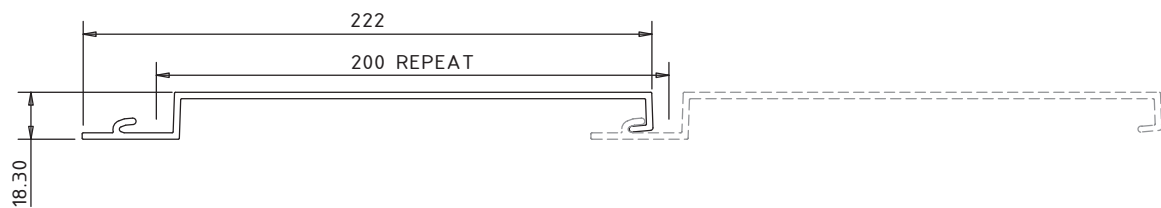
3. PANEL SPECIFICATION

SHADOW 160 – SH160



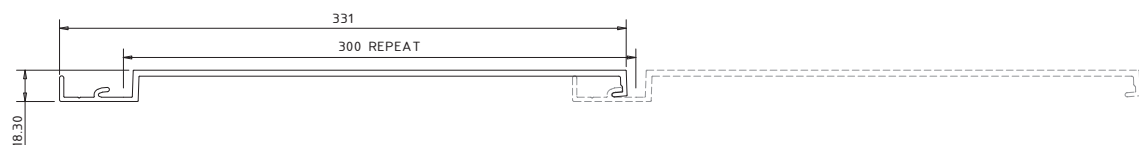
Thickness	1.8mm
Weight	6.9kg/m ²
Length	5.8m
Effective Cover	160mm per panel

SHADOW 200 – SH200



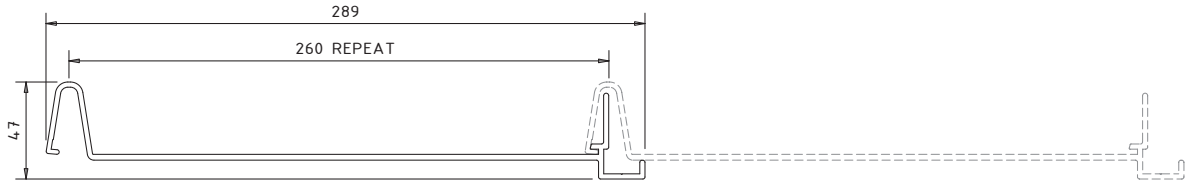
Thickness	2.5mm
Weight	8.82kg/m ²
Length	5.8m
Effective Cover	200mm per panel

SHADOW 300 – SH300



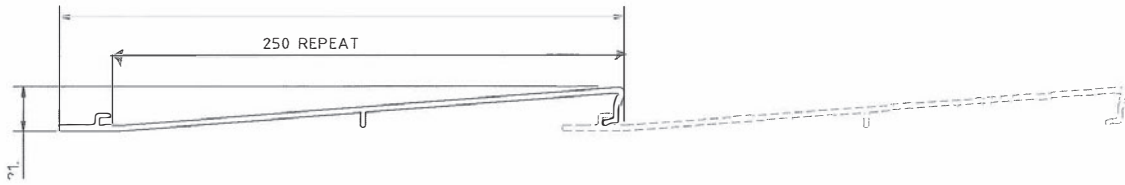
Thickness	3.5mm
Weight	11.29kg/m ²
Length	5.8m
Effective Cover	300mm per panel

SEAM 260 – SE260



Thickness	2.8mm
Weight	11.07kg/m ²
Length	5.8m
Effective Cover	260mm per panel

STEP 250 – ST250



Thickness	2.8mm
Weight	9.37kg/m ²
Length	5.8m
Effective Cover	250mm per panel

CUSTOM SIZES AND PROFILES AVAILALABLE, PLEASE SPEAK TO THE PANELTEC TEAM

4. COATING SPECIFICATIONS

4.1 TYPICAL COATING TYPE

POWDER COAT

Stryüm is available in the commercial Interpon and Dulux range of powder coat finishes. These commercial finishes have been tested to AAMA2604 and have been designed specifically for architectural applications. They are super durable thermosetting polyester powders ideal for use in mild, severe and tropical exterior conditions.

For increased warranties, AAMA2605 powder coat finishes are also available upon request. These finishes consist of ultra-durable fluoropolymer powder coat finishes.

A virtually unlimited range of custom colours is available in powder coat, please speak to the Paneltec team.

ANODISED

The Stryüm profiles are subjected to the anodising process and are supplied with an authentic anodised finish, there are 24 anodised finishes to choose from.

Unlike a powder coat finish, anodising is not a coating, it is an alteration of the physical properties of the aluminium. This means the material has much better durability than a powder coat finish: authentic anodised finishes are the most durable type of finish available.

The Stryüm panels use an authentic anodised finish, which involves passing the raw material through an electrochemical process. This process highlights the natural variation of the aluminium, showcasing the natural lustres of the metal. As a result, anodising creates a vibrant, dynamic finish that morphs from one colour to the next when viewed from varying angles, and at different times throughout the day.

This natural variation is one of the design benefits of using anodised aluminium, and the final appearance will not have the same ultra-consistent appearance as other finishes such as powder coating.

As anodising is a natural process there is a large potential for slight colour variation within the material, and when compared to the approved sample. However, this variation has always been part of the allure of anodising and will create a truly unique façade.

WOODGRAIN

Stryüm uses an innovative woodgrain technology known as dual powder, the market leader in durability. It has a raised grain, increasing the realism of the profile.

Dual powder is a process where a base layer of powder coat is applied, however is only partially cured. This profile is then coated with a second layer of powder coat which forms the woodgrain pattern.

These two layers are then cured together to form a single layer, with a real grain texture. With this production method, the woodgrain layer is as durable as the base profile and is much more durable than other woodgrain alternatives on the market.

The Stryüm woodgrain utilises the Interpon D2525 powders, and as such is treated as the same material.

Custom woodgrain finishes are available at request, please contact the Paneltec team.

5. COATING DATA

5.1 POWER COAT/ WOODGRAIN DATA

INTERPON D2525 AAMA2604 RESULTS		
TEST	RESULT	TEST REQUIREMENT
7.1 Color Uniformity	Standard	Standard
7.2 Specular Gloss	20.3	As reported
7.3 Dry Film Hardness	Pass – F	F Hardness and No Film Rupture
7.4 Film Adhesion		
7.4.1.1 Dry	Pass	No Removal of Film from Substrate
7.4.1.2 Wet	Pass	No Removal of Film from Substrate
7.4.1.3 Boiling Water	Pass	No Removal of Film from Substrate
7.5 Impact Resistance	Pass	No Removal of Film from Substrate
7.6 Abrasion Resistance	Pass (ACV = 42)	ACV 20 Minimum
7.7 Chemical Resistance		
7.7.1 Muriatic Acid	Pass	No Blistering or Visible Change
7.7.2 Mortar	Pass	No Blistering or Visible Change
7.7.3 Nitric Acid	Pass ($\Delta E = 0.04$)	Hunter, Delta E = 5 max
7.7.4 Detergent	Pass	No Film Adhesion Loss or Visible Change
7.7.5 Window Cleaner Resistance	Pass	No Blistering or Noticeable Change in Appearance and No Film Loss
7.8 Corrosion Resistance		
7.8.1 Humidity	Pass (No Blisters)	Not Greater Than Few & No. 8 blisters
7.8.2 Salt Spray	Pass	
Scribe	9	7 Minimum Rating
Field	9	8 Minimum Rating

5.2 ANODISED DATA

All anodised finishes are supplied in accordance with AS1231 2000 Aluminium and Aluminium Alloys – Anodic Oxidisation Coatings.

6. PERFORMANCE

6.1 FIRE

In today's architecture the technical details are as important as the overall appearance of the project specification. Architects are seeking products that tick the box for sustainability, moisture control and fire performance.

The demand for specification and non-combustible facades have fast become the industry norm. As a solid aluminium pre-finished panel, Stryüm meets these requirements having been tested to AS1530.1 and AS1530.3.

Stryüm is a safe preferred choice where non-combustible or limited combustibility cladding must be specified for use on applications such as hospitals, schools and high-rise buildings.

POWDER COAT & WOODGRAIN FINISHES			
TEST STANDARD	RESULT		
AS1530.1	NON-COMBUSTIBLE		
AS1530.3	PASS	Ignitability Index	11
	PASS	Heat Evolved	0
	PASS	Spread of Flame	0
	PASS	Smoke Developed	3

6.2 AVERAGE EXPANSION

MATERIAL	EXPANSION COEFFICIENT (X10 ⁻⁶ /°C)	ELONGATION PER 1000MM T =50°C
Stryüm	23.4	1.17

When installing Stryüm please leave the following clearance at each end of a length to allow for unhindered expansion and contraction.

LENGTH	CLEARANCE
≤ 4000mm	5mm
> 4000mm	10mm

The proprietary Stryüm S Section is designed to sustain expansion of Stryüm in an 80°C temperature change, whilst allowing for a direct fix to the substrate.

If the Stryüm S Section is not used, allowance must be made for thermal expansion in the form of oversized holes, with special attention paid in the installation of the material to ensure the screws are not overtightened.

7. INSTALLATION DETAIL

7.1 INSTALLATION CONSIDERATIONS

As minor colour variation can occur between production lots, it is recommended the total material requirements for a project are placed in one order to ensure colour consistency.

Where aluminium materials meet dissimilar metals, a proper insulator or caulking tape should be applied to insulate between dissimilar materials to avoid corrosive and electrolytic action.

Please ensure Stryüm is used as part of a compliant wall system, with all components complying with the Deemed-to-Satisfy provisions of the relevant NCC or approved as part of a performance solution.

When Stryüm panels are delivered to site, approximately 50mm of panel will need to be trimmed from both ends due to the production process. When ordering site specific sizes, please ensure you have allowed for 100mm – 150mm of wastage on each panel. Please ensure that both ends have been trimmed prior to installation, as this is vital to ensuring the panels will clip together fully.

Stryüm panels will be installed with uncoated cut edges. Aluminium is extremely resistant to corrosion and within minutes of cutting the panel, a thin oxide layer will have formed over the cut edge, preventing any further corrosion.

If installed as per the installation requirements, these edges are adequately drained and ventilated to prevent sitting in pooled water. If the panels are installed incorrectly so that they are subject to pooled water, this may eventually break down the oxide layer and allow for corrosion.

When installing Stryüm, ensure that the panel has fully locked together before screwing it off. In the Stryüm shadow profiles, a 14mm packer can be inserted in the shadow line to ensure a complete connection. With the Seam and Step profiles, please tap the join using a soft faced hammer to ensure complete connection, taking care not to damage the finish.

Due to the interlocking nature of the Stryüm, it is critical that special attention is paid to installing the S Section substructure correctly. It must provide a flat surface for the cladding to be installed on, as any inconsistencies in the substructure may affect the visual appearance of the cladding.

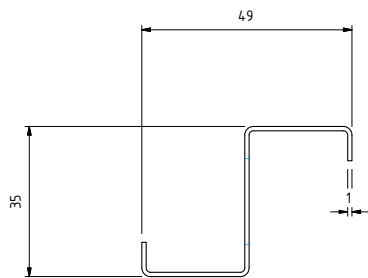
7.2 ACCESSORIES

All standard components are available from Paneltec. Please visit Stryüm Trims Guide for further information.

7.3 S-BATTENS

Due to the interlocking nature of Stryüm, it is critical that special attention is paid to installing the S-Section substructure correctly. It must provide a flat surface for the cladding to be installed on, as any inconsistencies in the substructure may affect the visual appearance of the cladding.

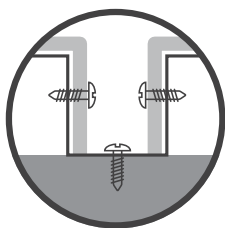
S-SECTION 35MM – TRM0901



Thickness	1.0 BMT
Grade	G550 - Galvanised Steel
Length	5.8m
Coating	A2150

8. FABRICATION DETAIL

8.1 FABRICATION CONSIDERATIONS



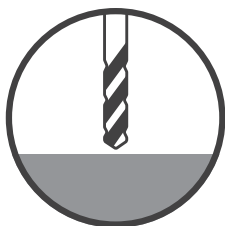
SCREWING

Stryüm can be screwed with conventional stainless steel or class 3 self-drilling screws for metal. Wind loading calculations in this manual are based on a 12-gauge Tek Screw.



RIVETING

Riveting is possible with the usual equipment and solid rivets or blind rivets.



DRILLING

Stryüm can be drilled with centre point twist drills normally used for aluminium or steel. Use High-Speed Steel (HSS) drill bits.

9. WARRANTY

Stryüm is an incredibly durable material when used in the right application. Please contact your Paneltec representative for full terms and conditions.

9.1 IMPORTANT WARRANTY INFORMATION

Maintaining your Stryum finish is an important component to upholding your warranty. Cleaning frequencies are based on your project location and provided in the warranty; therefore, you should document each time your Stryum panels are cleaned.

Recommended cleaning agents:

- Mineral Spirits
- Organic Cleaners
- PH-Neutral Solvents

10. MISCELLANEOUS

10.1 MANUFACTURING QUALITY

A dedication to the total fulfilment of our client's and customer's expectations is reflected by a complete quality control system, beginning at the point of specification and continuing through to delivery of the guaranteed products. All activities are carried out in a manner which:

- Uses the framework of ISO9001 Quality Standard to verify the quality of our systems
- Ensures that our products and services are of the highest standards
- Creates continuous improvements to our product through the application of the best quality practices.

ACCEPTABLE VARIATION

Width	± 2.4mm
Length	± 6.0mm
Thickness	± .4mm (maximum)
Surface Defects	The surface shall not have any irregularities such as dents, scratches and other imperfections in accordance with our quality assurance.

MATERIAL DATA

Aluminium Alloy	6060, 6063
Grade	T5

HANDLING AND STORAGE

- Considerable care should be taken in the handling of Stryüm
- A minimum of two people should be used when moving large sheets to avoid scratching
- To prevent surface damage when stacking Stryüm, there should be no swarf between the panels, and a cover sheet of paper or foam sheet should be used.
- Stryüm should be stored in a cool and dry area where temperature is relatively stable
- Pallets of Stryüm should be stored horizontally with adequate support to prevent sagging.

SUSTAINABILITY

Stryüm has been designed with an expected performance life of over 50 years. All Paneltec products have been developed with the health of environment and community in mind. As part of our commitment to using recyclable or reusable materials wherever possible, all Stryüm panels are 100% recyclable.

DISCLAIMER

While the information provided relating to Paneltec products is true to the tests and measures available to us, the information provided in this article is general in nature only and does not constitute project-specific building, construction or fire-safety advice. Before acting on any information on this document, you should consider the appropriateness of the information having regard to your project parameters and requirements. Paneltec products are deemed suitable or compliant after approval from building and construction professionals associated with specific projects and developments. If you'd like some further insight about this topic, contact Paneltec on 09 439 4357 or email info@paneltec.co.nz. We're here to see how we can help.

