



ALSPEC DESIGN HANDBOOK

Authorised Alspec Dealer:



48 Legacy Road, Epping, VIC 3076 | T: (03) 9424 2996
info@ekinal.com.au | www.ekinal.com.au





ABOUT US

Established in 1974, Alspec is the market leader in the design and distribution of innovative aluminium systems to the architectural, residential, industrial and home improvement markets.

Our range of quality products, that are extensively tested, together with our professional service ensures Alspec is uniquely positioned to support the growth of your business.

Alspec stocks a complete range of commercial and residential hardware and accessories to complement all aluminium systems.

Alspec continues to partner with major Australian and global hardware manufacturers. If you need an accessory for an aluminium system from a major manufacturer, it is more than likely it will be in stock at your local Alspec branch.

With a network of 500 staff and fourteen locations nationally, Alspec is 100% Australian owned.

INNOVATIVE SYSTEMS

Alspec continues to invest heavily in Research and Development to ensure the latest technologies and design principles are applied into their ever increasing range of advanced systems. This provides the customer with fully tested systems that meet and/or exceed current and relevant Australian standards but also deliver on trend and aesthetics.

PROFESSIONAL AND PERSONAL SERVICE

Alspec's investment in Research and Development is matched by the company's history of developing staff who are committed to doing everything necessary to satisfy our customer's requirements. From fabricators to specifiers the benefits of working with Alspec ensures easy access to a team of experienced and technically competent people who are aluminium systems specialists with real expertise in all facets of the industry.

At Alspec, we value the importance of developing relationships and maintaining the personal touch. Our staff are accessible, always interested in your needs and take pride in a well earned reputation for dependability.



System Range



Commercial Windows and Doors

An extensive range of sophisticated window and door systems includes multi-fold, hinged, pivot and sliding doors as well as sliding, awning, casement, pivot and double hung windows for commercial, high end residential and multi unit developments.



Commercial Framing

Modern and diverse range of Architectural Systems for interior fit out, shopfront and curtain wall applications that enhance the design and function of any building.



AluK®

These superior, high performing sliding solutions have great aesthetics and design appeal and exceed current and future standards in energy efficiency. Exclusively distributed by Alspec in Australia.



ThermAFrame

ThermAFrame is an energy efficient window option that utilises the latest in European Polyamide Thermal Break technology combined with Australian design principles to achieve the most challenging structural and energy requirements.



Louvres & Solar Control

Our range of Solar Control products include Air-Flo Glass Louvres, Solaire Fixed Louvre for external solutions and CityScape, a versatile aluminium plantation shutter designed for internal and external applications.



Home Improvement

Our Home Improvement range caters to almost every need from balustrade, fencing and wardrobes to our most popular shower screen system.



Screening

Our range of screening product meets security, bushfire, fire attenuation and cyclonic debris protection requirements. All led by our premium Invisi-Gard 316 Stainless Steel Mesh Security System.



Carinya

The commercial and industrial pedigree of Carinya products ensures a high level of performance and design, thanks to the scale and strength of Alspec's commercial operations. Visit the Carinya website to download the entire Carinya Collection Booklet.



Hardware

We offer a complete range of commercial and residential door and window accessories covering many of the major brands in the industry. Visit the Alspec website for a copy of the Hardware Catalogue.

Contents

Research & Development	6
National Specification Support	8
Solutions	10
Liveable Design and Access	12
Commercial Windows and Doors	
Hawkesbury Commercial Multi-Fold Door	16
Hawkesbury Top Hung Commercial Sliding Door	18
ProGlide High Performance Sliding Door	20
ProGlide UltraFlat High Performance Wheel Chair Accessible Sliding Door	22
Altitude Apartment Sliding Door	24
Swan Evo 45mm Shopfront Door	26
Torrens 45mm Shopfront Door	28
View-Max Sliding Window	30
ProVista Sashless Double Hung Window	32
ProTilt High Performance Awning and Casement Window	34
Awning and Casement Window	36
Case Study Jetsons House, Casuarina NSW	38
Commercial Framing	
Derwent 76mm Centre Pocket Framing	42
McArthur Evo Centre Pocket Framing	44
ecoFRAMEplus Centre Pocket Double Glazed Framing	46
Hunter Evo Single Flush Glazed Framing	48
Hunter Evo Double Flush Glazed Framing	50
Hunter Evo Double Flush Glazed Acoustic Framing	52
EcoWall 225 Flush Glazed Framing	54
Hastings Front Glazed Framing / 550 Front Glazed Plant On Sections	56
Partitioning Systems	58
Case Study Meriton Suites, North Sydney NSW	60
AluK®	
Infinium Ultra Thin Sliding Door	64
SC95TT Sliding Door System	66

ThermaFrame

Awning and Casement Window	72
Flushed Glazed Framing	74
Centre Pocket Framing	76
50mm Commercial Door	78
Case Study Konayuki, Falls Creek VIC	80

Louvres and Solar Control

Air-Flo Louvre Framing	84
Solaire Fixed Louvres	86
CityScape Aluminium Shutter System	88
Dualair Secondary Glazed Louvre Component System	90
Case Study VicRoads, Sunshine VIC	92

Home Improvement

EndurAl Balustrade System	96
DuraSlat Fencing System	98
Versastyle Wardrobe System	100
Danmac Shower Screen Kits & Hardware	102

Screening

Invisi-Gard 316 Stainless Steel Security	106
Alu-Gard Aluminium Security Screens	108
Alu-Gard Edge Aluminium Security Screens	110
Vision-Gard Aluminium Security Screens	112
KidScreen Window Fall Prevention	114
Alu-Grille 7mm Diamond Grille	116
Alspec Escape Security Screens	118
Aluminium, Fibreglass and Polyester Insect Screening	120
Case Study Double One 3, Teneriffe, Brisbane QLD	122

Carinya Residential Windows and Doors	126
---------------------------------------	-----

Case Study Trigg Private Residence, Perth WA	128
--	-----

Commercial Hardware	130
---------------------	-----

AluSpace by Alspec	132
--------------------	-----

Colour and Finishes	134
---------------------	-----

Research & Development

ALSPEC SYSTEMS: INNOVATIVE, TESTED, GUARANTEED

The creation of innovative and technologically sound aluminium systems relies on comprehensive research and development combined with an ongoing commitment to continuous improvement. At Alspec, our high quality aluminium systems have evolved from extensive research and product development, followed by exhaustive testing to stringent standards, all backed by superior customer service and support.

IT ALL STARTS WITH RESEARCH

Alspec continue to invest heavily in research and the Alspec experience begins with our dedicated in-house R&D team. The comprehensive range of products developed to date is continuously expanding to meet the growing demands of our clients and in response to market trends. Our team undertakes research to ensure the product range meets or exceeds customer requirements, while staying up to date with relevant regulatory processes and standards to ensure we are continuously improving our product offering.

Our experienced team recognises every job is different and at Alspec the aim is to find the solution that meets the client's needs. Sometimes an existing product will be appropriate; other times there may be the need to adapt an existing product or design a bespoke system. All options can be addressed through application of the expertise accessible through Alspec's R&D team.



WE USE ONLY THE BEST COMPONENTS

Manufacturing products to an exceptional standard requires the highest quality materials which can be relied upon to meet the appropriate standards and ensure compliance with Australian regulations. We start with architectural grade aluminium and ensure all of our components meet stringent standards through careful monitoring, testing and review.

However, consumers need to be aware that not all aluminium system suppliers do the same. For example, some import cheaper products into Australia which run the risk of containing asbestos – a known carcinogenic material banned in Australia since 2003. While the Australia-wide ban aims to ensure no asbestos or asbestos-containing materials are used in manufacturing, some countries continue to use the material, either with or without disclosure to importers. Alspec customers, however, can rest assured that our products come from an asbestos-free supply chain, which has been independently reviewed to provide peace of mind.



CERTIFIED IN-HOUSE TESTING

With our in-house NATA Certified Test Facility in Queensland, Alspec clients know that our products have been subject to all the appropriate testing and certification processes under strictly monitored and inspected conditions. The National Association of Testing Authorities (NATA) is the national accreditation body for Australia which ensures organisations such as those producing aluminium systems comply with the relevant international and Australian standards. Knowing they utilise a NATA accredited facility gives Alspec clients the knowledge they can rely on the integrity and conformity of the products they are purchasing.

The key standards applicable to the industry are set out in the NCC Building Code of Australia. Windows, doors and glazed assemblies are designed and constructed in accordance with AS2047 performance requirements. Those glazed assemblies not covered by AS2047 require compliance to AS1288. Adherence to these standards ensures the window and framing products will be fit for the purpose for which they have been selected and all Alspec products receive documentation to support the performance claims made.

An added benefit of having our own test facility is we can respond quickly to changes in the market's requirements and not be reliant on timeframes of external test facilities.

RESPONSIVE LEAD TIMES

As a manufacturer, we know a key factor in the construction industry is timing, as down time or delays can be costly for all involved. Alspec's capacity and coverage across Australia means we can provide responsive lead times to your project. Our extensive warehouse system also ensures stocks are at hand of complementary accessories and hardware, enabling us to respond quickly to client needs.

ONGOING SERVICE AND SUPPORT

Producing quality products is just the first stage of Alspec's commitment to our clients. Once a project is completed, we can provide the necessary ongoing technical support using a range of experts on our team and our extensive servicing network. Our aim is to provide all necessary assistance to users of our products both before and after the system is installed.

Alspec aluminium systems are the result of extensive research and development, manufactured with the highest quality materials available. Our use of architectural grade aluminium, which is highly corrosion resistant and exceptionally strong, enables us to confidently provide extensive warranties for all our products.



WHY BUY ALSPEC OVER IMPORTED PRODUCTS?

Cheaper imported products may come with documentation which states compliance with Australian Standards, but evidence suggests some of this documentation may be unreliable, or in extreme cases, fraudulent. Some countries have little understanding of Australia's regulatory requirements or do not rigidly adhere to the Standards, while others lack sufficient controls to ensure the appropriate testing has been conducted. The only way to be sure the aluminium system you select is fit for purpose is to be confident it has been through a robust process of testing and certification, such as that conducted by Alspec within Australia, using NATA certified testing.

National Specification Support

INTRODUCING ALSPEC'S NATIONAL SPECIFICATION SERVICE

As a leader in architectural framing systems, Alspec has long recognised the need to provide support to the architects and designers who specify our products. With this in mind, Alspec offers a National Specification Service which brings together a team of dedicated professionals to provide assistance to clients. With a specification manager located in each state, the team provides professional support drawing on their detailed knowledge of Alspec's products and systems. This knowledge is used to assist architects and designers to find the right solution to address the specific needs of their project.

PROJECT INTEGRATION

To ensure project compatibility and integration, the team uses the latest in software tools during the specification process. These include Building Information Modelling (BIM) Solutions, Revit and ArchiCAD software. BIM is used to design and model every detail of a building, allowing design options to be explored as well as generating design documentation for construction.

Both ArchiCAD and Revit software suites are particularly useful for customising windows and doors to suit projects and ensure compatibility, with both supporting and integrating with BIM modelling. By utilising these systems, Alspec's specification team can undertake a comprehensive overview of how their products can meet the project needs and identify optimum configurations. Using this software also assists with multi-discipline coordination, allowing Alspec's framing systems to be smoothly integrated into the construction process.



AUTODESK
REVIT

GRAPHISOFT.
ARCHICAD
Alspec files due for release late 2019



SUPPORTING PROFESSIONAL DEVELOPMENT

Within the building and construction industry many professionals such as architects are required to undertake annual recognised Continuing Professional Development (CPD) training to maintain their qualifications. Alspec's specification team, with their depth and breadth of experience and qualifications, are certified to provide CPD modules as a technical product supplier.

Alspec offers tailored courses across a range of topics designed to satisfy CPD requirements. Each presentation includes a high standard of educational content with clearly defined learning outcomes. Modules can include specific areas of window and door specifications such as energy performance, window-related standards and requirements for bushfire and cyclonic regions or more general topics such as integrating passive ventilation solutions.



FLEXIBLE LEARNING OPTIONS

By delivering the presentations in-house, presentations can be tailored to individual organisation needs or specific projects, and minimise time off-site. The presentations are tailored to address the different standards and requirements of the State they are being delivered in and each attendee receives 1 formal CPD point and a certificate of completion.

In addition, Alspec's team also provide external CPD training at events in conjunction with industry bodies such as Architectural Information Services (AIS), the Australian Institute of Architects (AIA) CPD Refuel network and industry-tailored events such as Equinox and Mecca.

EDUCATING THE NEXT GENERATION

Alspec's National Specification team are also active in looking to assist the next generation of architects and designers by interacting with university and TAFE institutions who offer industry-related courses. Our professionals work closely with final year students to provide CPD training in topics related to the window and framing industry along with specific training on the nature and technical capacities of available systems.



NATSPEC PRODUCT PARTNER

As part of its contribution to the ongoing development of the construction industry, Alspec is a Product Partner with NATSPEC. Owned by government and industry, NATSPEC is a not-for-profit organisation which aims to provide leadership and information related to building and construction. NATSPEC Product Partners such as Alspec provide branded work section templates. These specification templates are pre-populated with information on the various commercial framing systems including specific products for windows and doors, louvres and solar control assemblies, security doors and screens, and internal partitions. The templates also include details about glazing, hardware, fasteners, flashings, sealants and seals, caulking and weather-stripping, which are all required to be specified during the construction documentation.

SPACE TO COLLABORATE

The National Specification Service is closely linked with Alspec's innovative AluSpace facilities. Located in Surry Hills, Sydney, and Beverly, Adelaide, AluSpace has been developed as a unique facility where architects, engineers and specifiers can interact with Alspec's latest systems. Each facility showcases the advanced designs available and provides the opportunity for each party to consider alternatives available for their project. Clients are able to experience the different options and interact with the products before making their final decision. Based on the success of these environments to date, Alspec plans to extend AluSpace to other regions throughout Australia in 2020.



Solutions

Alspec invest heavily on Research & Development to come up with innovative solutions in catering for all requirements in the National Construction Code. Working with Architects and Builders, Alspec have tested and developed products to meet a range of building requirements in Commercial and Residential areas offering a complete solution for all your needs no matter how large or small a project may be.

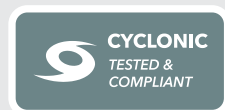
BAL-40 BUSHFIRE COMPLIANT

Bushfires in Australia are almost a common occurrence during the hotter months due to Australia's hot and dry environment. Bushfire events in New South Wales, South Australia, Canberra and Victoria have been the most tragic bushfires events to occur in Australia's history.



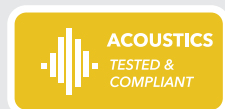
CYCLONIC COMPLIANT

Affecting the eastern, northern and western coastlines of Australia, tropical cyclones place enormous stress on the building envelope. Windows, doors and screens are designed and manufactured to meet the highest pressure, impact and water performance requirements to minimise cyclone damage.



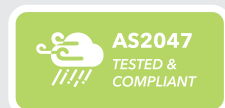
ACOUSTICS COMPLIANT

Constant noise into a building can cause health related issues such as disruption of sleep and increasing stress levels. Aircraft, trains, highways, commercial retail and public areas are some of the conditions windows and doors are subjected to and specifying the correct window & door system is a significant requirement in achieving comfortable living.



AS2047 COMPLIANT

AS 2047 is the mandatory minimum specification for windows and doors used in Australia. It includes compliance to the Glass Standard AS 1288 and a range of other performance tests such as deflection, operating force, air infiltration, water penetration resistance and ultimate strength testing.



FALL PREVENTION COMPLIANT

Whether being fitted to an existing home, apartment or factored into a new build, our range of fall prevention screens are a safe and attractive addition. The surrounding frames are constructed from high grade aluminium and can be powder coated to suit the buildings existing design.



WERS RATED

The Window Energy Rating Scheme enables windows to be rated and labelled for their annual energy impact on a whole house, in any climate of Australia. Energy efficient windows will make your home more comfortable, dramatically reduce your energy costs and help to create a brighter, cleaner, healthier environment.



	BAL-40	CYCLONIC	ACOUSTICS	AS2047	FALL PREVENTION	WERS
Commercial Windows and Doors						
Hawkesbury Commercial Multi-Fold Door	●	●	●	●		●
Hawkesbury Top Hung Commercial Sliding Door	●		●	●		●
ProGlide High Performance Sliding Door	●	●	●	●		●
ProGlide UltraFlat High Performance Sliding Door	●	●	●	●		●
Altitude Apartment Sliding Door	●	●	●	●		●
Swan Evo 45mm Shopfront Door	●	●	●	●		●
Torrens 45mm Shopfront Door						●
View-Max Sliding Window	●		●	●	*Optional	●
ProVista Sashless Double Hung Window	●		●	●	*Optional	●
ProTilt High Performance Awning and Casement Window	●	●	●	●	*Optional	●
Awning and Casement Window	●	●	●	●	*Optional	●

Commercial Framing

Derwent 76mm Centre Pocket Framing				●		●
McArthur Evo Centre Pocket Framing 101.6mm	●	●	●	●		●
McArthur Evo Centre Pocket Framing 150mm				●		
ecoFRAMEplus Centre Pocket Double Glazed Framing 101.6mm	●	●	●	●		●
ecoFRAMEplus Centre Pocket Double Glazed Framing 150mm	●			●		
Hunter Evo Single Flush Glazed Framing	●	●	●	●		●
Hunter Evo Double Flush Glazed Framing	●	●	●	●		●
Hunter Evo Acoustics 100mm/150mm			●	●		●
EcoWall 225 Flush Glazed Framing		●	●	●		●
Hastings Front Glazed Framing / Front Glazed Plant On Sections			●	●		●
Partitioning Systems (45mm, Opal 64/76/92, Diamond 64)						●

AluK®

Infinium Ultra Thin Sliding Door			●	●		●
SC95TT Sliding Door System	●		●	●		●

ThermaFrame

Awning and Casement Window	●		●	●	*Optional	●
Flushed Glazed Framing	●		●	●		●
Centre Pocket Framing	●		●	●		●
50mm Commercial Door			●	●		●

Louvres and Solar Control

Air-Flo Louvre Framing	●		●	●	*Optional	●
Solaire Fixed Louvres	N/A	N/A	N/A	N/A	N/A	N/A
CityScape Aluminium Shutter System	N/A	N/A	N/A	N/A	N/A	N/A
Dualair Secondary Glazed Louvre Component System			●	●		●

Screening

Invisi-Gard 316 Stainless Steel Security	●	Invisi-Maxx			●	●
Alu-Gard Aluminium Security Screens					●	
Alu-Gard Edge Aluminium Security Screens					●	
Vision-Gard Aluminium Security Screens					●	
KidScreen Window Fall Prevention	316 Version				●	
Alu-Grille 7mm Diamond Grille					●	

Carinya Residential Windows and Doors

Classic Sliding Window	●	●	●	●	*Optional	●
Classic High Performance Sliding Window	●	●	●	●	*Optional	●
Classic Sliding Door	●	●	●	●		●
Classic Double Hung Window			●	●	*Optional	●
Classic Awning Window	●	●	●	●	*Optional	●
Select Double Hung Window	●		●	●	*Optional	●
Select Hinged Door	●		●	●		●
Select Bi-Fold Window & Door	●		●	●		●

*When fitted with an Alspec Fall Prevention Screen.

Liveable Design and Access

Liveable design is the inclusion of key easy living features that aim to make spaces easier and safer to use. This allows for ease of access with no entrance trip hazards for people with a disability, senior Australians, people with temporary injuries, and families with young children.

Alspec have a range of products suitable for flush sill or ramped access for both residential and commercial applications.

	Flush Sill Solution	Ramped Solution	AS1428 Compliant
Commercial Windows and Doors			
Hawkesbury Commercial Multi-Fold Door	●		When used with some sill options.
Hawkesbury Top Hung Commercial Sliding Door	●		●
ProGlide High Performance Sliding Door	●		
ProGlide UltraFlat Wheelchair Access Sliding Door	●		●
Altitude Apartment Sliding Door	●		
Swan Evo 45mm Shopfront Door		●	
Torrens 45mm Shopfront Door		●	
Carinya Residential Windows and Doors			
Classic Sliding Door		●	
Select Hinged Door		●	
Metro Sliding Door	●		
AluK®			
Infinium	●		



AS1428.1 Compliance for Disability Access

AS1428.1-2009 was authorised by the NCC Building Code of Australia (BCA) and the Disability Discrimination Act 1992 (DDA) to ensure building design requirements provide equitable access for the specific needs of people with disabilities.



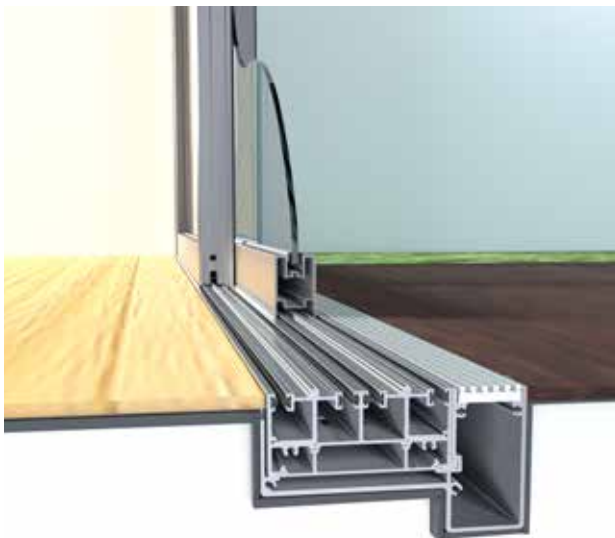
Alspec's High Performance Wheelchair Accessible Sliding Door

The ProGlide UltraFlat Sliding Door from Alspec allows architects and designers the freedom to achieve large expansive openings whilst also offering a weather resistant wheelchair compliant sill to AS1428.1 without the need to compromise on performance or aesthetics.

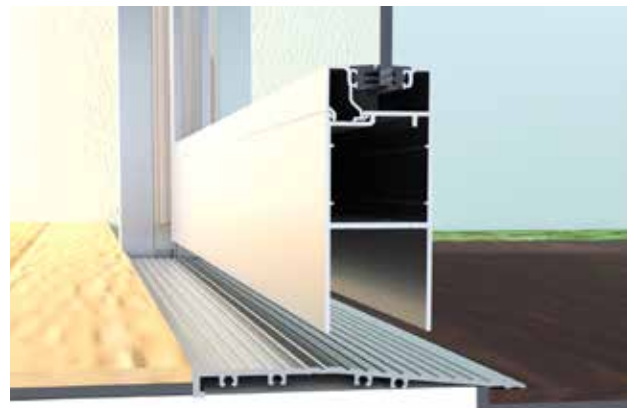
Alspec's ProGlide UltraFlat Sliding Door can comply with AS1428.1 with a recorded 19N operating force and a level, step free transition and threshold for ease of access and mobility. This ensures the client receives a solid, durable high performance product offering a continuous accessible path of seamless transition between internal and external floor finishes.

Designed and manufactured in Australia to meet the extremes of the Australian environment, the Alspec ProGlide UltraFlat is the first choice amongst architects, builders, homeowners and fabricators when performance and quality matter. Refer to pages 22 – 23 in this Design Handbook for further information.

Flush sill solution



Ramp solution







Commercial
Windows
and Doors



Hawkesbury®

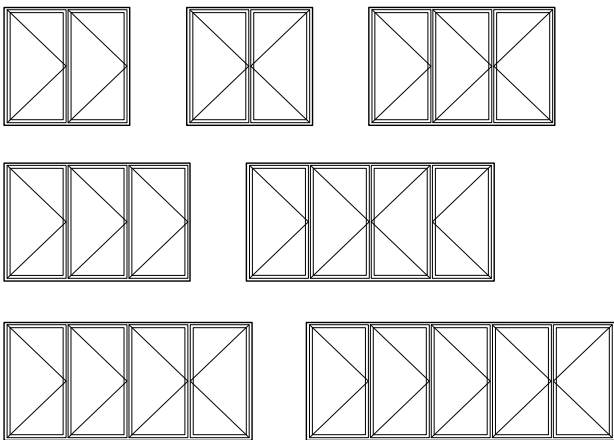
Commercial Multi-Fold Door

Multi-Fold Door Range

Designed with large floor to ceiling applications in mind, the Hawkesbury Multi-Fold Door Range combine full sized commercial perimeter framing with specially designed commercial door stiles.

A functional alternative to traditional door units in lighter commercial and residential applications, the Hawkesbury E2 and E3 door range removes the barriers to allow flow between indoor and outdoor living. Whether the doors are opened or securely fastened into place as sturdy impenetrable walls, the Alspec Hawkesbury Door is the only choice.

Typical Configurations



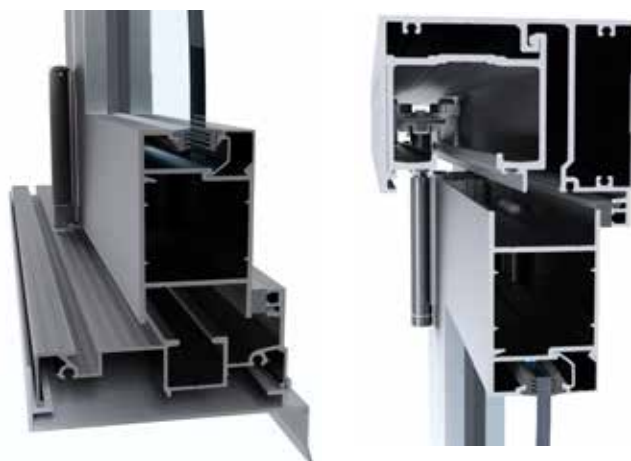


**SMOOTH, TROUBLE FREE
OPERATION, WHILE KEEPING
THE HARSH ELEMENTS OUT.**

Key Features

- Smooth top-rolling operation
- Weatherseal technology keeps wind, rain and cold air where it belongs
- The stabilising centre hinge controls door stile deflection and bowing on tall doors
- Surelock™ system allows for simple vertical height adjustment when needed
- Uncompromised security with flush bolts and proprietary door furniture
- Accepts from 6mm – 13.5mm single glazed and up to 28mm double glazed units, allowing the designer to achieve the most demanding thermal and acoustic specifications
- Concealed carriers under door panels minimising open tracks for debris to collect

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	101.6 x 44.5mm

Maximum Recommended Sizes	
Height	3000mm
Width	1000mm
Weight	60kg E2A / 115kg E3A

Acoustic Performance	
Glass Type	Rw (C; C _{tr})
6.38mm Laminate	29 dB
10.38mm/ 12/ 6.38mm IGU	34 (25mm Optilam IGU) dB

Thermal Performance	
Uw range SG	4.4 - 6.2
SHGC range SG	0.26 - 0.59
Uw range DG	3.2 - 4.0
SHGC range DG	0.15 - 0.51

Glazing Details	
Single Glazed	6 - 13.5mm
Double Glazed	18 - 28mm

Compatible Systems	
McArthur Evo Centre Pocket Framing	
Hunter Evo Flush Glazed Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	

Hawkesbury®

Top Hung Commercial Sliding Door

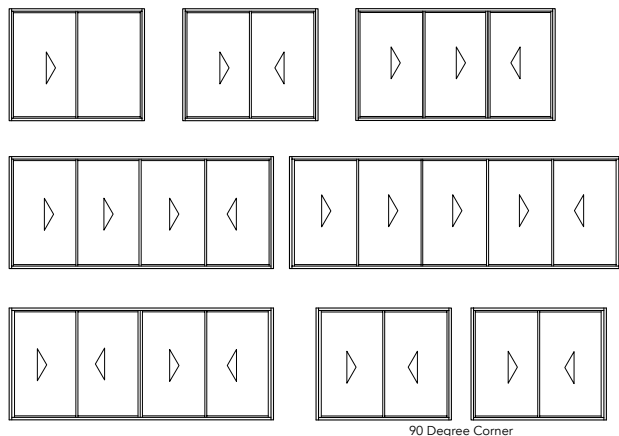
Top Hung Commercial Sliding Door

The Hawkesbury Top Hung Sliding Door from Alspec offers architects and designers unrivaled design flexibility with the freedom to achieve large expansive openings whilst also offering a weather resistant and wheelchair compliant sill.

Specifying Alspec's Hawkesbury Top Hung Sliding Door ensures the client receives a solid, durable high-performance product offering a continuous accessible path of seamless transition between internal and external floor finishes that is capable of large panel sizes up to 3000mm in height and 2500mm in width. Multi-stack configurations are available using high quality E3 hardware by Centor.

Designed and manufactured in Australia to meet the extremes of the Australian environment, the Alspec Hawkesbury Top Hung Sliding Door is the first choice amongst architects, builders, homeowners and fabricators when performance and quality matter.

Typical Configurations





**LARGE EXPANSIVE OPENINGS,
WEATHER RESISTANT AND
WHEELCHAIR COMPLIANT SILL.**

Key Features

- Powered by exclusive hardware from Centor Architectural the Hawkesbury Door features top-rolling hardware for smooth, trouble-free operation
- 19mm glazing pocket accepts up to 13.5mm single glazed
- Double glazing option accepts up to a 28mm IGU
- Colour coded glazing wedges for ease of identification/glazing
- Panel heights up to 3000mm subject to project requirements and site conditions
- Weatherseal technology keeps wind, rain and cold air where it belongs

CAD Cross Sections



Technical Specifications

Frame Dimensions	
2 Track	124 x 45 mm
3 Track	186 x 45 mm
Maximum Product Performance	
SLS (Pa)	1400
ULS (Pa)	2700
Water (Pa)	200
Maximum Recommended Sizes	
Height	3000 mm
Sash Width	2500 mm
Weight	300 kg per panel
Acoustic Performance	
Glass Type	Rw (C; C _{tr})
6.38mm Laminate	Rw 29
6.38mm/ 12/ 6.5mm	Rw32
Thermal Performance	
Uw range SG	4.5 - 6.2
SHGC range SG	0.26 - 0.59
Uw range DG	3.2 - 4.0
SHGC range DG	0.25 - 0.52
Glazing Details	
Single Glazed	6 - 13.5mm
Double Glazed	18 - 28mm

ProGlide®

High Performance Sliding Door



High Performance Sliding Door

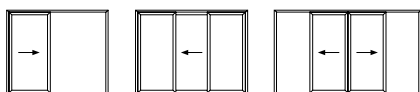
The ProGlide range from Alspec has been designed with Australia's unique architecture and climate in mind. The door allows architects and designers the freedom to achieve large expansive openings without the need to compromise on performance or aesthetics.

Specifying Alspec's ProGlide range ensures the client receives a solid, durable, high performance product.

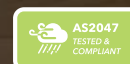
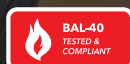
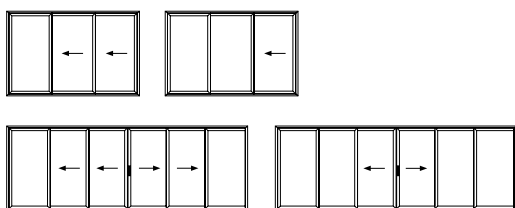
Designed by an Australian company to meet the extremes of the Australian environment, the Alspec ProGlide range is the first choice amongst architects, builders, homeowners and fabricators when performance and quality matter.

Typical Configurations

Double Track



Triple Track





Key Features

- High water performance sill options
- Large sliding panels, ideal for housing, apartment and commercial applications
- Inside or outside sliding panels, allowing multiple panel designs
- Allows up to 4 panels stacking in each direction
- Heavy duty interlocks for high wind load requirements
- Accepts up to 13.52mm single glazed and up to 28mm double glazing units, allowing the designer to achieve the most demanding thermal and acoustic specifications
- 90 degree post free corner option
- Heavy duty rollers up to 200kg per panel
- Bevelled rail options

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	101 x 50mm
Option 2	151.5 x 50mm
Maximum Product Performance	
SLS (Pa)	3000
ULS (Pa)	6000
Water (Pa)	700
Maximum Recommended Sizes	
Height	3150mm
Sash Width	2250mm
Weight	200kg per panel
Acoustic Performance	
Glass Type	Rw (C; C _{tr})
6.38mm Laminate	32 (0, -2) dB
10.38/12/6.38 IGU	38 (-2, -4) dB
Thermal Performance	
Uw range SG	4.3 - 6.1
SHGC range SG	0.38 - 0.66
Uw range DG	3.0 - 3.9
SHGC range DG	0.22- 0.55
Glazing Details	
Single Glazed	5 - 13.52mm
Double Glazed	18 - 28mm
Compatible Systems	
McArthur Evo Centre Pocket Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	
Hunter Evo Flush Glazed Framing	

ProGlide UltraFlat®



High Performance Wheelchair Accessible Sliding Door

Alspec's Wheelchair Accessible Sliding Door

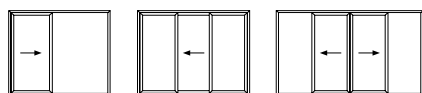
The ProGlide UltraFlat Sliding Door from Alspec allows architects and designers the freedom to achieve large expansive openings whilst also offering a weather resistant wheelchair compliant sill to AS1428.1 without the need to compromise on performance or aesthetics.

Specifying Alspec's ProGlide UltraFlat Sliding Door ensures the client receives a solid, durable, high performance product offering a continuous accessible path of seamless transition between internal and external floor finishes.

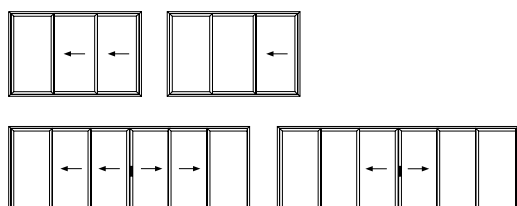
Designed and manufactured in Australia to meet the extremes of the Australian environment, the Alspec ProGlide UltraFlat Sliding Door is the first choice amongst architects, builders, homeowners and fabricators when performance and quality matter.

Typical Configurations

Double Track



Triple Track





FLOOR TO CEILING DESIGNS FOR MODERN LIVING.

Key Features

- AS1428.1 wheelchair compliant sill ideal for aged care living applications
- 250Pa water resistant sill
- Large sliding panels, ideal for housing, apartment and commercial applications
- Inside or outside sliding panels, allowing multiple panel designs
- Allows up to 4 panels stacking in each direction
- Heavy duty aluminium profiles
- Accepts up to 13.52mm single glazed and up to 28mm double glazing units, allowing the designer to achieve the most demanding thermal and acoustic specifications
- 90 degree post free corner option
- Heavy duty rollers up to 200kg per panel

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	101 x 50mm
Option 2	151.5 x 50mm
Maximum Product Performance	
SLS (Pa)	1000
ULS (Pa)	2400
Water (Pa)	250
Maximum Recommended Sizes	
Height	3150mm
Sash Width	1800mm
Weight	200kg per panel
Acoustic Performance	
Glass Type	Rw (C; C _{tr})
6.38mm Laminate	32 (0, -2) dB
10.38/12/6.38 IGU	38 (-2, -4) dB
Thermal Performance	
Uw range SG	4.3 - 6.1
SHGC range SG	0.38 - 0.66
Uw range DG	3.0 - 3.9
SHGC range DG	0.22- 0.55
Glazing Details	
Single Glazed	5 - 13.52mm
Double Glazed	18 - 28mm
Compatible Systems	
McArthur Evo Centre Pocket Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	
Hunter Evo Flush Glazed Framing	



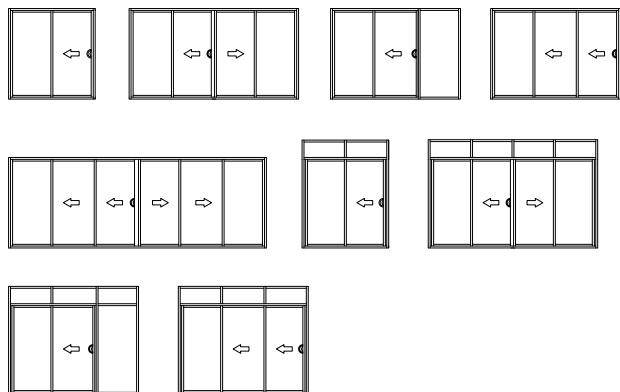
Apartment Sliding Door

The Altitude Sliding Door has been specifically designed with the latest trends in architecture in mind. The door allows architects and designers the ability to achieve expansive openings without the need to compromise on performance or aesthetics.

Specifying the Alspec Altitude Sliding Door ensures the client receives a stylish, high performance product.

Designed by Alspec to meet the extremes of the Australian environment, the Altitude Apartment Sliding Door is the premier choice by architects, builders, homeowners and fabricators when looking for a great sliding door.

Typical Configurations





FLOOR TO CEILING DESIGNS FOR MODERN LIVING.

Key Features

- Large sliding panels, ideal for high rise apartment and commercial applications
- Concealed drainage slots, high weather performance
- Fully integrated flyscreen options available
- Sliding inside and outside panel configurations
- Proprietary hardware, specially designed to accompany this product
- Fully interfaces with 76mm, 101.6mm and 150mm systems, allows for total design flexibility
- Accepts from 4mm to 12.4mm single glazed and up to 18mm double glazing units, allowing the designer to achieve the most demanding thermal and acoustic specifications

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	76 x 46mm
Option 2	101.6 x 46mm
Option 3	150 x 46mm
Maximum Recommended Sizes	
Height	2700mm
Width	1500mm
Weight	160kg
Acoustic Performance	
Glass Type	Rw (C; C _{tr})
6.38mm Laminate	32 (-2,-2)
10.5mm Hush Lam	36 (-0,-2)
Thermal Performance	
Uw range SG	4.2 - 6.0
SHGC range SG	0.30 - 0.69
Uw range DG	3.3 - 3.8
SHGC range DG	0.16 - 0.58
Glazing Details	
Single Glazed	4 - 12.4mm
Double Glazed	18mm
Compatible Systems	
Derwent Centre Pocket Framing	
McArthur Evo Centre Pocket Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	
Hunter Evo Flush Glazed Framing	

Swan Evo

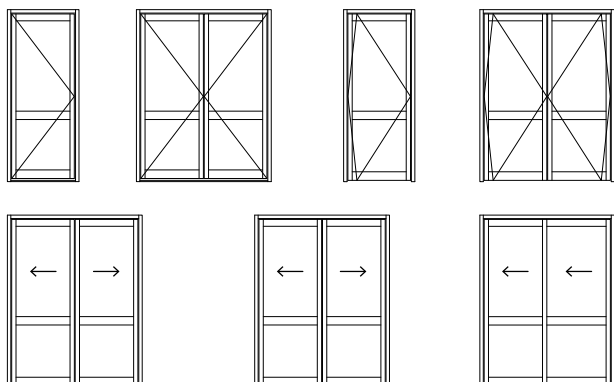
45mm Shopfront Door

45mm Commercial Shopfront Door

The Alspec Swan Evo 45mm Commercial Door is a versatile shopfront door that is easy to fabricate and install. Suitable for a wide range of applications, the Swan Evo can be used in hinged, pivoted or sliding configurations, while also integrating seamlessly with the Alspec commercial framing systems.

Featuring a new and improved clamping spigot set for superior performance and easy fitment, integrated heal and toe block and captive glazing option, the Swan Evo provides the ideal solution where superior operation and performance is required. Glazing could not be simpler with the colour coded wedges from standard Alspec systems being utilised to deal with the many diverse glass options.

Typical Configurations



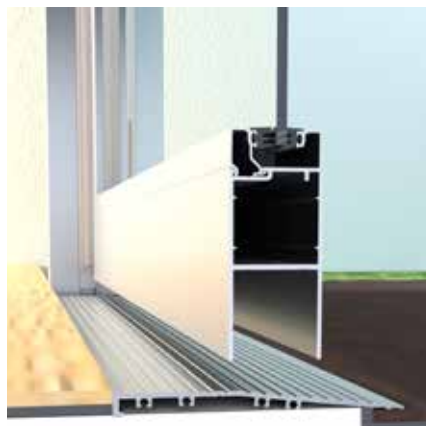


**A VERSATILE SHOP FRONT
DOOR SOLUTION FOR A WIDE
RANGE OF APPLICATIONS.**

Key Features

- Available in hinged, pivoted or sliding options
- Stronger sash through the use of custom designed clamping spigot set
- 19mm glazing pocket accepts up to 13.5mm single glazed
- Double glazing option accepts up to a 28mm IGU
- Colour coded glazing wedges for ease of identification
- Panel heights up to 3000mm subject to project requirements and site conditions
- Easily adapts to Alspec's McArthur Evo and Hunter Evo framing systems
- Wide stiles/rails available
- Range of thresholds such as disabled ramp

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	76 x 46mm
Option 2	101.6 x 46mm
Option 3	150 x 46mm

Maximum Recommended Sizes	
Height	3000mm
Width	2400mm*
Weight	225kg*

Acoustic Performance	
Glass Type	Rw (C; C _{tr})
6.38mm Laminate	32 dB
10.38mm/ 12/ 6.38mm IGU	36 (10.5mm Hush Lam) dB

Thermal Performance	
Uw range SG	4.2 - 6.0
SHGC range SG	0.30 - 0.69
Uw range DG	3.3 - 3.8
SHGC range DG	0.16 - 0.58

Glazing Details	
Single Glazed	6 - 13.5mm
Double Glazed	18 - 28mm

Compatible Systems	
Derwent Centre Pocket Framing	
McArthur Evo Centre Pocket Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	
Hunter Evo Flush Glazed Framing	

*Varies depending on hinged, pivot or sliding door used.
Check Technical Manual for further details.

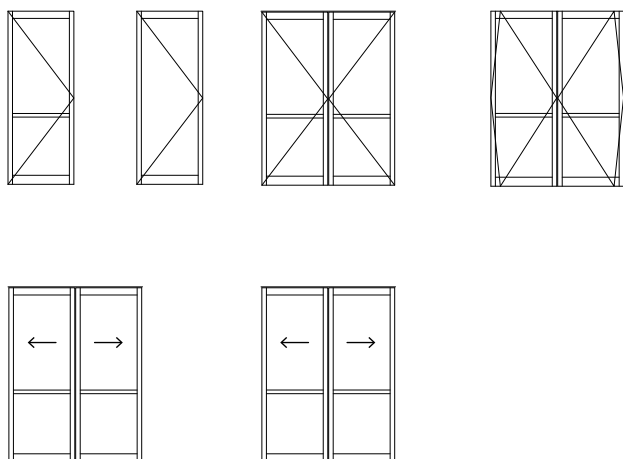
Torrens

45mm Shopfront Door

45mm Commercial Shopfront Door

Designed for the fabrication of glazed entrance doors for shopfronts, offices and other commercial and industrial premises. The Torrens door from Alspec is a widely used 45mm commercial shopfront door. The door can be used in a hinged, pivoted or sliding application. Frame sections feature snap on beads to all sides and is suitable for a range of glass thicknesses.

Typical Configurations





**A VERSATILE SHOPFRONT DOOR
SOLUTION FOR A WIDE RANGE
OF APPLICATIONS.**

Key Features

- The opening method may be either hinged, pivoted or sliding
- 4mm to 10.38mm single glazed and up to 26mm double glazed options
- Utilises spigots and bolts for frame joints
- A range of midrail sections and bead widths are available from 45mm up to 200mm
- A full range of accessories and hardware including locks, hinges, door closers and handles are available
- A range of wide stile options

CAD Cross Sections



Technical Specifications

Frame Dimensions

Option 1	Width 45mm
----------	------------

Maximum Recommended Sizes

Height	2700mm (hinged)
Width	1000mm (hinged)
Weight	Dependent on hardware

Thermal Performance

Uw range SG	4.7 - 6.2
SHGC range SG	0.36 - 0.59
Uw range DG	3.4 - 4.2
SHGC range DG	0.21 - 0.50

Glazing Details

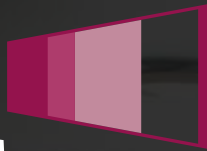
Single Glazed	4 - 10.38mm
Double Glazed	16 - 26mm

Compatible Systems

Derwent Centre Pocket Framing
McArthur Evo Centre Pocket Framing
ecoFRAMEplus Centre Pocket Double Glazed Framing
Hunter Evo Flush Glazed Framing
Hastings Front Glazed Framing

View-Max[®]

Sliding Window

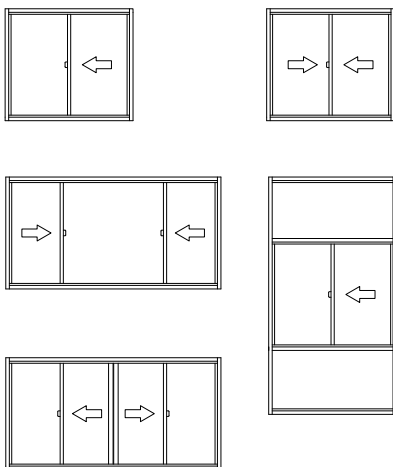


Commercial Sliding Window

The View-Max Sliding Window offers unparalleled levels of flexibility by allowing designers and architects the choice of 76mm (Derwent) or 101.6mm (McArthur Evo) framing to cater for both the slimline applications and those of a more robust commercial design.

The View-Max Sliding Window offers the flexibility of single and double glazing options and integrates with a number of design initiatives unique to Alspec such as the proprietary locking, roller and drainage systems.

Typical Configurations





**MAXIMUM VIEW,
UNLIMITED POSSIBILITIES.**

Key Features

- Commercially designed to suit 76mm and 101.6mm
- Developed specifically for multi-storey residential, schools and architecturally designed housing
- 4mm up to 10.38mm monolithic glass and up to 18mm double glazed units
- Superior thermal and acoustic performance (refer to test reports)
- Superior weather performance
- Minimal processing, cost effective and simple fabrication

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	76 x 35mm
Option 2	101.6 x 44.5mm
Maximum Recommended Sizes	
Height	1600mm
Width	1200mm
Weight	50kg
Maximum Product Performance	
SLS (Pa)	2000
ULS (Pa)	6000
Water (Pa)	600
Thermal Performance	
Uw range SG	4.7 - 6.6
SHGC range SG	0.28 - 0.69
Uw range DG	3.2 - 4.4
SHGC range DG	0.16 - 0.6
Acoustic Performance	
Glass Type	Rw (C; C _{tr}) dB
6.38mm Laminate	31 (-0,-2)
10.38mm/ 12/ 6.38mm IGU	34 (-1,-3) (10.38mm lam)
Glazing Details	
Single Glazed	4 - 10.38mm
Double Glazed	18mm
Compatible Systems	
Derwent 76mm Centre Pocket Framing	
McArthur Evo Centre Pocket Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	

ProVista®

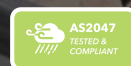
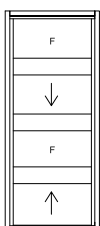
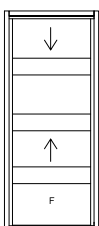
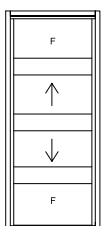
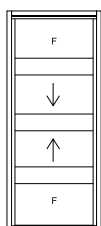
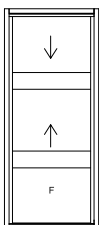
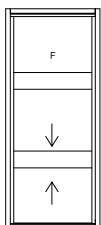
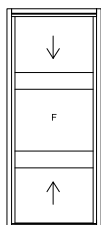
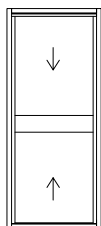
Sashless Double Hung Window

Sashless Double Hung Window

The ProVista Sashless Double Hung Window offers unobstructed views whether the window is open or closed. The two panes of glass slide smoothly and effortlessly past each other with a minimalist design.

It creates a clean and modern aesthetic feel while also providing maximum ventilation.

Typical Configurations





**UNINTERRUPTED VIEW,
MAXIMUM VENTILATION.**

Key Features

- 2, 3, 4 Pane configurations
- New build and retrofit compatible
- Snap in jambs providing concealed fixings and pulleys
- Vent lock and key locking options
- Ease of assembly
- Excellent water, bushfire, acoustic and energy performance

CAD Cross Sections



Technical Specifications

Configuration	Frame Width	
	6mm Glaze	10mm Glaze
2 Panel	41mm	49mm
3 Panel	59mm	71mm
4 Panel	76mm	93mm

Maximum Product Performance

ULS (Pa)	4500
Water (Pa)	300

Maximum Recommended Sizes

Sash Height	1800mm	
Sash Width	Dependant on sash weights	
Sash Weight	STD Pulley	WIDE Pulley
	25kg	40kg

Acoustic Performance

Glass Type	Rw (C; C _{tr})
6.38mm Laminated	28 (-1; -2)
10.38mm Laminated	31

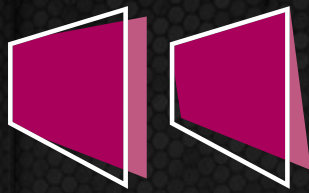
Primary Window	Secondary Window	Rw (C; C _{tr})
Awning 6.38mm Laminated	ProVista 6.38mm Laminated	47 (-2; -5)

Glazing Details

Single Glazed	6mm & 10mm
---------------	------------

Compatible Systems

McArthur Evo Centre Pocket Framing



ProTilt®

High Performance
Awning/Casement Window

High Performance Awning and Casement Windows

The ProTilt High Performance Awning and Casement Windows are ideally suited for suburban housing, multi-unit residential, hotels and commercial applications.

Featuring overlapping internal and external seals, the ProTilt Awning and Casement Window is the preferred choice where superior weather performance is required.

A range of glass thickness options from 4mm to 28mm allows the system to be configured for excellent thermal and acoustic performance.

The system can be used with a range of available stays while also offering multi-point locking options and a proprietary operator. The ProTilt seamlessly interfaces with Alspec's McArthur Evo and Hunter Evo Commercial Framing Systems.

Key Features

- Concealed multi-point locking
- Superior weather performance
- Excellent thermal and acoustic performance
- Accepts up to 16mm single glazed and up to 28mm double glazing units, allowing the designer to achieve the most demanding thermal and acoustic specifications



**SUPERIOR WEATHER
PERFORMANCE AND EXCELLENT
THERMAL & ACOUSTIC GRADE.**

CAD Cross Sections



Technical Specifications

Awning Window	Without Multi-Point Locks	With Multi-Point Locks
Max height	1500mm	2000mm
Min height	400mm	900mm
Max width	1200mm	1500mm
Min width	500mm	500mm
Max area	1.8m ²	2.4m ²
Max weight	80kg	130kg

Casement Window with Multi-Point Locks	
Max height	2100mm
Min height	900mm
Max width	1000mm
Min width	500mm
Max area	2.0m ²
Max weight	45kg

Maximum Product Performance	
SLS (Pa)	3500
ULS (Pa)	8900
Water (Pa)	1000

Acoustic Performance	Single Glazed	Double Glazed
Glass Type	Rw (C; C _{tr}) dB	Rw (C; C _{tr}) dB
6.38mm Laminate	33 (-1,-2) dB	N/A
6.38mm/ 12/ 6.38mm IGU	N/A	36 (-1,-3) dB

Maximum Recommended Sizes	
Height	2000mm
Width	1500mm
Weight	130kg
Sash m ²	2.4

Glazing Details	
Single Glazed	4 - 16mm
Double Glazed	24 - 28mm

Compatible Systems	
McArthur Evo Centre Pocket Framing	
ecoFRAMEplus Centre Pocket Double Glazed Framing	
Hunter Evo Flush Glazed Framing	

Awning & Casement Windows



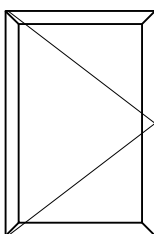
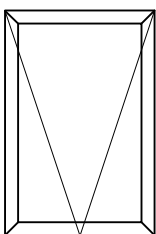
Awning and Casement Window

Alspec's range of awning and casement windows are ideal for suburban housing, multi-unit residential, hotels and commercial applications. The awnings and casements can integrate with a number of Alspec Commercial Framing systems by using different awning adaptors.

The 35mm and 50mm sashes offer the benefit of overlapping internal and external seals to achieve superior weather performance. The 443 30mm sash sits inset of the framing and can offer a flush appearance.

Various glazing options for single and double glazing are available. All awnings and casements can be used with a range of available stays and operated with chainwinders or cam handles, locking or non-locking. With the use of our chainwinder adaptor, insect and security screens can easily be added from the inside of the building.

Typical Configurations





**IDEAL FOR SUBURBAN HOUSING,
MULTI-UNIT RESIDENTIAL AND
COMMERCIAL APPLICATIONS.**

Key Features

- Wide range of applications
- Integration with a number of Alspec Commercial Framing systems
- Superior weather performance
- Various glazing options including double glazing
- Electric winder option

CAD Cross Sections

Sill detail



Head detail



Technical Specifications

Frame Dimensions		
Option 1	Sash width 35mm	
Option 2	Sash width 50mm	
Maximum Recommended Sizes	35mm	50mm
Height	1500mm	1800mm
Width	1200mm	1500mm
Weight	35kg	40kg
Sash SQMs	1.2	1.8
Maximum Product Performance	35mm	50mm
SLS (Pa)	1000	1000
ULS (Pa)	1800	3500
Water (Pa)	300	700
Thermal Performance	35mm	50mm
Uw range SG	5.9 - 6.9	5.8 - 7.2
SHGC range SG	0.26 - 0.53	0.29 - 0.51
Uw range DG	4.2 - 4.8	4.3 - 5.3
SHGC range DG	0.15 - 0.48	0.13 - 0.45
Glazing Details	35mm	50mm
Single Glazed	4 - 12mm	4 - 12.38mm
Double Glazed	18 - 24mm	24 - 30mm
Acoustic Performance	35mm	50mm
Glass Type	Rw (C; C _{tr})	Rw (C; C _{tr})
6.38mm Laminate	33 (-1,-2) dB	32 (0,-1) dB
Compatible Systems		
Derwent Centre Pocket Framing		
McArthur Evo Centre Pocket Framing		
ecoFRAMEplus Centre Pocket Double Glazed Framing		
Hunter Evo Flush Glazed Framing		

CASE STUDY | Jetsons House, Casuarina NSW

This 28 metre-long facade of floor-to-ceiling glazing is constructed using Alspec's high performance window and door framing products.

Architect

Dimension 3

Builder

Cosbar Construction

Fabricator

Tweed Coast Glass

The striking design of a new home on NSW's north coast has been inspired by the architecture style "Googie", once considered futuristic and made popular during the space age era of the mid-20th century. Aptly named "The Jetsons" after the iconic 1960s animated television show, the Casuarina home features many Googie architecture traits such as curvaceous geometric shapes, minimalist interiors and the bold use of steel and glass.

A key aspect of the expansive design is the 28 metre-long facade of floor-to-ceiling glazing, constructed using products from Alspec's high performance window and door framing range.

Situated on the oceanfront at Casuarina, just south of the Queensland border, this dramatic cantilevered home has been constructed over two levels, with the upper level offset by 45 degrees, providing both interest and practical shading to the lower level areas. The architectural design features large-scale indoor spaces which interact seamlessly with the outdoors, showcasing the superior spanning properties of the Hunter Evo Single Flush Glazed Framing and the ProGlide High Performance Sliding Doors.



CASE STUDY | Jetsons House, Casuarina NSW

Products Used

- Hunter Evo 101.6mm Single Flush Glazed Framing
- ProGlide High Performance Sliding Door



Upstairs, Alspec's Hunter Evo 101.6 mm Single Flush Glazed Framing was used to form the vast northern façade overlooking the outdoor area. Originating in the commercial environment, Hunter Evo Framing was selected for this project because of its versatility and flush glazed finish which contribute to the building's modernistic appearance. The wall of glazing provides optimum light while addressing energy requirements and ensuring protection from the seaside weather extremes. While the 101.6mm x 50mm product was used for this project, Hunter Evo is also available in 150mm. The single glazed framing can accommodate 4-14mm glazing while the double glazing can accommodate up to 40mm.

At ground level, ProGlide High Performance Sliding Doors were selected to span the length of the building adjacent to the pool. This project takes advantage of the ProGlide's ability to accommodate floor-to-ceiling heights and up to 4 panels stacking in each direction. With 14 panels distributed across flush triple tracks and sills, the panels stack at each end to provide a truly seamless interface to the outdoor area when opened. As well as looking great, the heavy duty aluminium profile of the doors will ensure ongoing performance and endurance in the seaside environment and provide exceptional weather and water protection.

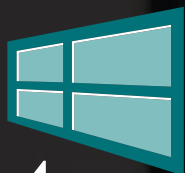
With its space-age design and expanses of sophisticated framing, this striking oceanfront home demonstrates how simple geometric lines combined with the right glazing products can together deliver a stunning architectural masterpiece.







Commercial
Framing



Derwent

76mm Centre Pocket Framing

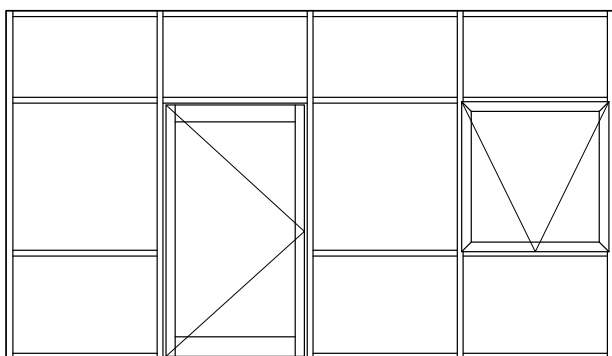


Multi-Purpose Alspec Architectural Suites

The Derwent 76mm x 35mm Centre Pocket Framing is an ideal economical fixed glazing suite for both internal and external locations. Suitable for residential entrance ways, arcades, glass partitions and offices, the Derwent is the lightest and most slimline of the multi-purpose Alspec Architectural Suites.

With its straight cuts and pocket glazing the Derwent not only looks good, but is easy to fabricate and easy to install. Suitable for a range of glass thicknesses it has self draining sub sills that solve water leakage problems. The Derwent also provides a seamless interface with Alspec's extensive product offer.

Typical Configurations





**AN IDEAL ECONOMICAL FIXED
GLAZING SUITE FOR BOTH
INTERNAL AND EXTERNAL USE.**

Key Features

- Sharp unbroken lines
- Slimline frame
- 4mm up to 10.38mm glazing options
- Centre pocket framing, reducing the number of beads required thus improving fabrication and installation time
- Various adaptors to easily accept awning, double hung, sliding windows, louvres and Alspec's hinged doors

CAD Cross Sections



Technical Specifications

Frame Dimensions	
Option 1	76 x 35mm
Maximum Recommended Sizes	
Height	2400mm
Width	2000mm
Maximum Product Performance	
SLS (Pa)	3500
ULS (Pa)	3500
Water (Pa)	600
Thermal Performance	
Uw range SG	4.0 - 5.9
SHGC range SG	0.34 - 0.77
Glazing Details	
Glass Position	Centre
Single Glazed	4 - 10.38mm
Compatible Systems	
Swan Evo 45mm Commercial Shopfront Door	
Torrens 45mm Commercial Shopfront Door	
35mm Awning Window	
View-Max Commercial Sliding Window	



McArthur Evo

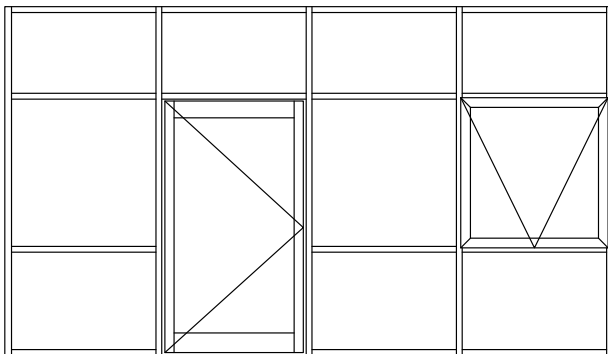
Centre Pocket Framing

Alspec's Most Popular Commercial Framing

The McArthur Evo Centre Pocket Glazing System is the most popular and flexible of the Alspec Commercial range. Available in two frame depths, 101.6mm and 150mm x 44.5mm. Ideal for shopfront use, it is widely favoured by architects and designers for a multitude of applications.

With its straight cuts and centre pocket glazing the McArthur Evo not only looks good, but is easy to fabricate and easy to install. McArthur Evo is suitable for a range of glass thicknesses with self draining sub sills that solve water leakage problems. The McArthur Evo also provides a seamless interface with Alspec's extensive product offer.

Typical Configurations





**WIDELY FAVOURED BY
ARCHITECTS AND DESIGNERS FOR
A MULTITUDE OF APPLICATIONS.**

Key Features

- Sharp unbroken lines
- Centre glazed
- Robust frame
- Excellent weathering performance
- 101.6mm and 150mm x 44.5mm framing system
- 19mm glazing pocket accepts up to 14.5mm single glazed
- Colour coded glazing wedges for ease of identification
- Easily adapts to Alspec's awnings and hinged doors

CAD Cross Sections



Technical Specifications

Frame Dimensions

Option 1	101.6 x 44.5mm
Option 2	150 x 44.5mm


Maximum Recommended Sizes	101.6mm Frame	150mm Frame
Height	4200mm	5100mm
Width	2200mm	2400mm

Maximum Product Performance	101.6mm Frame	150mm Frame
SLS (Pa)	3000	3000
ULS (Pa)	7200	7400
Water (Pa)	1000	900

Acoustic Performance (both)	
Glass Type	Rw (C; C _{tr})
6.38mm Lam	32 (-1,-2) dB

Glazing Details (both)	
Glass Position	Centre
Single Glazed	6 - 14.5mm

Compatible Systems	
Swan Evo 45mm Commercial Shopfront Door	
Torrens 45mm Commercial Shopfront Door	
35/50mm Awning Window	
ProTilt High Performance Awning/Casement Window	
View-Max Commercial Sliding Window	
ProGlide High Performance Sliding Door	
Altitude Apartment Sliding Door	



ecoFRAMEplus®

Centre Pocket Double Glazed Framing

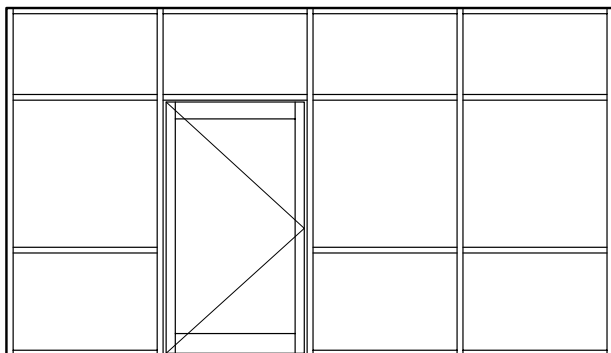
Centre Pocket Double Glazed Framing

The ecoFRAMEplus is the ideal system principally when energy efficiency is paramount. Its versatility allows countless specifications to be achieved, from standard shopfront applications, through to the most challenging structural and energy requirements.

Available in a frame depth of 101.6mm x 50mm and 150mm x 50mm, ecoFRAMEplus allows a frame to transform from double to single glazed with ease. Glazing could not be simpler with the colour coded wedges to deal with the many diverse glass options.

Sub sills are recommended for optimum weathering with all ecoFRAMEplus systems.

Typical Configurations

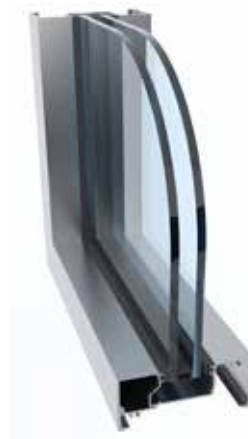




Key Features

- Sharp unbroken lines
- 4mm – 14mm single glazed and up to 28mm double glazed options
- Robust frame
- Secure glazing using fully captive backing gaskets to outside of window frame
- Excellent weathering performance
- Colour coded glazing wedges for ease of identification
- Easily adapts to Alspec's awnings and hinged doors

CAD Cross Sections



Technical Specifications

Frame Dimensions		
Option 1	101.6 x 50mm	
Option 2	150 x 50mm	
Maximum Recommended Sizes	101.6mm Frame	150mm Frame
Height	4200mm	4800mm
Width	2400mm	2400mm
Maximum Product Performance	101.6mm Frame	150mm Frame
SLS (Pa)	2000	2500
ULS (Pa)	3000	3800
Water (Pa)	1000	1200
Acoustic Performance	101.6mm Frame	150mm Frame
Glass Type	Rw (C; C _{tr})	Rw (C; C _{tr})
6.38mm Laminate	32 (-1,-2) dB	32 (-1,-2) dB
6.38mm/ 12/ 6.38mm IGU	36 (-1,-5) dB	36 (-1,-5) dB

Glazing Details (both)		
Glass Position	Centre	
Single Glazed	4 - 14mm	
Double Glazed	16 - 28mm	
Thermal Performance	101.6mm Frame	150mm Frame
Uw range DG	2.5 - 3.5	3.1 - 3.7
SHGC range DG	0.18 - 0.64	0.15 - 0.64
Compatible Systems		
Swan Evo 45mm Commercial Shopfront Door		
Torrens 45mm Commercial Shopfront Door		
35/50mm Awning Window		
ProTilt High Performance Awning/Casement		
ProGlide High Performance Sliding Door		
Altitude Apartment Sliding Door		
View-Max Commercial Sliding Window		



Hunter Evo

Single Flush Glazed Framing



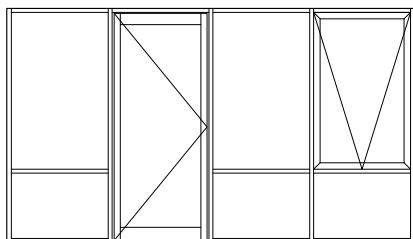
Single Flush Glazed Framing

The Hunter Evo Single Flush Glazed Framing is the most versatile and flexible of the Alspec Commercial Framing Systems. Available in a frame depth of 101.6mm x 50mm and 150mm x 50mm, it is ideal for shopfronts.

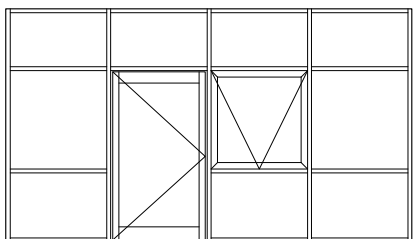
With its straight cuts and flush glazing the Hunter Evo not only looks good, but is easy to fabricate and easy to install. Suitable for a range of single glazed glass thickness options to address the most demanding energy requirements. With self draining sub sills it also solves water leakage problems. The system can be internally or externally glazed along with incorporating the flexibility and appeal of gently curved or faceted frame installations. The Hunter Evo also provides a seamless interface with Alspec's extensive product offer.

Typical Configurations

101.6mm



150mm



**SUITABLE FOR A RANGE OF
SINGLE GLAZED GLASS
THICKNESS OPTIONS.**

Key Features

- Sharp unbroken lines
- Flush glazed appearance
- Robust frame
- Good weathering
- 4mm – 14mm single glazed
- Easily adapts to Alspec's awnings and hinged doors

CAD Cross Sections



Technical Specifications

Frame Dimensions		
Option 1	101.6 x 50mm	
Option 2	150 x 50mm	
Maximum Recommended Sizes	101.6mm Frame	150mm Frame
Height	4200mm	4500mm
Width	2400mm	2400mm
Maximum Product Performance	101.6mm Frame	150mm Frame
SLS (Pa)	3500	6000
ULS (Pa)	8900	9000
Water (Pa)	1200	1000
Acoustic Performance		
Glass Type	Rw (C; C _{tr})	
6.38mm Laminate	33 (-1,-3) dB	
Glazing Details		
Glass Position	Front	
Single Glazed	4 - 14mm	

Thermal Performance	101.6mm Frame	150mm Frame
Uw range DG	4.2 - 6.5	4.5 - 6.5
SHGC range DG	0.24 - 0.73	0.24 - 0.74
Cyclonic Performance	101.6mm Frame	150mm Frame
Glass Type	12.4 mm Gen II	12.4 mm Gen II
Speed (m/sec)	38	38
Glass Type	14.08mm Ultra Forza	12.84mm Ultra Forza
Speed (m/sec)	38	39
Compatible Systems		
Swan Evo 45mm Commercial Shopfront Door		
Torrens 45mm Commercial Shopfront Door		
35/50mm Awning Window		
ProTilt High Performance Awning/Casement		
ProGlide High Performance Sliding Door		
Altitude Apartment Sliding Door		



Hunter Evo

Double Flush Glazed Framing

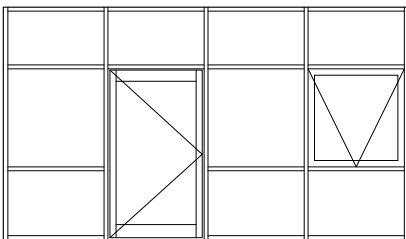
Double Flush Glazed Framing

The Hunter Evo Double Flush Glazed Framing is the most versatile and flexible of the Alspec Commercial Framing Systems. Available in a frame depth of 101.6mm x 50mm and 150mm x 50mm, it is ideal for shopfronts.

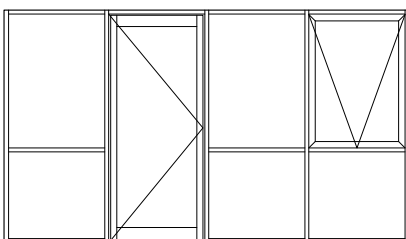
With its straight cuts and flush glazing the Hunter Evo not only looks good, but is easy to fabricate and easy to install. Suitable for a range of double glazed glass thickness options to address the most demanding energy requirements. With self draining sub sills it also solves water leakage problems. The system can be internally or externally glazed along with incorporating the flexibility and appeal of gently curved or faceted frame installations. The Hunter Evo also provides a seamless interface with Alspec's extensive product offer.

Typical Configurations

101.6mm



150mm



**SUITABLE FOR A RANGE OF
DOUBLE GLAZED GLASS
THICKNESS OPTIONS.**

Key Features

- Sharp unbroken lines
- Flush glazed appearance
- Robust frame
- Up to 40mm double glazed
- Easily adapts to Alspec's awnings and hinged doors

CAD Cross Sections



Technical Specifications

Frame Dimensions		
Option 1	101.6 x 50mm	
Option 2	150 x 50mm	
Maximum Recommended Sizes	101.6mm Frame	150mm Frame
Height	4200mm	4500mm
Width	2400mm	2400mm
Maximum Product Performance	101.6mm Frame	150mm Frame
SLS (Pa)	3500	6000
ULS (Pa)	8900	9000
Water (Pa)	1200	1000
Acoustic Performance		
Glass Type	Rw (C; C _{tr})	
6.38mm/ 12mm/ 6.38mm IGU	36 (-1 -5) dB	

Glazing Details		
	101.6mm Frame	150mm Frame
Glass Position	Front	Front
Double Glazed	15 - 30mm	15 - 40mm
Thermal Performance		
	101.6mm Frame	150mm Frame
Uw range DG	2.4 - 3.6	2.9 - 3.9
SHGC range DG	0.17 - 0.64	0.16 - 0.64
Compatible Systems		
Swan Evo 45mm Commercial Shopfront Door		
Torrens 45mm Commercial Shopfront Door		
35/50mm Awning Window		
ProTilt High Performance Awning/Casement		
ProGlide High Performance Sliding Door		
Altitude Apartment Sliding Door		
ProVista Sashless Double Hung Window		

Hunter Evo

Flush Glazed Acoustic Framing

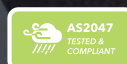
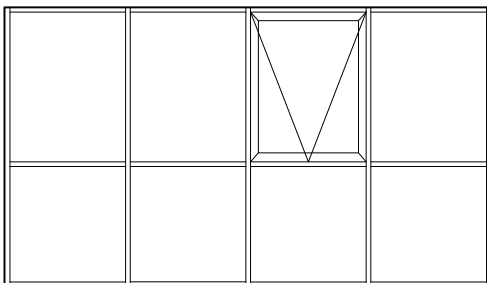


Double Flush Glazed Acoustic Framing

The Hunter Evo 150mm Acoustic Framing is the ideal system when sound reduction is paramount. Featuring dual 19mm glazing pockets with 100mm airspace, the Hunter Evo Acoustic Frame is ideal for commercial shopfronts, showrooms and high end residential projects.

Featuring straight cuts and flush glazing the Hunter Evo Acoustic Frame not only looks good, but is easy to fabricate and install. Providing a seamless interface with the Hunter Evo Flush Glazed Framing system as well as accepting 35mm and 50mm awning sashes, this system offers the flexibility and performance demanded for modern build environments.

Typical Configurations





**THE IDEAL SYSTEM WHEN SOUND
REDUCTION IS PARAMOUNT.**

Key Features

- Superior acoustic performance
- Sharp unbroken lines
- Flush glazed appearance
- Robust frame
- Good weathering
- Glass type include 6mm up to 14mm
- Easily adapts to Alspec's awnings and hinged doors

CAD Cross Sections



Technical Specifications

Frame Dimensions

Option 1	101.6 x 50mm
Option 2	150 x 50mm

Maximum Recommended Sizes

Height	4500mm
Width	2400mm

Maximum Product Performance

SLS (Pa)	3000
ULS (Pa)	4000
Water (Pa)	1200

Acoustic Performance (both)

Glass Type		Rw
Pocket 1	Pocket 2	
6.38	- 6.38	Rw43
6.38	- 12.38	Rw45
6.38	- 12.5 Vlam	Rw47
12.5	- 12.5 Vlam	Rw49

Glazing Details (both)

Glass Position	Front / Back
Double Glazed	6 - 14mm (x2)

Compatible Systems

35mm Awning Window
50mm Awning Window
ProVista Sashless Double Hung Window
Breezway Dualair Secondary Glazed Louvre
ProGlide High Performance Sliding Door
Altitude Apartment Sliding Door



ecoWALL 225

Flush Glazed Framing



The Complete Structural System

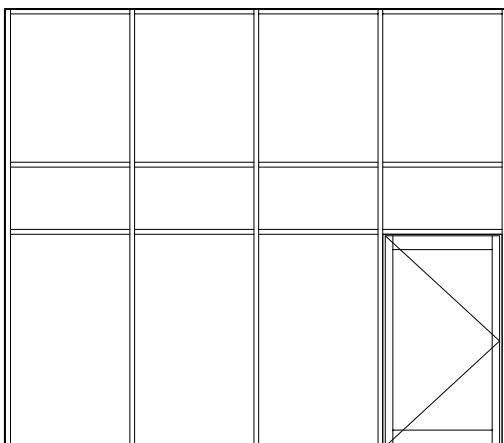
The ecoWALL 225 Flush Glazed Framing is arguably Alspec's greatest engineering achievement.

With 225mm x 60mm profiles it is not only proportionally correct but also boasts the structural integrity of its 250mm alternatives available in the market. Add this to the fact that with ecoWALL 225 you can single or double glaze unlike any of the competitors.

In many cases using ecoWALL 225 can eliminate the requirement of unsightly and often very expensive steel frames to support the system (this is determined subject to structural engineer's detail and project specific design criteria).

With reinforced subheads, mullion anti buckling technology, and self draining sub-sills to prevent water leakage the ecoWALL 225 is the complete structural system ideal for your next commercial foyer, auto showroom or high end residential project.

Typical Configurations





**IDEAL FOR COMMERCIAL
FOYER, AUTO SHOWROOM OR
HIGH END RESIDENTIAL.**

Key Features

- Sharp unbroken lines
- 4 – 14mm single glazing and up to 28mm double glazing options
- Ideally suited for automotive showrooms, two storey foyers, atriums or similar applications
- Secure glazing using fully captive backing gaskets to outside of frame
- Superior weathering performance
- Colour coded glazing wedges for ease of identification allowing for multiple glass types

CAD Cross Sections



Technical Specifications

Frame Dimensions

Option 1	225 x 60mm
----------	------------

Maximum Recommended Sizes

Height	6300mm
Width	2700mm

Maximum Product Performance

SLS (Pa)	4000
ULS (Pa)	6000
Water (Pa)	1200

Acoustic Performance

Glass Type	Rw (C; C _{tr})
6.38mm/ 10 / 8.38mm IGU	37 (-1,-4) dB

Thermal Performance

Uw range SG	5.0 - 6.9
SHGC range SG	0.24 - 0.73
Uw range DG	3.5 - 4.3
SHGC range DG	0.16 - 0.63

Glazing Details

Glass Position	Front
Single Glazed	4 - 14mm
Double Glazed	20 - 28mm

Compatible Systems

Swan Evo 45mm Commercial Shopfront Door
Torrens 45mm Commercial Shopfront Door



Hastings

Front Glazed Framing

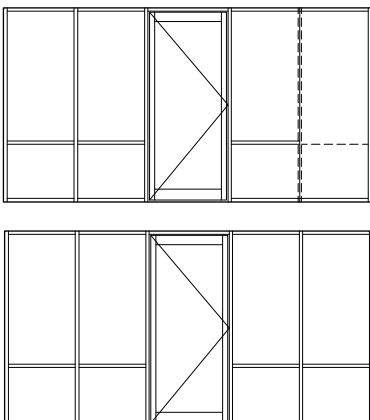
Front Glazed Framing / Front Glazed 550 Plant On Sections

The Hastings Front Glazed Framing is a versatile and flexible system available in a frame depth of 101.6/150mm x 50mm. Ideal for shopfronts, upmarket residential and commercial applications.

With its straight cuts and flush glazing the Hastings not only looks good, but is easy to fabricate and easy to install. Hastings 101.6/150mm is suitable for a range of single and double glazed options.

The 550 Front Glazed Plant On System is versatile and flexible allowing glazing adaptors and covers to be fixed to other structure including aluminium, steel or timber. With cover adaptors at 50mm they can be used along side the Hastings Framing. Ideal for upmarket residential and commercial applications.

Typical Configurations



**IDEAL FOR SHOPFRONTS,
UPMARKET RESIDENTIAL
AND COMMERCIAL.**

Key Features

- Sharp unbroken lines
- Front glazed appearance
- Robust frame
- Good weathering performance
- 4 – 12.4mm single glazed and up to 32mm double glazed
- Easily adapts to Alspec's hinged doors

CAD Cross Sections



101.6 x 50mm

50mm plant on system

150 x 50mm

Technical Specifications

Frame Dimensions		
Option 1	101.6 x 50mm	
Option 2	150 x 50mm	
Option 3 '550'	50mm plant on system	
Maximum Recommended Sizes		
	101.6	150/550
Height	3600mm	Dependent on structure
Width	2400mm	
Maximum Product Performance (101.6 only)		
SLS (Pa)	2400	
ULS (Pa)	3000	
Water (Pa)	1000	
Acoustic Performance (101.6 & 150)		
Glass Type	Rw (C; C _{tr})	
6.38mm Laminate	32 (-1,-2) dB	
Glazing Details		
	101.6	150/550
Glass Position	Front	Front
Single Glazed	6 - 12.38mm	6 - 16mm
Double Glazed	24 - 32mm	24 - 30mm
Compatible Systems		
Swan Evo 45mm Commercial Shopfront Door		
Torrens 45mm Commercial Shopfront Door		

Partitioning Systems

45mm Display Suite

The 45mm Display Suite is a narrowline, adaptable general purpose suite ideal for internal glazing and one of the simplest systems available for continuous glass walls, with the glass panels silicone butt joined or mullions may be utilised for extra strength.

The system can be used with a range of standard door frames from 35mm to 45mm and readily complements plasterboard walls.

May be used in conjunction with Alspec's range of aluminium skirting.

Opal 64/76/92mm Stud Partitioning Suite

The Opal suite has been produced in response to market demand for a more contemporary framing system which meets today's design requirements.

By being skilfully engineered this system offers more strength where required whilst ensuring installers are still competitive at the contract stage.

The 64mm, 76mm and 92mm framing cleverly utilise the current McArthur 101.6mm centre pocket framing bead to eliminate the need for additional adaptors and wedges for installation of doors.

Diamond 64mm Stud Partitioning Suite

The Diamond suite is a 104.8mm economical, light weight, easy to fabricate internal framing system. The system accommodates 64mm steel stud with plasterboard and glazing options.

The system can be used with a range of standard door frames from 35mm to 45mm and readily complements plasterboard walls.

May be used in conjunction with Alspec's range of aluminium skirting.

Skirting Profiles

Alspec provide a comprehensive range of skirtings suitable for all its Partition Suites and commercial/ industrial building fit outs including:

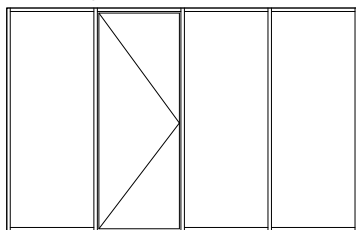
- 1.6mm Flat bar stick on skirting in 25, 80, 100 & 150mm.
- 3mm Flat bar stick on skirting in 25, 40, 50, 80, 100 & 150mm.
- Concealed screw fix skirtings 5mm thick in 50, 100 & 150mm. Suitable PVC corner stakes and cover tape in black and grey are available.

All sections are readily available from Alspec in mill, black or clear anodised finish off the shelf. For all other colours (including warranty paint) please contact your Alspec Area Manager for the relevant lead times.

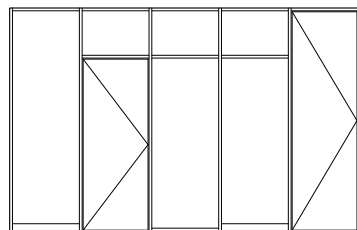


Typical Configurations

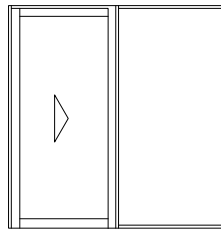
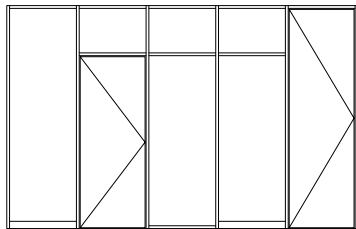
45mm Display Suite



Diamond Stud Partitioning Suite



Opal Stud Partitioning Suite



CAD Cross Sections



45mm Display Suite



Opal 64/76/92mm



Diamond 64mm

Technical Specifications

Frame Dimensions

45mm Display Suite	45 x 26.2mm
Opal 64/76/92mm	101.6 x 42mm 116.5 x 42mm 132 x 42mm
Diamond 64mm	104.8 x 25mm 105 x 50mm

Maximum Recommended Sizes or 45mm, Opal 64/76/92mm & Diamond 64mm

Height	2700mm
Width	2400mm

Glazing Details	Glass Position	Single Glazed
45mm Display Suite	Centre	4 - 10.38mm
Opal 64/76/92mm	Centre	4 - 10.38mm
Diamond 64mm	Centre/Front	4 - 10.38mm

Compatible Systems for 45mm, Opal 64/76/92mm & Diamond 64mm

Swan 45mm Commercial Door

Skirting Profiles

Compatible Systems for Skirting Profiles

45mm Display Suite

Opal Partitioning Suite

Diamond Partitioning



CASE STUDY | Meriton Suites, North Sydney NSW

This new hotel uses high performance acoustic window and door framing products to ensure a quiet and peaceful stay for guests.

Architect

Tony Caro Architects

Builder

Meriton

Fabricator

Alutec Windows

Guests at a new hotel in North Sydney will barely notice they are sleeping just metres from one of Australia's busiest freeways, thanks to purposefully selected acoustic glazing products from Alspec's high performance range. The 29-storey Meriton Suites on Arthur Street is located adjacent to the Warringah Freeway, the key access route to the Sydney Harbour Bridge and Tunnel. With thousands of vehicles using the freeway each day, it was up to the building designers to work closely with Alspec's R&D team to ensure optimum acoustic performance for the comfort of visitors.

With expansive surrounding views of Sydney Harbour and the Lower North Shore, products were needed which could deliver larger window openings and balcony doors to maximise the views, whilst minimising potential noise impacts. The ProGlide/Altitude Acoustic Sliding door was the obvious choice to provide the level of acoustic performance required for this application. This heavy duty, high performance sliding door system is ideal for floor-to-ceiling applications, while providing exceptional all-weather performance.



CASE STUDY | Meriton Suites, North Sydney NSW

Products Used

- Hunter Evo 101.6mm Single Flush Glazed Framing
- Hunter Evo 150mm Single Flush Glazed Framing
- Hunter Evo 150mm Acoustic Framing
- ecoWALL 225
- ProGlide High Performance Sliding Door
- Altitude Apartment Sliding Door
- Hawkesbury Commercial Multi-Fold Door
- Swan Evo 45mm Commercial Door
- ProTilt High Performance Awning/Casement Window - Single Glazed
- Fixed Louvre



To deliver the larger window openings to take advantage of the iconic views of Sydney Harbour, window framing products were selected from the Hunter Evo Flush Glazed Framing system. The Hunter Evo 150mm Acoustic Framing is an architectural grade aluminium framing product specifically designed for situations where acoustic considerations are paramount. As well as having exceptional sound-reducing properties, the Hunter Evo is extremely strong thanks to the design of the mullions (vertical frame elements) and offers excellent weathering performance.

Complementing the framing choices, ProTilt High Performance Awning and Casement Windows were selected for openable window requirements. Able to accommodate glass up to 28mm, and with multi-point locking options, the ProTilt windows are ideally suited to hotel and commercial applications to enhance acoustic performance. The windows worked seamlessly with the Hunter Evo framing products to deliver an integrated glazing solution for the building.

At the end of a busy day exploring Sydney's many tourist attractions, or after a long day in the office for the business visitor, this well-insulated hotel will provide a welcoming and peaceful refuge to relax and unwind.







ALUK[®]

INFINIUM ULTRA THIN SLIDING DOOR

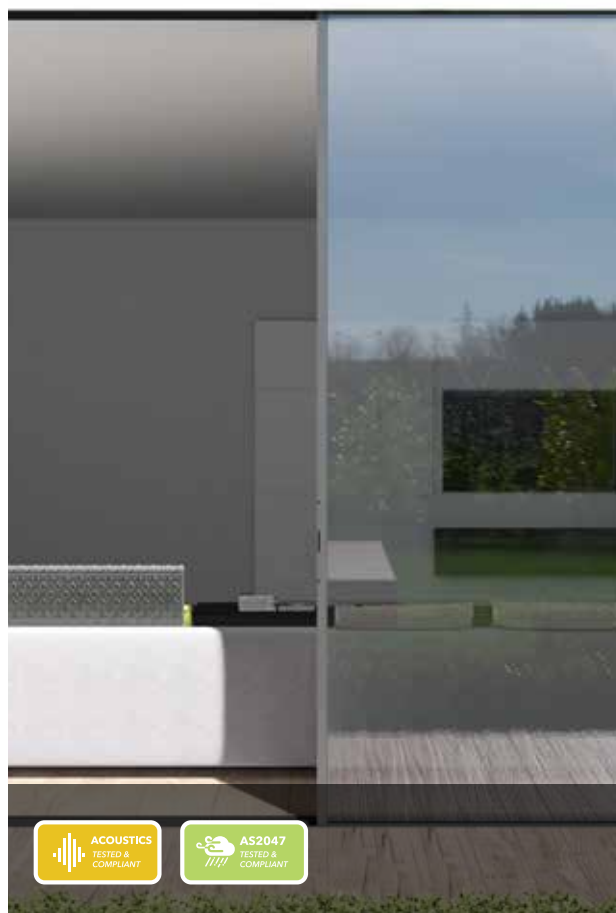
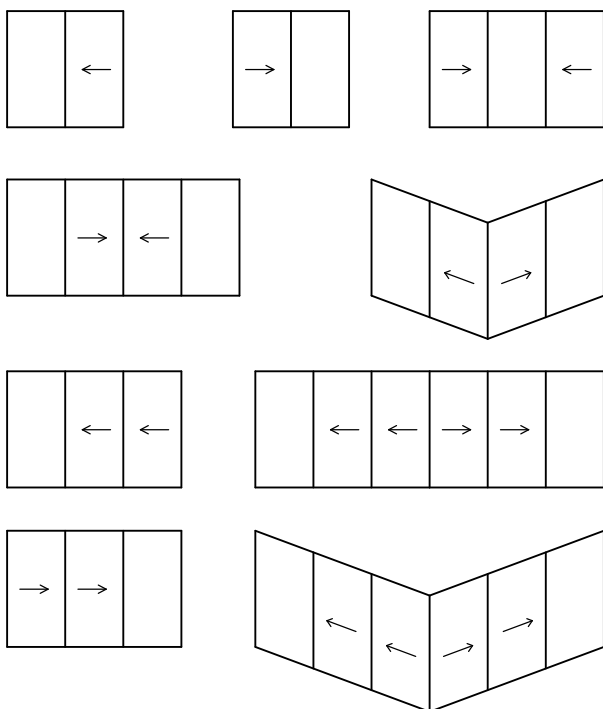


A Modern Masterpiece

Like the finest pieces of art, great architecture inspires, it evokes discussion and stirs emotions. At times it demands attention, other times reflection. At its most powerful, it beautifully unifies indoor and outdoor worlds.

The AluK® Infinium aluminium sliding door embodies these principles with picture-perfect precision, turning every view into an ever-changing work of art.

Typical Configurations



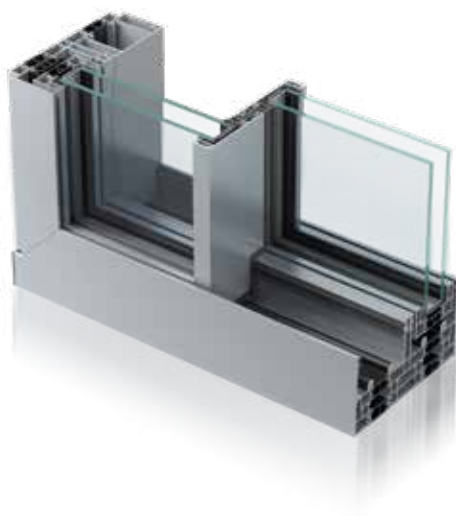


ALUK[®]

Key Features

- Inline sliding door
- Fully concealed outer-frame
- 21mm/31mm central interlock
- One or more opening panels with large width dimensions up to 3000mm and height dimensions up to 3500mm
- Holds up to 400kg panel weight

CAD Cross Sections



Technical Specifications

Glazing Details

Double Glazed 32mm, 38mm IGU

Maximum Recommended Sizes

Height 3500mm
Width 3000mm
Weight 400kg

Maximum Product Performance

SLS (Pa) 1400
ULS (Pa) 2200
Water (Pa) 450

Acoustic Performance

Glass Type Rw (C; C_{tr})
10mm/18/10mm 34 (-1,-3)
8mm/20/10mm 31 (-1,-1)

Thermal Performance

Uw range DG 2.3 - 3.1
SHGC range DG 0.28 - 0.61

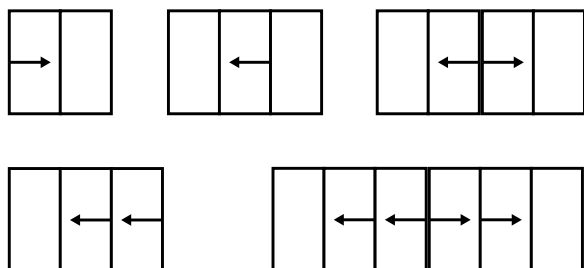
SC95TT SLIDING DOOR SYSTEM

Thermally Broken Sliding Door

The SC95TT thermally broken sliding door system from AluK® is a superior, high performing sliding solution with great aesthetics and design appeal.

The product comes with sturdy rollers tested for 100,000 cycles and is a trusted and proven AluK® product worldwide. This versatile sliding door solution comes with many choices and customised options and is an ideal energy efficient sliding solution for applications in high-rise buildings and individual residences.

Typical Configurations



CAD Cross Sections





ALUK[®]

Key Features

- SC95TT sliding system is based on thermal break insulated profiles for optimised energy efficiency.
- A 101.6mm frame in two track and 150mm frame in three track. Frame size to suit standard Australian framing sizes means the door can be installed into a sub head and sub sill and coupled with matching Alspec systems.
- Double glazed slider with 84mm interlock profile at centre.
- SC95TT comes with either a glazing channel wrap around solution for 28mm glass or a glazing bead based solution for 24mm glass and; hence convenience in glass options for users. (thickness can vary from 18mm to 28mm)
- Superior aesthetics with international design appeal: 45 degree join for sashes and 90 degree join for frames.
- Well-designed sloped bottom track with an effective drainage solution.
- Polyamide rail on bottom track for extra smooth sliding.
- Solid and robust in performance, works for high design wind pressure; a thoroughly tested door system for demanding weather criteria. A tested and certified product as per Australian Standards AS2047.
- Designed for integration of flyscreens/Security Screens.
- All accessories, fittings, gaskets are AluK[®] branded and tested for performance.
- This system is adapted for large dimensions with sash weight up to 150kg of load bearing capacity per sash.
- Retention brushes are in high-density propylene with central water stripping.

Technical Specifications

Glazing Details

Double Glazed 18 - 28mm

Maximum Recommended Sizes

Height 2700mm
Width 1500mm
Weight 150kg

Maximum Product Performance

SLS (Pa) 1200
ULS (Pa) 3000
Water (Pa) 300

Thermal Performance

Uw range DG 2.5
SHGC range DG 0.42

Acoustic Performance

Glass Type Rw (C; C_{tr})
6mm/16/6mm 35 (-1,-3)
6.38mm/8/10mm 36 (-1,-2)
6mm/12/6.38mm 35 (-1,-3)

Compatible Systems | ThermAFrame

101.6mm Centre Glazed Thermally Broken Framing
150mm Centre Pocket Thermally Broken Framing
101.6mm Flush Glazed Thermally Broken Framing
150mm Flush Glazed Thermally Broken Framing

THERMAFRAME[®]
THERMALLY BROKEN WINDOW SYSTEMS

SC95TT fully integrates with Alspec's Thermally Broken Window and Door System.





THERMAFRAME®

THERMALLY BROKEN WINDOW SYSTEMS



THERM A FRAME®

THERMALLY BROKEN WINDOW SYSTEMS



What is a Thermal Break?

A thermal break is an element of low thermal conductivity placed in an assembly to reduce the flow of thermal energy between conductive materials such as Aluminium. Thermal Breaks made of polyamide have been the chosen method of thermally breaking aluminium window products for more than thirty years in Europe, where the product originated.

Alspec uses only Technoform Polyamide Strips in our ThermAFrame. Technoform Thermal Breaks are made of fibreglass reinforced polyamide with glass fibres oriented in 3 directions for optimal structural performance. Structural performance and mechanical response are exceptional with the multi directional glass fibres oriented in 3D to give improved load transfer.

Thermally Broken Window Systems

Alspec's new thermally broken window system is an energy efficient option that utilises the latest in European Polyamide Thermal Break technology.

Combined with Australian design principles this achieves the best possible results in energy rating in a system that is easy to fabricate and install.

The systems versatility allows for seamless integration across our ThermAFrame Centre Pocket and Flush Glazed Systems to achieve the most challenging structural and energy requirements. It has been designed to accommodate high performance double glazed units that can maximise the performance of the building envelope.

Alspec's ThermAFrame is currently available in:

- 101.6mm Centre Pocket Commercial Framing
- 150mm Centre Pocket Commercial Framing
- 101.6mm Flush Glazed Commercial Framing
- 150mm Flush Glazed Commercial Framing
- 50mm Commercial Shopfront Door
- 56mm Awning/Casement Window
- AluK® SC95TT Thermally Broken Sliding Door

Look for this symbol in our range of commercial products to ensure they have been designed and tested to Australian Standards to achieve the best possible thermal energy rating results.



Awning & Casement Window

THERMAFRAME®
THERMALLY BROKEN WINDOW SYSTEMS

Thermally Broken Awning / Casement Window

Alspec's ThermAFrame Awning / Casement window system is an energy efficient window option that utilises the latest in European Polyamide Thermal Break technology.

Combined with Australian design principles this achieves the best possible results in energy rating in a system that is easy to fabricate and install. Its versatility allows seamless integration into ThermAFrame Centre Pocket and Flush Glazed Systems to achieve the most challenging structural and energy requirements. It has been designed to accommodate high performance double glazed units that can maximise the performance of the building envelope.

Available in a 56mm sash featuring a 'Double Strut' Thermal Break design the ThermAFrame Awning / Casement allows architects to minimise the transfer of heat or cold across a window with a standard system. Glazing could not be simpler with the colour coded wedges from standard Alspec systems being utilised to deal with the many diverse glass options.

Featuring overlapping internal and external seals, the ThermAFrame Awning / Casement Window is the preferred choice where superior weather performance is required.

A range of glass thickness options up to 32mm allows the system to be configured for excellent thermal performance. The system is complemented with a range of heavy duty Stainless Steel Friction Stays to ensure maximum performance with large, heavy IGUs.

Sashes can be operated with manual or electric chainwinders or cam handles, locking or non-locking. With the use of our chainwinder adaptor insect and security screens can easily be added from the inside of the building.





**PROVIDES ENERGY-EFFICIENT
INTERIOR TEMPERATURES
ALL YEAR ROUND.**

Key Features

- Excellent 'Uw' values down as low as 2.7
- Utilises a strong 'Double Strut' thermal break construction for maximum strength in the sash
- Wide glazing pocket accepts double glazed options up to 32mm
- Complemented by a range of Heavy Duty Stainless Steel Friction Stays
- Integrated screening options available
- Sash features internal and external weather seals for maximum performance
- Electric chainwinder option
- Colour coded glazing wedges for ease of identification for glazing
- Integrates with ThermAFrame Centre Pocket and Flush Glazed Systems



Technical Specifications

Frame Dimensions	
Option 1	Sash width 56.4m
Maximum Recommended Sizes - Casement	
Height	1500mm
Width	800mm
Thermal Performance	
SHGC range DG	0.21 - 0.40
Glazing Details	
Double Glazed	22 - 32mm
Maximum Recommended Sizes - Awning	
Height	1800mm
Width	1200mm
Acoustic Performance	
6.38/12/6.38mm IGU	37 (-2,-6) dB
Uw range DG	2.7 - 3.4
Compatible Systems	
101.6mm Centre Glazed Thermally Broken Framing	
150mm Centre Pocket Thermally Broken Framing	
101.6mm Flush Glazed Thermally Broken Framing	
150mm Flush Glazed Thermally Broken Framing	

Flushed Glazed Framing

THERMAFRAME®
THERMALLY BROKEN WINDOW SYSTEMS



Flush Glazed Thermally Broken Framing

Alspec's ThermAFrame Flush Glazed system is a high performance energy efficient framing option that utilises the latest in European Polyamide Thermal Break technology.

Combined with Australian design principles this achieves the best possible results in energy rating in a system that is easy to fabricate and install. Its versatility allows countless specifications to be achieved, from standard shopfront applications through to low rise curtain wall applications. It has been designed to accommodate high performance double glazed units that can maximise the performance of the building envelope.

Available in two frame depths 101.6mm and 150mm x 60mm, ThermAFrame Flush Glazed allows architects to minimise the transfer of heat or cold across a window with a standard system.

Glazing could not be simpler with the colour coded wedges from standard Alspec systems being utilised to deal with the many diverse glass options.

With the use of heavy duty mullions the ThermAFrame 150mm Flush Glazed system with a myriad of mullion and reinforcing splice options can allow heights to reach and surpass 4.5m depending upon wind loading conditions.

Subsills are recommended for optimum weathering with all ThermAFrame systems.

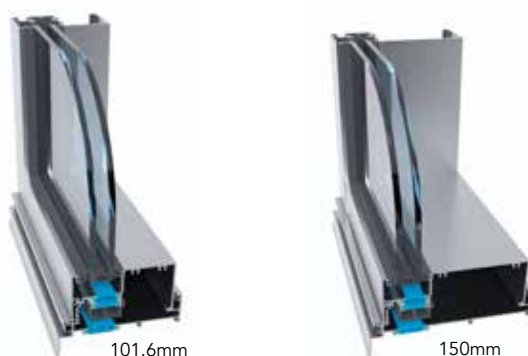




**PROVIDES ENERGY-EFFICIENT
INTERIOR TEMPERATURES
ALL YEAR ROUND.**

Key Features

- Glazing Pocket Design maximises energy performance
- Glazing Pocket Design allows for insertion of optional accessories to reduce total window U_w values where required
- Excellent ' U_w ' values down as low as 1.9
- 101.6mm and 150mm x 60mm Framing System
- 38mm wide glazing pocket accepts double glazed options up to 32mm
- Thermally Broken Sub Framing designed to support heavy double glazed frames including the option of a two piece sub jamb for easier installation
- Thermally Broken Hinge Door Threshold also available
- The glazing pockets are designed to allow for the installation of large IGUs and provides the required glass cover to comply with AS1288
- Secure glazing using fully captive backing gaskets to outside of window frame allows windows to be reglazed from the inside
- Colour coded glazing wedges for ease of identification for glazing
- Available as internally or externally glazed
- Easily adapts to ThermAFrame 50mm Commercial Hinge Door and Awning Window as well as the SC95TT Sliding Door System



Technical Specifications

Frame Dimensions		
Option 1	101.6 x 60mm	
Option 2	150 x 60mm	
Maximum Recommended Sizes	101.6 x 60mm	150 x 60mm
Height	4200mm	4500mm
Width	2400mm	2400mm
Maximum Product Performance	101.6 x 60mm	150 x 60mm
SLS (Pa)	1800	3000
ULS (Pa)	4000	5200
Water (Pa)	700	700
Thermal Performance	101.6 x 60mm	150 x 60mm
U_w range DG	1.8 - 2.7	1.8 - 2.9
SHGC range DG	0.30 - 0.63	0.30 - 0.63
Glazing Details (both)		
Glass Position	Front	
Single Glazed	6 - 14.52mm	
Double Glazed	16 - 32mm	
Acoustic Performance (R_w (C ; C_{tr}))	101.6 x 60mm	150 x 60mm
6.38/12/6.38mm IGU	37 (-2,-6) dB	N/A
10.38/12/6.38mm IGU	N/A	39 (-1,-4) dB
Compatible Systems		
Thermally Broken Awning & Casement Window		
Thermally Broken 50mm Commercial Hinge Door		
AluK SC95TT Sliding Door System		

Centre Pocket Framing

THERMAFRAME®
THERMALLY BROKEN WINDOW SYSTEMS

Centre Pocket Thermally Broken Framing

Alspec's ThermAFrame Centre Pocket system is a versatile energy efficient Shopfront framing option that utilises the latest in European Polyamide Thermal Break technology.

Combined with Australian design principles this achieves the best possible results in energy rating in a system that is easy to fabricate and install. Its versatility allows countless specifications to be achieved, from standard shopfront applications, through to the most challenging structural and energy requirements. It has been designed to accommodate high performance double glazed units that can maximise the performance of the building envelope.

Available in two frame depths 101.6mm and 150mm x 60mm, ThermAFrame Centre Pocket allows architects to minimise the transfer of heat or cold across a window with a standard system. Glazing could not be simpler with the colour coded wedges from standard Alspec systems being utilised to deal with the many diverse glass options.

With the use of heavy duty mullions the ThermAFrame 150mm Centre Pocket System can allow heights to reach and surpass 4.5m depending upon wind loading conditions.

Subsills are recommended for optimum weathering with all ThermAFrame systems.

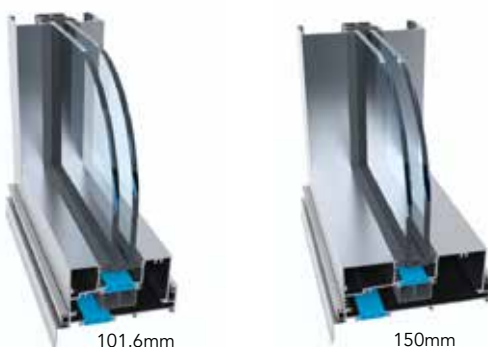




**PROVIDES ENERGY-EFFICIENT
INTERIOR TEMPERATURES
ALL YEAR ROUND.**

Key Features

- Glazing Pocket Design maximises energy performance
- Glazing Pocket Design allows for insertion of optional accessories to reduce total window U_w values where required
- Excellent ' U_w ' values down as low as 1.7
- 101.6mm and 150mm x 60mm Framing System
- 38mm wide glazing pocket accepts double glazed options up to 32mm
- Thermally Broken Sub Framing designed to support heavy double glazed frames
- Thermally Broken Hinge Door Threshold also available
- The glazing pockets are designed to allow for the installation of large IGUs and provides the required glass cover to comply with AS1288
- Secure glazing using fully captive backing gaskets allowing for internal and external glazing
- Colour coded glazing wedges for ease of identification for glazing
- Easily adapts to ThermAFrame 50mm Commercial Door and Awning Window



101.6mm

150mm

Technical Specifications

Frame Dimensions		
Option 1	101.6 x 60mm	
Option 2	150 x 60mm	

Maximum Recommended Sizes	101.6 x 60mm	150 x 60mm
Height	4200mm	4800mm
Width	2200mm	2200mm

Maximum Product Performance	101.6 x 60mm	150 x 60mm
SLS (Pa)	1300	2500
ULS (Pa)	3600	5500
Water (Pa)	1000	1000

Thermal Performance	101.6 x 60mm	150 x 60mm
U_w range DG	1.7 - 2.8	1.8 - 2.8
SHGC range DG	0.32 - 0.63	0.33 - 0.62

Glazing Details (both)		
Glass Position	Centre	
Single Glazed	6 - 14.52mm	
Double Glazed	16 - 32mm	

Acoustic Performance (R_w (C ; C_{tr}))	101.6 x 60mm	150 x 60mm
10.38/12/6.38mm IGU	36 (-1,-3) dB	N/A
10.5/12/6.38mm IGU	N/A	40 (-2,-5) dB

Compatible Systems		
Thermally Broken Awning & Casement Window		
Thermally Broken 50mm Commercial Hinge Door		
AluK SC95TT Sliding Door System		

50mm Commercial Door

THERMAFRAME
THERMALLY BROKEN WINDOW SYSTEMS

Thermally Broken 50mm Commercial Door

Alspec's ThermAFrame 50mm Commercial Door is an energy efficient option that utilises the latest in European Polyamide Thermal Break technology.

Combined with Australian design principles this achieves the best possible results in energy rating in a system that is easy to fabricate and install. Its versatility allows seamless integration into ThermAFrame Centre Pocket and Flush Glazed Systems to achieve the most challenging structural and energy requirements. It has been designed to accommodate high performance double glazed units that can maximise the performance of the building envelope.

Available in a 50mm Door width featuring a 'double wishbone' Thermal Break design the ThermAFrame Commercial Door allows architects to minimise the transfer of heat or cold across a door with a standard system.

Glazing could not be simpler with the colour coded wedges from standard Alspec systems being utilised to deal with the many diverse glass options.

Featuring optional top and bottom seals for increased performance the ThermAFrame Commercial Door is the preferred choice where superior weather performance is required.

A range of glass thickness options up to 32mm allows the system to be configured for excellent thermal and acoustic performance.

The system is complemented with proprietary Heavy Duty Aluminium Hinges to ensure maximum performance with large, heavy IGUs. Sashes can be fitted with most standard locking options.



**PROVIDES ENERGY-EFFICIENT
INTERIOR TEMPERATURES
ALL YEAR ROUND.**

Key Features

- Excellent 'Uw' values down as low as 2.3
- Utilises a strong 'Double Strut' thermal break construction for maximum strength in the door panel
- 38mm wide glazing pocket accepts double beaded rolls in both sides
- Colour coded glazing wedges ranging from 3mm to 7mm in one mm increments
- Heavy Duty Aluminium Hinges designed for use with the system
- Stronger sash achieved through the use of custom designed corner clamp spigot
- Door can be installed as either Hinged, Pivot or Sliding
- Integrates with ThermAFrame Centre Pocket and Flush Glazed Systems



Technical Specifications

Frame Dimensions	
Option 1	Width 50mm
Maximum Recommended Sizes	
Height	3000mm (hinged)
Width	1100mm (hinged)
Weight	Dependent on hardware
Sash SQMs	3
Maximum Product Performance	
SLS (Pa)	1400
ULS (Pa)	3000
Thermal Performance	
Uw range DG	2.3 - 3.0
SHGC range DG	0.22 - 0.44
Glazing Details	
Double Glazed	20 - 32mm
Acoustic Performance (Rw (C;C _{tr}))	
10.38/12/6.38mm IGU	36 (-1,-3) dB
Compatible Systems	
101.6mm Centre Pocket Thermally Broken Framing	
150mm Centre Pocket Thermally Broken Framing	
101.6mm Flush Glazed Thermally Broken Framing	
150mm Flush Glazed Thermally Broken Framing	

CASE STUDY | Konayuki, Falls Creek VIC

This luxury development provides an inviting year-round retreat for visitors thanks to our thermally broken window and door products.

Architect & Builder

Perna Developments

Fabricator

Active Aluminium Windows
Lancemore Glass & Aluminium

Located in the Falls Creek alpine village, visitors to the Konayuki apartments will find themselves well-protected from both summer and winter weather extremes through the high-performance properties of Alspec's ThermAFrame systems.

The Konayuki development features the ThermAFrame Centre Pocket Framing Suite, Hinged Doors and Awning Windows. The ThermAFrame system has been designed and developed using what is known as Polyamide Thermal Break technology. A "thermal break" is where a different element is added to the aluminium frame during construction. Given aluminium is a good conductor of heat and cold, a product with less conductive properties is inserted between the aluminium's inside and outside sections. This "break" in the window frame reduces the ability for heat or cold to transfer between the two areas.

In Alspec's ThermAFrame products, the break is constructed from polyamide, a synthetic nylon material reinforced with fibreglass.



CASE STUDY | Konayuki, Falls Creek VIC

Products Used

- Thermally Broken Awning & Casement Window
- Thermally Broken 50mm Commercial Door
- 101.6mm Centre Glazed Thermally Broken Framing



Thermal break framing technology has been used in aluminium products in Europe for more than 30 years as it maximises the insulation of a property, provides a stable, comfortable environment and ultimately delivers significant energy savings.

For the Konayuki apartments, the ThermoAFrame Centre Pocket Framing Suite was a key component of the build. The Centre Pocket Framing is available in two depths, 101.6mm and 150mm x 60mm, and can accommodate glass options up to 32mm thanks to the wide glazing pocket. The addition of ThermoAFrame Sub Framing ensures appropriate support when heavy double glazed frames are used. Depending on which glazing options are chosen, the ThermoAFrame system can see windows achieve U-values (rate of heat flow) as low as 1.7, indicating superior insulation performance. In buildings where the 150mm system is utilised, the heavy duty mullions can also offer the capacity to span openings of more than 4.5m.

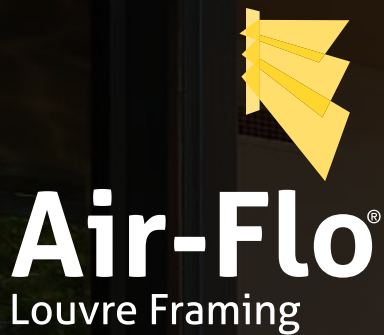
With its versatility and comprehensive insulation properties, Alspec's ThermoAFrame system will ensure all those lucky enough to stay at the Konayuki apartments enjoy the spectacular location in year-round comfort no matter what the season.







Louvres & Solar Control



Air-Flo®

Louvre Framing

Modern Aluminium Framing System with Advanced Breezway® Technology

Our extensive range of sophisticated aluminium framing systems partnered with the unmatched industry experience of Breezway® Louvre Windows provide the market with a complete and advanced louvre solution.

Breezway® louvres encompass many innovative and patented inventions that provide improved product strength, performance and flexibility when combined with the Alspec Range.

Alspec Framing Options

Air-Flo 125mm Louvre Frame

The Air-Flo system is purposely designed to be integrated with the entire Alspec range providing a total solution for all residential and commercial louvre windows, including fixed lights and hinged doors.

Air-Flo 125mm Screened Frame

A complete screened louvre frame offering a variety of external security and flyscreen options for louvre windows.

Air-Flo 50mm Louvre Frame

The Air-Flo range now includes a slimline frame developed to suit narrow louvre installations. The narrow frame provides a slim, neat appearance using an integrated head and sill design.



**CONTROL THE AIR MOVEMENT
FROM A GENTLE BREEZE TO
WIDE OPEN VENTILATION.**

Standard Louvre Features

- Extruded channel with or without screw holes
- Single operating mechanism with single left hand control handle (viewed from inside)
- Black handles and clips for all finishes, except white handles and clips for Pearl White and Architectural White
- Standard Louvre gallery heights
- Choice of clips to suit 6mm glass or 14mm timber blades

Custom Louvre Features

- Right hand control (viewed from inside)
- Top extended channel to next standard clip size, or cut to length channel. Off standard height galleries that are within 5mm of a standard height will not have a top fixed blade
- Colour matched handles and clips
- Remote control handles - A2, A6, A13
- 80, 100 or 120mm restricted opening
- Variable or additional handle position
- Low profile handle

Technical Specifications

Frame Dimensions

Option 1	125 x 25mm
Option 2	50 x 19mm

Maximum Product Performance

SLS (Pa)	1500
ULS (Pa)	4500
Water (Pa)	300

Glazing Details

Glass Position	Centre
Single Glazed	4 - 10.38mm

Thermal Performance

Uw range SG	4.5 - 6.1
SHGC range SG	0.27 - 0.63

Maximum Recommended Sizes

Height	3600mm
Width	900mm

Compatible Systems

Air-Flo Hinged Door
Swan Evo 45mm Commercial Shopfront Door

Breezway® Louvre Options

Breezway Altair® Louvre

A vast range of supreme quality louvre windows developed to maximise light, air and space.

Powerlouvre™ Louvre Window System

Automated Louvre window system which incorporates a concealed motor within the head of the frame and operated by the Powerlouvre™ Appivate® Control Unit, the Powerlouvre™ App, or integrated into a building management system.

Stronghold® Louvre Window System

Stronghold® offers a fall prevention louvre solution by mechanically retaining the louvre blades. This system provides additional strength and safety in multi-level buildings, balcony enclosures or school applications.

Solaire® Fixed Louvres



Versatile Building Solution

The Solaire range of self mating louvre fins has been developed to provide both architects and fabricators a flexible, yet simple solution to external solar control requirements that seamlessly integrate with Australia's unique architectural landscape. By utilising a range of self mating clip together blades and accessories, the Solaire product can be used as:

- Horizontal fins
- Vertical blades
- Window hoods

The Solaire range has been built on the back of Alspec's architectural systems knowledge, which balances the needs of both form and function. Alspec's design offers a robust solution that offers our customers an economical and flexible fabrication option. With countless configurable sizes and aesthetic possibilities, the Solaire range is the perfect solution for your next residential or commercial project.

Key Features

- Wide range of clip together blades offer a wide range of finished fin sizes
- Flexible fitting options to exceed market requirements
- Available in powder coated or anodised finishes
- 100% Recyclable aluminium
- Solaire blades reduce direct sunlight and heat transfer
- Flexible fitting options to exceed market requirements
- Innovative locking bar improves rigidity and "clip" strength
- Aluminium will not rust, rot, crack or perish under Australia's harsh conditions



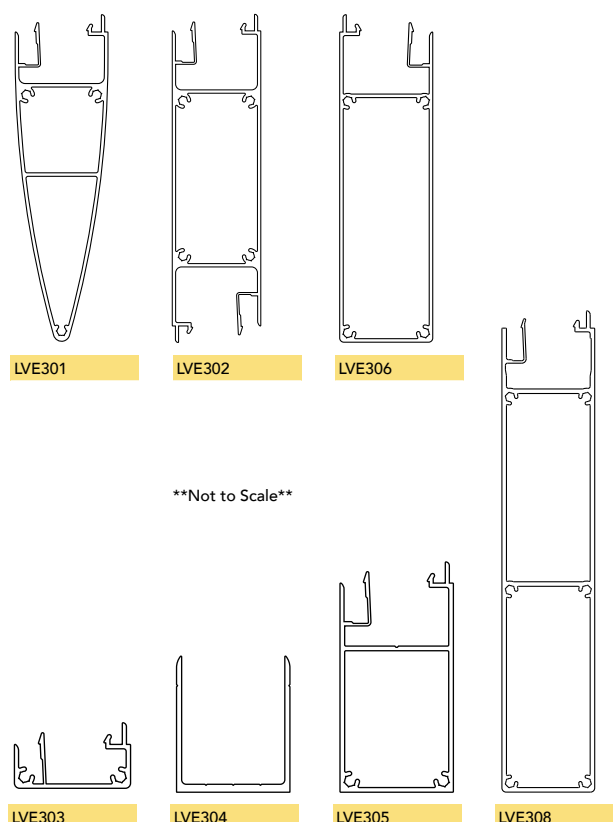


**A SIMPLE AND ECONOMICAL
SOLUTION TO THE MODERN DAY
ARCHITECTURAL REQUIREMENTS.**

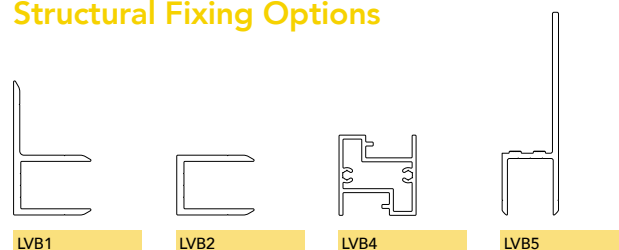
Fixing Options and Typical Configuration

Alspec has designed a wide range of extrusions to cover a multitude of design widths for both vertical and horizontal blade configurations for use in both commercial and residential applications.

Utilising recommended fixing methods to particular structures, Alspec Solaire fixed louvres can be configured in a myriad of different configurations.

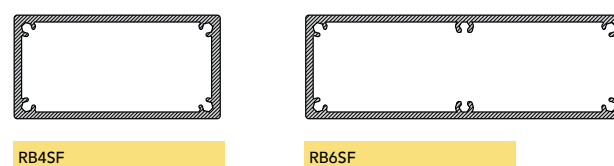


Structural Fixing Options



Other Fixed Blade Options

- Self mating options: 40mm, 50mm & 75mm configurations
- RHS sections with screw flutes



Other Configurations and End Caps

Finished Size	Component Configuration	Sections
100	83 + 17	LVE305 + LVE303
166	83 + 83	LVE305 + LVE305
167	150 + 17	LVE306 + LVE303
184	17 + 150 + 17	LVE303 + LVE302 + LVE303
233	150 + 83	LVE306 + LVE305
250	150 + 83 + 17	LVE302 + LVE303 + LVE305
300	150 + 150	LVE306 + LVE306
317	150 + 150 + 17	LVE306 + LVE302 + LVE303
334	17 + 150 + 150 + 17	LVE303 + LVE302 + LVE302 + LVE303
383	150 + 150 + 83	LVE306 + LVE302 + LVE305
450	225 + 225	LVE308 + LVE308



CityScape®

Aluminium Shutter System



CityScape Revolution

The CityScape aluminium shutter collection is a perfect solution to enhance your living areas by seamlessly blending your indoor and outdoor spaces.

Combining core elements of design, strength and flexibility, CityScape aluminium shutters enable alfresco living all year round. By providing the right mix of light, airflow and temperature control, this opening solution allows you to maximise your lifestyle and enhance the appeal of your home.

Alspec's latest evolution of our CityScape aluminium shutter range has been built on the back of our extensive pedigree as Australia's leading designer of sophisticated aluminium systems. With a design that incorporates an outstanding modern shutter look, improved functionality, as well as enhanced strength and rigidity with the use of structural alloys, CityScape is the perfect solution for internal and external operable shutters.

Key Features

- Centralised rail fin enables full blade rotation in either direction
- New tilt bar design blocks light penetration
- Inclusion of the variable rail enhances the panel size configuration options to fit all openings
- Punched and powder coated stiles improve corrosion resistance and eliminate noisy shutters
- Huge range of accessories including fly screen adaptors
- Wide range of fitting options: Fixed Panels, Hinged, Bi-Fold, Sliding (top hung and bottom rolling)





Reduced Fabrication Time

The new CityScape suite has been designed to eliminate waste through improvements in fabrication and assembly time. These improvements mean a more economical product for the homeowner. This has been achieved through:

- Simple square cuts on frames
- Pre-punched powder coated stiles
- Inclusion of calculation tables to improve quotation time
- New spring loaded, UV stabilised glass filled nylon end caps with stainless steel pins
- Modified screw flutes reduce "snap offs" and head stripping
- Accommodates a range of Alspec hardware for use in multiple applications

Environmentally Friendly

- 100% Recyclable aluminium
- CityScape shutters reduce direct sunlight and heat transfer
- Adjustable blades maximise natural ventilation

Elegant Smart Design

- Fixed, Hinged, Bi-Fold or Sliding
- Flexible fitting options to exceed market requirements
- Available in both powder coated and timber grain finishes
- Improved functional design reduces fabrication time and eliminates waste
- Insect screen options available

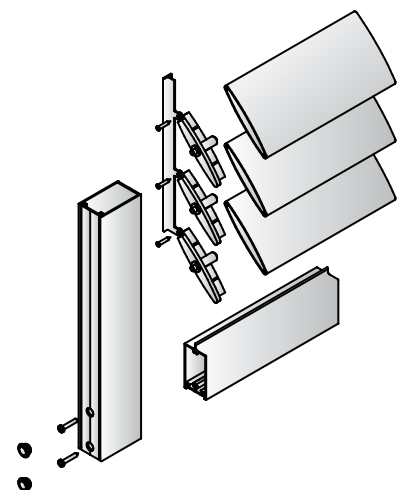
Built to Last

- Aluminium will not rust, rot, crack or perish under Australia's harsh conditions
- New frame design improves strength and rigidity
- Long life stainless steel hardware used throughout

Technical Specifications

Fixed Panels	
Maximum Height	3000mm
Maximum Width	1000mm
Bi-Fold Panels	
Maximum Height	2400mm
Maximum Width	1000mm
Maximum Panel Weight	25kg
Sliding Panels	
Maximum Height	3000mm
Maximum Width	1000mm
Maximum Panel Weight	40kg

Refer to tech manual for maximum panel height and width. Sizes must be checked against wind loading tables for suitability.



Dualair

Secondary Glazed Louvre
Component System

Secondary Glazing Louvre Component System

Alspec Dualair component system has been carefully designed to deliver a high performance dual glazed louvre system to the commercial market.

The system provides outstanding results for improved water penetration, allowing larger window sizes to be installed into project designs. Through the use of two louvre galleries inside the one frame, significant sound reduction can be achieved as well as excellent ventilation and shading to keep buildings cool and comfortable.

The Dualair system has been built on the back of Alspec's architectural systems knowledge, which balances the needs of both form and function.

Designed for Alspec 150mm commercial framing systems:

- McArthur Evo 150mm Centre Pocket Framing
- Hunter Evo Acoustic 150mm Framing

Key Features

- The outer gallery must always be an Altair Powerlouvre™ Gallery, the inner gallery can be a Powerlouvre™ Gallery or manually operated.
- Fully compatible with the Stronghold® system with restricted openings to satisfy fall prevention requirements.
- Full range of colour and handle customising available.
- 6mm thick, 152mm glass or aluminium blades only.



**TAKE CONTROL OF THE LIGHT,
AIRFLOW AND TEMPERATURE
OF YOUR HOME.**

Water Resistance

The Dualair System can be configured to either maximise the STC rating or Water Penetration Resistance rating.

Option for pressure equalized design

- Outer louvre resists water, allows air
- Inner louvre resists air only

AS2047 test result

- 1127mm blade length
- 18mm blade height
- 550Pa

Applications

The Alspec Dualair Louvre Component System is a secondary glazed unit with sophisticated aesthetics and reduced installation costs making it ideal for a multitude of projects, particularly those with High Rw or Low U-value requirements.

- Targeted project types
- Commercial
- Multi-level apartments
- Residential
- Government
- Education
- Retail



WATER PENETRATION

Significantly improved water penetration resistance up to 600Pa Water Penetration Resistance at floor to ceiling window sizes.



MAXIMUM VENTILATION

Maximum ventilation to keep building occupants comfortable.



ACOUSTIC INSULATION

Excellent sound acoustics to reduce outdoor noise. Rw ratings up to 38.



THERMAL INSULATION

U-values ranging from 2.4 to 3.3 give comparable performance to double glazed windows with thermally broken frames.



AESTHETICS

Single window unit gives better aesthetics. Using aluminium patterned blades can create a decorative effect to the building facade.



SHADING / PRIVACY

Use aluminium or patterned glass blades on outer blades to provide shading and privacy.



INSTALLATION COSTS

Single window unit reduces installation costs.

Airborne Sound Isolation

Inner Blade	Outer Blade	Water Penetration	Acoustic Result
Glass	Glass	550Pa	Rw 35
Glass	Aluminium	550Pa	Rw 35

Thermal Insulation

Inner Blade	Outer Blade	U - Value	SHGC
6Clr	6Clr	3.4	0.47
6LE	6Clr	2.8	0.14
6LE	6LE	2.4	0.10



CASE STUDY | VicRoads, Sunshine VIC

The building's striking appearance is enhanced by custom-coloured Alspec fixed louvres, ensuring optimum environmental performance.

Architect

Gray Puksand

Builder

ABD Group

Fabricator

Studd Corp

Drivers will easily navigate their way to the new VicRoads customer service centre in the Melbourne suburb of Sunshine, thanks to the building's striking appearance enhanced by custom-coloured Alspec fixed louvres. The new seven storey building, known as the "Hub@Sunshine", has been purpose built to provide a digital service centre for customers and office space for the department's engineers and planners.

While the building design was required to maximise land use, the challenge for architects was to create interest in an essentially cube-shaped façade. The selection of Alspec Solaire Fixed Louvres, finished in two distinctive shades of green, has enhanced the building's visual appeal while also ensuring optimum environmental performance. Curved, horizontal and diagonal louvres have been placed at specific locations around building windows in correlation to expected sun exposure. They will make certain the interior is protected from direct summer sun, which will help to control internal temperatures and ultimately reduce the amount of artificial cooling required. Meanwhile, their positioning ensures they won't compromise on light or views for those working inside.



CASE STUDY | VicRoads, Sunshine VIC

Products Used

- Solaire Fixed Louvre



The effervescent aluminium louvres were coated with Interpon's Color Vitality Commercial Range which provides a striking colour, life and glamorous performance to the Solaire louvres. With Interpon's D2015 powder, the Solaire blades are covered with Interpon's 20 Year global warranty.

With the opening of the new facility, VicRoads customers can enjoy state of the art access to the department's services, and staff can enjoy working in well-lit, comfortable office spaces in a building with superior environmental credentials.







Home
Improvement

EndurAl[®]

Balustrade System



Unhindered Visual Freedom

The EndurAl Balustrade System from Alspec has been developed to provide Architects and Builders an engineered and tested balustrade solution with Australia's unique architecture and wind classifications in mind.

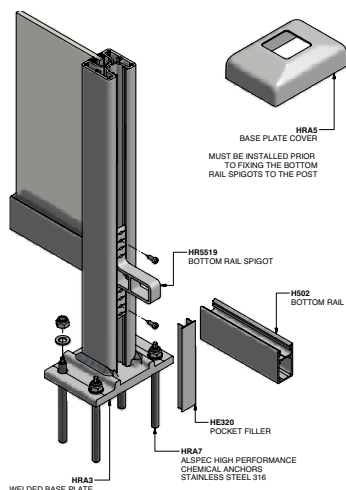
EndurAl is a complete balustrade solution, suitable for use in a wide range of building applications for both residential and commercial environments which require engineered solutions up to and including the most stringent C5 overcrowding requirements.

Furthermore, EndurAl is a high end, comprehensive, easy to specify and easy to install balustrade solution that offers class leading strength whilst enhancing the surrounding visual outlook.

Simple Installation

Safety, security, protection and style without compromising your views and enjoyment, the EndurAl Balustrade design has been developed to minimise both fabrication and installation time.

By incorporating a deep captive glazing pocket, the EndurAl Balustrade can be installed faster and safer than other balustrade glazing methods. Pre-cut rail spigots are easily positioned for on site fixing of horizontal glazing rails.





Engineered to Perform

After significant research and testing to exceed AS1657, Alspec is pleased to release the EndurAl Balustrade System. EndurAl is a suite of specifically engineered extrusions that provides a premium solution for a wide range of balustrade applications for residential (C3) and commercial (C1) applications. The EndurAl System also delivers a core drilled solution for overcrowding (C5) applications.

By utilising a 55mm Structural Glazing Post, the EndurAl System has enabled Alspec to offer a solution that:

- Is significantly stronger than 50mm glazing posts
- Has a wide range of glazing options (up to 15mm glass)
- Can be mounted using welded post plates (base and side mounted)
- Has the ability to reach up to 1200mm high and enables post centres up to 1800mm
- Meets architectural design requirements

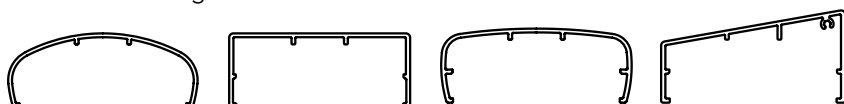
EndurAl is an innovative and cost effective balustrade system that can be easily adapted to provide a seamless solution to the evolving trend of multi-use commercial/residential developments.

Stronger Posts and Thicker Glass Options

By incorporating a wider glazing pocket, EndurAl can satisfy the glazing requirements of AS1288-2006.

Multiple Handrail Options

With the EndurAl Balustrade System, you have access to a range of modular slimline, rectangular & circular handle profile designs to suit both top rail and standoff rail configurations.



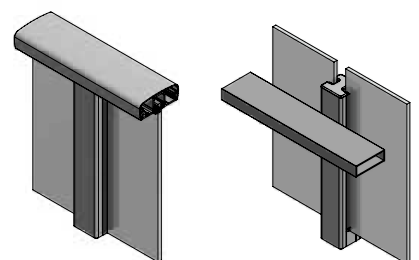
Key Features

- Tested to exceed the requirements of AS1170.1 & AS1657
- Higher strength for increased spans
- Core drilled or welded post options
- Captive glazing pockets can accommodate up to 15mm glass
- Suitable for timber deck installation
- Wide range of top rails and accessories

Multiple Glazing Options

The EndurAl system can be used in multiple glazing configurations to suit various architectural requirements.

Available to you are multiple glazing options ranging from 2 side, 3 side and 4 side support configurations with either a top mounted or standoff handrail option to suit any aesthetic requirement.





DuraSlat® Fencing System

Architectural Form and Innovative Design

The Alspec DuraSlat Fencing System is a suite of specifically designed extrusions that provides a premium concealed fixed screening solution for use in both domestic and commercial fence and screening applications.

Unlike other screw together screen and fencing options, the DuraSlat Fencing System has been built on the back of Alspec's sophisticated architectural systems experience. As a result, the Alspec DuraSlat Fencing System is an innovative, cost effective, concealed fixed solution for fencing, privacy screening and pedestrian gates.

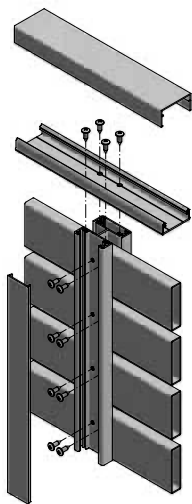
Similar to other Alspec systems, the DuraSlat Fencing System incorporates a stylish design balanced with the need to be simple and fast during fabrication and installation. Furthermore, the concealed fixings, coupled with structural frames and slats will deliver a robust long term solution for your next project.

Simple Fabrication

NO WELDING REQUIRED!

By eliminating the need to weld, sections can be supplied pre-finished and are cut and screwed together on site or in your factory providing a strong and durable finished product.

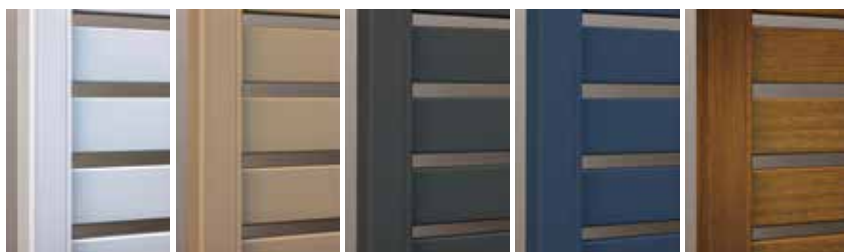
Screens and fences can be easily fabricated either by cementing posts into the ground or by bolting the specifically designed base plate to the various post sections. Slats are then positioned to the desired spacing and screwed off. Finally, all fixings are concealed with the use of our snap-on infill extrusion profiles.





Colour Range and Finish Options

Alspec has four strategically positioned advanced powder coat lines throughout Australia. These lines enable Alspec to offer over 100 colours. These powder coat options coupled with a range of timber grain finishes help position the DuraSlat Fencing System as a perfect solution for attractive and affordable screens and gates for your next project. .



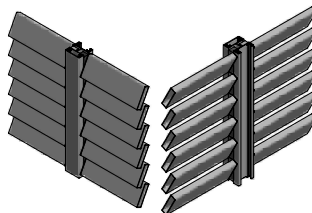
Key Features

- Pre-powder coated
- Fast fabrication
- Screw together
- Suitable for fences and gates
- Multiple slat profiles including elliptical blades
- Resistant to warping, cracking or splintering
- Full range of hardware options
- Flexibility in gate fabrication
- Designed for all Australian weather conditions

Louvre Look

The DuraSlat slats can be further enhanced by utilising our 140 degree self spacing connectors.

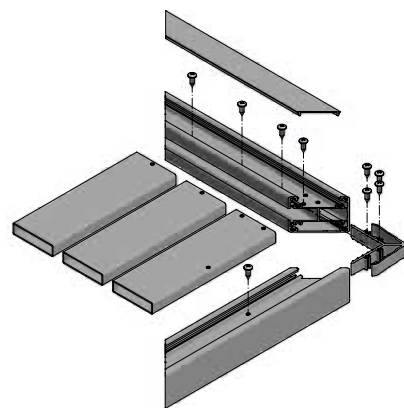
By tilting the slat, enhanced privacy is achieved, whilst still allowing airflow and light. The connectors are made from UV stabilised glass filled nylon, which offer improved strength and durability.



Pedestrian Gates

The DuraSlat Fencing System has been designed and tested for use as pedestrian gates when used in conjunction with our structural DuraSlat profile.

Pedestrian gates are easily fabricated using mitred corners and custom designed corner stakes with integrated screw locators to ensure gates are true and square. Furthermore, our gate frame has been specifically reinforced to offer improved gate hardware life through increased sectional wall thicknesses at fixing points.



Versastyle®

Wardrobe Systems



Great Design Flexibility

A great wardrobe design can not only improve the décor of your bedroom, but actually add value to your home.

Delivering a comprehensive, modern and stylish range, this framing system offers great design flexibility, which, combined with easy installation, will be a welcome addition to any household.

Featuring modern profiles that are suitable for opaque and coloured glass as well as mirror or board doors, this aluminium framing system uses load bearing rollers which are designed to allow the doors to glide easily on the aluminium track.

For a history of great service and quality built products, when considering a wardrobe system there's only one place that has all the solutions – Alspec Versastyle.





**A COMPREHENSIVE, MODERN
AND STYLISH WARDROBE.**

Choice of Stylish Colour

With Alspec Versastyle wardrobes, matching the colour of the wardrobe to the interior of your room isn't a problem.

- Large choice of stylish colours – both powder coated and anodised.
- Standard colours available: White, White Birch, Bright Silver and Natural Anodise.
- Have something specific in mind? A full range of powder coated custom colours can be ordered as requested.



Complementary Hardware

Not only are Alspec's Versastyle wardrobes stylish and contemporary, but they are also designed using the latest advancements in technology and are built using the highest quality materials.

Adjustable roller bearings and wheels ensure for smooth and silent closing doors, while the contemporary range of pull handles, available in both square and round finishes; ensure that the overall design of the wardrobe system is complementary.

With over 30 years experience, Alspec is proud to introduce a new and innovative sliding wardrobe system.

Key Features

- Easy grip door handles allow you to open and close doors easily
- Full-length bumper strip eliminates metal to metal contact for silent closing
- Readily adjustable rollers ensure quiet and smooth operation
- With double and triple sliding door designs available, these wardrobe systems cover most openings
- An unobtrusive concave track
- With an extensive designer colour range, you can be sure your wardrobe will have the latest fashion colours



Danmac Shower Screen Kits & Hardware



excellence. innovation. custom design.

99 Frankston Gardens Drive,
Carrum Downs VIC 3201
Phone: 03 9775 1223 | Fax: 03 9775 1445

To order or for more information call:

1300 139 706

visit: danmac.com.au

Alspec have joined forces with Danmac to bring you Australia's most trusted and committed shower screen manufacturer.

Danmac is a glazing industry leader in the design and distribution of aluminium shower screen products and components. They pride themselves on providing the very best in customer service and quality through their fabrication and supply of custom-built products to suit any requirement, style or area.

Danmac custom design everything to ensure your exact specifications are met and supply only the finest quality fittings and hardware in the market (including Opus frameless hardware).

Our Product Range includes:

- **Fully Framed Shower Screens**
- **Semi-Frameless Shower Screens**
- **Frameless Shower Screens**
- **Bath Screens: Framed & Semi-Frameless**

Note: Danmac is not available in WA.







Screening



INVISI-GARD®

316 STAINLESS STEEL SECURITY



Unbeatable Stainless Steel Security Design

Invisi-Gard is made from 316 marine grade stainless steel mesh and backed by a 15 year warranty. Using the unique, patented pressure retention and isolation method, you can rest assured that the stainless steel mesh will defy the most determined attack from both intruders and corrosion.



Corrosion Prevention of Invisi-Gard's EGP

The construction of security screens requires stainless steel mesh to be attached to an aluminium frame, bringing two different metals together which can lead to corrosion.

To prevent this type of dissimilar metal corrosion, Invisi-Gard have developed and patented a unique clamping system, called Extreme Grip Protection (EGP). This system cleverly captures the mesh within the frame using specially shaped co-extrusions of PVC. A PVC wedge is then used to apply uniform pressure around the frame which locks in the mesh.



The EGP system, used only by Invisi-Gard, means the mesh is able to be locked into the frame without the uses of screws or mechanical fixing, and means the potentially harmful contact between the metals is avoided.

Care and Maintenance

Your Invisi-Gard Stainless Steel Security Screen should only ever need to be washed down with a soft brush using warm water and a mild detergent.

Rinse well with fresh water to remove any detergent residue. Do not use strong detergents or abrasive cleaners as they may scratch or damage the surface finish. (The frequency of this maintenance is determined by the location of the product). For full care & maintenance requirements visit www.invisi-gard.com.au/warranty-care

Mesh Matters!

316 grade stainless steel offers superior corrosion resistance over 304 as it contains an additional substance, molybdenum, giving higher protection from corrosion, notably in marine environments.

In fact, 316 is regarded as the standard marine grade material for this very reason. In the case of window and door security screens, required to be exposed to the elements over long periods of time, it makes sense that corrosion resistance is a fundamental consideration.

A final key factor which distinguishes Invisi-Gard products from the market, is that only the highest quality mesh is sourced which is consistently quality controlled and accredited under international standards.

Invisi-Scape Systems

Invisi-Scape Emergency Escape Security Screens offer a simple keyless escape method in the event of a fire or an emergency situation. The need to escape through a window is one that we hope you will never require, however with the Invisi-Scape System you have confidence in not only additional security but also the peace of mind of egress in an emergency. An additional benefit of Invisi-Scape screens is the ease of cleaning.





UNPARALLELED CLARITY OF VISION WITH
ENHANCED SECURITY.

Technical Specification

Aluminium Frame	6063-T5 Architectural Aluminium
Mesh	Marine Grade 316 Stainless Steel
Wire Diameter	0.8mm
Mesh Count	11 x 11 strands per 25mm ²
Aperture Size	1.6 x 1.6mm
Velocity Drop	44.21%
Drag Coefficient	0.6998
Wire Tensile Strength	900MPa (Nominal)
Open Area	44%

Wide Product Range

Invisi-Gard Stainless Steel Screens have a wide range of products suitable for the following residential and commercial applications:

- Hinged Doors
- Sliding Windows
- Sliding Doors
- Security Screens
- Patio Enclosures
- Pool Fencing
- Emergency Escape Systems

Sliding Doors

The Invisi-Gard Sliding Door is the most versatile Stainless Steel door on the market. With many homes incorporating one or more sliding doors to access entertainment areas, gardens and patios. Invisi-Gard Sliding Security Doors offer excellent security without compromising the view.

Increased Protection

BAL Rated

Invisi-Gard is BAL rated to protect your home against bushfires in areas from BAL-LOW up to and including BAL-40.



INVISI-MAXX[®]

MAXX SECURITY. MAXX PROTECTION

For protection against cyclonic debris and ultra security protection from intruders, Invisi-Maxx is the ideal solution. Invisi-Maxx is a 1.2mm mesh.

For more information visit:

www.invisi-gard.com.au/invisi-maxx

Hinged Doors

The Invisi-Gard Hinged Door delivers a style and finish like no other. Manufactured and tested in accordance to the Australian Standards, Invisi-Gard Hinged Doors will complement any home that requires enhanced levels of security.

Window Screens

The Invisi-Gard Window Screen is the best option when it comes to securing the windows in your home or business.

Invisi-Gard Window Screens offer fantastic airflow and security while complementing the aesthetic appeal of the building. It also has been tested to meet and exceed Building Code of Australia requirement on protection of openable windows.

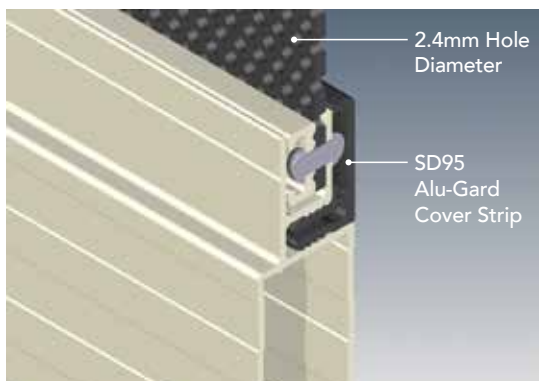
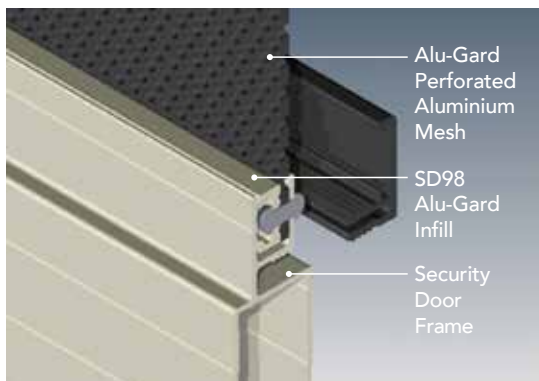




Perforated Aluminium Security Screening Systems

The All-Aluminium security screening solution for Australian conditions. Alu-Gard is a perforated aluminium sheet retained in an extruded aluminium frame.

Alu-Gard not only provides security, clarity of vision and strength, it is also corrosion resistant and looks great





**STRENGTH, SECURITY AND
DURABILITY WITH EXCELLENT
DIRECT CLARITY OF VISION.**

Alu-Gard Design

Alu-Gard utilises a strong (1.6mm thick) aluminium sheet that is perforated and powder coated in Australia to standards. The sheet is retained in a frame with riveted aluminium infill retention system. The resulting screen is strong, extremely resistant to corrosion and provides excellent direct clarity of vision.

The Complete Range

Alspec now offers the complete range of screening systems from our top of the range Invisi-Gard 316 Stainless Steel Security Screens, through to Alu-Gard, Federation Cast Panels, Alu-Grille Diamond Grilles, Vision-Gard one way vision security screen, fibreglass and aluminium insect screen and all the associated accessories.

For a history of great service and quality built products when considering an aluminium screen door system, there's only one place that has all the solutions - Alspec.

Custom Built

All Alu-Gard products are custom built, made to measure to suit your exact requirements. Alu-Gard Security Screens are suitable for a wide range of residential and commercial applications including the following:

- Hinged Doors
- Sliding Doors
- Security Window Screens
- Balustrade
- Fencing

Choice of Stylish Colours

With Alu-Gard products, matching the colour to existing door and window frames is not a problem. A full range of powder coated colours along with anodised finishes or decorative imaging are readily available from your Alu-Gard dealer.



Key Features

- Tested and passed Australian Standards.
- Choice of retention systems.
- Manufactured in Australia.
- Part of a wide range of security and screening solutions.

Tested Performance

Security

Australian Standard AS5041 – 2003
Methods of Test – Security Screen Doors and Window Grilles

	Knife Shear Test	✓
	Dynamic Impact Test	✓
	Jemmy Test	✓

Child Fall Prevention

Australian Standard AS5203-2016 Protection of Openable Windows / Fall Prevention - Test Sequence & Compliance Method

	Resist 250N Outward Force	✓
--	----------------------------------	---

Fire Attenuation

Australian Standard AS1530.4-2014
Appendix B7

	Achieves a fire attenuation rating of up to 56% at 40kW/m² incident energy	✓
--	--	---

Technical Specifications

Material Grade	5005 H34
Thickness	1.6mm
Hole Diameter	2.4mm
Paint	Dulux Black Matt
% Open Area	40%



ALU-GARDEGE®

ALUMINIUM SECURITY SCREENS

Perforated Aluminium Security Screening Systems

Alu-Gard Edge is the latest addition to the Alu-Gard range, the All-Aluminium security screening solution for Australian conditions. Edge is a PVC pressure retention system that retains the Alu-Gard perforated aluminium sheet in an extruded aluminium frame.

Alu-Gard Edge not only provides security, clarity of vision and strength, it is also corrosion resistant and looks great.



Alu-Gard Edge Design

Alu-Gard Edge utilises a strong (1.6mm thick) aluminium sheet that is perforated and powder coated in Australia to standards. The sheet is retained in a frame with bespoke PVC pressure retention system. The resulting screen is strong, extremely resistant to corrosion and provides excellent direct clarity of vision.





**STRENGTH, SECURITY AND
DURABILITY WITH EXCELLENT
DIRECT CLARITY OF VISION.**

The Complete Range

Alspec now offers the complete range of screening systems from our top of the range Invisi-Gard 316 Stainless Steel Security Screens, through to Alu-Gard, Federation Cast Panels, Alu-Grille Diamond Grilles, Vision-Gard one way vision security screen, fibreglass and aluminium insect screen and all the associated accessories.

For a history of great service and quality built products when considering an aluminium screen door system, there's only one place that has all the solutions - Alspec.

Choice of Stylish Colours

With Alu-Gard products, matching the colour to existing door and window frames is not a problem. A full range of powder coated colours along with anodised finishes or decorative imaging are readily available from your Alu-Gard dealer.



Custom Built

All Alu-Gard products are custom built, made to measure to suit your exact requirements. Alu-Gard Edge Security Screens are suitable for a wide range of residential and commercial applications including the following:

- Hinged Doors
- Sliding Doors
- Security Window Screens
- Balustrade
- Fencing




Key Features

- Tested and passed Australian Standards.
- Choice of retention systems.
- Manufactured in Australia.
- Part of a wide range of security and screening solutions.

Tested Performance


Security

Australian Standard AS5041 – 2003
Methods of Test – Security Screen Doors and Window Grilles

	Knife Shear Test	✓
	Dynamic Impact Test	✓
	Jemmy Test	✓

Child Fall Prevention

Australian Standard AS5203-2016 Protection of Openable Windows / Fall Prevention - Test Sequence & Compliance Method

	Resist 250N Outward Force	✓
---	---------------------------	---

Technical Specifications

Material Grade	5005 H34
Thickness	1.6mm
Hole Diameter	2.4mm
Paint	Dulux Black Matt
% Open Area	40%



One Way Vision Security Screen

Vision-Gard Screens are a new addition to the Alspec range of screening options. Vision-Gard screens not only secure your home but also provide a degree of privacy from people outside your home looking in. Vision-Gard screens provide security, privacy and strength, as well as being corrosion resistant and looking great.

Vision-Gard Screens utilise a strong (1.6mm thick) aluminium sheet that is perforated and powder coated in Australia to exacting standards. This mesh works by limiting the field of vision for people on the outside looking in. Vision-Gard works if there is correct lighting allowing a person on the inside to see outside and not be seen from the visitor's side.

The mesh has two options for retaining in the frame:

1. Retention with our bespoke Wedge PVC pressure retention system.
2. Retention using rivets into a frame with a covering strip to conceal the rivets.

The resulting screen is strong, extremely resistant to corrosion and provides excellent clarity of vision from the inside looking out.

The Complete Range

Alspec now offers the complete range of screening systems from our top of the range Invisi-Gard 316 Stainless Steel Security Screens, through to Alu-Gard, Federation Cast Panels, Alu-Grille Diamond Grilles, Vision-Gard one way vision security screen, fibreglass and aluminium insect screen and all the associated accessories.

For a history of great service and quality built products when considering an aluminium screen door system, there's only one place that has all the solutions - Alspec.





**STRENGTH, SECURITY,
PRIVACY AND DURABILITY.**

Bushfire Prone Areas

Vision-Gard complies with the mesh aperture for screening of openable parts to doors and windows up to BAL-29 conditions.

Wide Product Range

Vision-Gard Security Screens are primarily designed for front door security and privacy. However they are suitable for a wide range of residential applications including the following:

- Hinged Doors
- Sliding Doors
- Security Window Screens.

Custom Built

All Vision-Gard products are custom built by your local Alspec dealer, made to measure to suit your exact requirements.

Choice of Stylish Colours

With Vision-Gard products, matching the colour to existing door and window frames is not a problem.

All of our frames are available from your Vision-Gard dealer in a full range of powder coated colours along with anodised finishes.



Tested Performance

Security

Australian Standard AS5041 – 2003
Methods of Test – Security Screen Doors and Window Grilles

	Knife Shear Test	✓
	Dynamic Impact Test	✓
	Lock and Lever Hinge Test	✓

Child Fall Prevention

Australian Standard AS5203 - 2016
Protection of Openable Windows /
Fall Prevention - Test Sequence &
Compliance Method

	Resist 250N Outward Force	✓
--	---------------------------	---

Fire Attenuation

AS1530.4-2014 Appendix B7

	Achieves a fire attenuation rating of up to 75% at 40kW/m ² incident energy	✓
--	--	---

Key Features

- Reduces the vision into the home
- Clarity of vision from the inside
- High corrosion resistance
- Aperture of less than 2mm meets bushfire requirements up to BAL-29
- Tested & passed Australian Standards
- Choice of retention systems
- Manufactured in Australia
- Part of a wide range of security and screening solutions

Technical Specifications

Material Grade	5005 H34
Thickness	3mm
Paint	Dulux Black Matt
% Open Area	17%
Aperture	1mm x 4mm

Window Falls by Children

Those responsible for the care of young children know about obvious safety issues such as the use of child restraints in cars, crossing roads carefully, or ensuring chemicals and medicines are stored out of reach.

One danger many do not recognise is that posed by the very design of the homes and buildings in which they live. Windows and balconies may provide light and desirable living spaces but they can also pose a serious threat to the safety of young children.

Despite education campaigns such as NSW Health's Kids Don't Fly initiative, each year the media continues to report on a number of serious and sometimes fatal accidents involving falls from windows and balconies. According to NSW Health more than 8,000 children each year are admitted to hospital as the result of a fall. Of these, about 50 children suffer a serious injury resulting from a fall from a balcony or window, with some sadly being fatal.

The responsibility for the safety of children lies not only with parents, but with all sections of our community.

Thankfully, preventing falls from windows and balconies is one area where all community stakeholders have been working together to reduce the number of accidents through a number of important initiatives combining education with regulation and innovative product design.

Alspec's child safety window screens offer families the following benefits:

- Prevents accidental falls from windows.
- Allows full ventilation of the window.
- Easy egress by an adult in an emergency.
- Perfect for coastal or salt corrosion areas.
- Built-in UV inhibitor to withstand extreme temperature variations.
- Ideal for bushfire prone regions.
- Stylish and modern with lots of colours.
- Can be mounted to timber or aluminium frames.
- Custom made to your exact specifications.
- Fully compliant with AS5203-2016.
- Meet & exceeds the National Construction Codes. (Vol 1: D.2.24 & Vol 2: 3.9.2.6)

The big advantage of our fall prevention screens is that they comply with the National Construction Code for the Protection of Openable Windows.

This means that rather than having your windows open just 12cm to allow in a small amount of fresh air, while still keeping your children safe at home, you can use our stylish fall protection screens and open your windows for maximum ventilation.



**PREVENTS ACCIDENTAL
FALLS FROM WINDOWS.**

Kids Don't Fly Mandatory Window Requirements

Window openings must be
restricted to less than 125mm

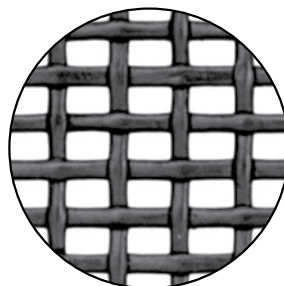
By law, all NSW bedroom windows
above BCA specified height must have
window safety devices installed.

**NOW REQUIRED
IN NSW**

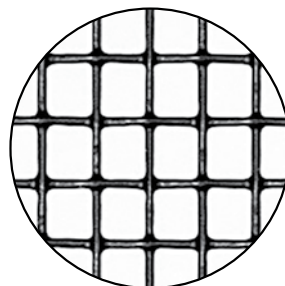
KidScreen is made from heavily
reinforced polyester or stainless
steel 316 grade mesh, and has
been tested and certified to
exceed the 250N force standards and satisfy the
Australian Standard for Protection of Openable
Windows (AS5203).

The ability of KidScreen to be fitted to any existing
window makes it a cost effective and practical
solution for both new build and retrofit situations.

When installed by a certified licensed installer, the
KidScreen system meets the National Construction
Code requirement and comes with a 7 year warranty.



Reinforced Polyester
37% Open Area



316 Stainless Steel
72% Open Area



Find your Licensed KidScreen Dealer at:
kidscreen.com.au





ALU-GRILLE®

7MM DIAMOND GRILLE

7mm Diamond Grille

Alspec offer a wide range of window and door grille options that will improve the security of your home. Alu-Grille is perfectly suited to a wide range of window applications as well as both hinged and sliding doors.

Alu-Grille has a 7mm strand thickness and has been tested to Australian Security Standard AS5041 and meets the requirements of AS5039. To obtain maximum benefit from Alu-Grille, all doors made incorporating these grilles should also be installed to comply with AS5040.

Alu-Grille doors are available with the option of restricted vision mesh, ideal if added privacy is required. Restricted vision mesh allows you to see out through your door at the same time as reducing the visibility into your house from the outside.



A117 Small Diamond



Standard 7mm Diamond



A227 Decorative Diamond

The Complete Range

Alspec now offers the complete range of screening systems from our top of the range Invisi-Gard 316 Stainless Steel Security Screens, through to Alu-Gard, Federation Cast Panels, Alu-Grille Diamond Grilles, Vision-Gard one way vision security screen, fibreglass and aluminium insect screen and all the associated accessories.

For a history of great service and quality built products when considering an aluminium screen door system, there's only one place that has all the solutions - Alspec.





**GREATER STRENGTH FOR
INCREASED PEACE OF MIND.**

Wide Product Range

Alu-Grille Security Screens are primarily designed for front door security. However they are suitable for a wide range of residential applications including the following:

- Hinged Doors
- Sliding Doors
- Security Window Screens

Custom Built

All Alu-Grille products are custom built by your local Alspec dealer, made to measure to suit your exact requirements.

Choice of Stylish Colours

With Alu-Grille products, matching the colour to existing door and window frames is not a problem.

All of our frames are available from your Alspec dealer in a full range of powder coated colours along with anodised finishes or decorative imaging.



Tested Performance

Security

Australian Standard AS5041 – 2003
Methods of Test – Security Screen Doors and Window Grilles

	Shear Test	✓
	Dynamic Impact Test	✓
	Jemmy Test	✓

Child Fall Prevention

Australian Standard AS5203-2016 Protection of Openable Windows / Fall Prevention - Test Sequence & Compliance Method

	Resist 250N Outward Force	✓
--	----------------------------------	---

Key Features

- Made from special tempered aluminium for greater strength and increased peace of mind.
- Alu-Grille for custom-made sliding doors provides optimum protection and smooth operation. Adjustment screws for rollers face inside the door out of an intruders reach.
- Half door panels add to protection from the weather, pets and intruders. Available in a range of pre-finished colours.
- Security doors made from quality Alu-Grille can be fitted with the extra feature of a 3 Point Safety Lock. Three interlocking security hinges deter even the most persistent intruder.

Technical Specifications

Material Grade	Tempered Aluminium
Thickness	8mm
Strand Width	7mm
Paint	Dulux Black Matt

ALSPEC ESCAPE SECURITY SCREENS

Outward Opening Hinged Emergency Egress System

The Alu-Grille Outward Opening Hinged Emergency Egress System is designed to provide an escape route in the event of a fire or emergency situation in domestic or commercial buildings.

Fixed bars or barriers are a major safety risk and should not be used to cover all windows in a domestic environment. In our attempts to maximise security we often compromise the safety of the building inhabitants in the case of fire or emergency.

The Alu-Grille Escape System offers the perfect answer to your security and safety. Easy to operate, allowing you to exit the building freely in case of an emergency. The impact tested Alu-Grille Escape ensures the external security of the building is not compromised.

Multiple Infill Options



Alspec Alu-Grille offers a 7mm strand thickness that will improve the security of your home, meeting all the requirements of the Australian Security Door Standard AS5039.



Alternatively, if added privacy is required, Alu-Gard Perforated Aluminium Mesh provides reduced visibility into your home while also providing full security.





TWO STEP EMERGENCY ESCAPE SYSTEM.

Two Step Emergency Escape System

During an emergency situation, you don't have time to be fumbling around with complicated latches and locks. With the Alu-Grille Emergency Escape System, a squeeze and push is all that's needed to get you and your family out safely.

Step 1 – Squeeze

Locate the spring loaded lock handle running down the length of the sash. Insert your fingers and squeeze handle towards the external frame.



Step 2 – Push

With your other hand, push firmly against the escape sash. The sash should freely swing outward to allow passage.



Key Features

- Alu-Grille Escape Security Screens provide simple, keyless, one handed unlocking of the window security screen from the inside.
- Once unlocked, the security screen then hinges open to allow a path of escape.
- An additional benefit of fitting an Alu-Grille Escape Screen to your window is the ease of cleaning and in the case of accidental breakage, replacement of the window glass.
- All Alu-Grille Emergency Escape Window Security Screens have been tested to Australian Standards AS5039-2008 so you can be assured that when choosing Alu-Grille Escape, you are choosing the best option for your safety and security.

Aluminium, Fibreglass and Polyester Insect Screening

Standard Aluminium Mesh

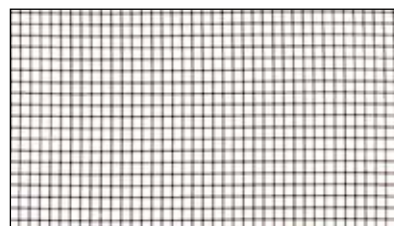
Features

- Excellent weathering characteristics, will not rust
- Good airflow
- Offers good outward visibility
- Excellent weave consistency

Technical Specifications

Weave	17 x 15 strands / inch (25.4mm)
Wire Ø	0.24mm
Openness	68%
Finish	E-coat Black finish

Black



Aluscreen®

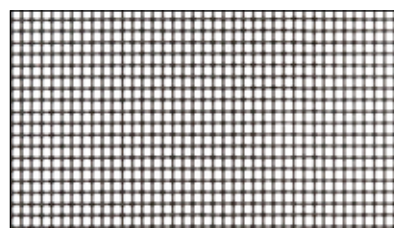
Features

- 47% stronger than conventional screening
- Easy to install
- Withstands damage from pets and children
- Resists harsh weather conditions

Technical Specifications

Weave	17 x 15 strands / inch (25.4mm)
Wire Ø	0.24mm
Openness	57%
Finish	Powder coated aluminium finish

Black



Aluscreen Plus®

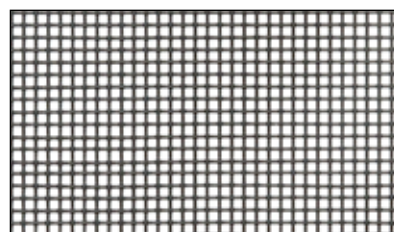
Features

- Heavy gauge wire diameter
- Very tough and durable
- Highly resistant to household pet damage
- Resists harsh weather conditions

Technical Specifications

Weave	17 x 14 strands / inch (25.4mm)
Wire Ø	0.4mm
Openness	50%
Finish	Extra heavy powder coated aluminium finish

Black



Bronze Mesh (90% copper / 10% zinc)

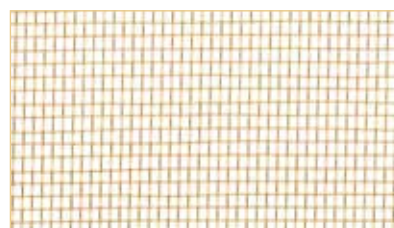
Features

- Strength and durability
- Corrosion resistant
- Visually appealing
- Ages beautifully to a dark finish

Technical Specifications

Weave	18 x 14 strands / inch (25.4mm)
Wire Ø	0.28mm
Openness	70%
Finish	Clear coat finish

Bronze



A COMPLETE RANGE OF
WOVEN INSECT SCREENING.

Standard Fibreglass Mesh

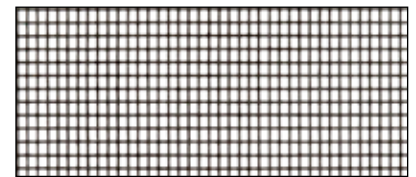
Features

- Corrosion & stain resistant
- UV stable
- Good airflow
- Offers good outward visibility

Technical Specifications

Weave	18 x 14 strands / inch (25.4mm)
Yarn Ø	0.28mm
Openness	63%

Black



BetterVue® Fibreglass Mesh

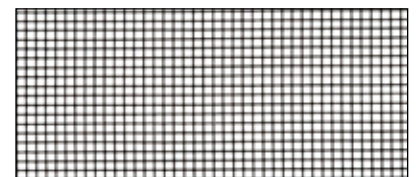
Features

- 20% improvement in airflow and optical clarity
- 10% improvement in insect protection
- Contains Microban® to inhibit mould and mildew
- GREENGUARD certified for chemical emissions

Technical Specifications

Weave	18 x 18 strands / inch (25.4mm)
Yarn Ø	0.22mm
Openness	69%

Black



Sandfly Fibreglass Mesh

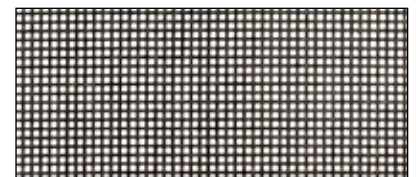
Features

- Tightly woven mesh controls small insects
- Still offers good airflow
- Woven from permanent glass yarn coated with protective vinyl

Technical Specifications

Weave	20 x 20 strands / inch (25.4mm)
Yarn Ø	0.3mm
Openness	45%

Black



PetScreen Polyester Mesh

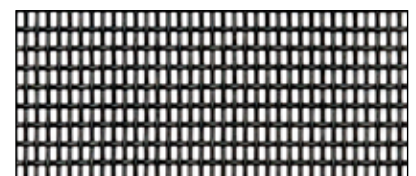
Features

- Resistant to tears & damage by household pets
- 7x stronger than standard Fibreglass Mesh
- Contains Microban® to inhibit mould and mildew
- GREENGUARD certified for chemical emissions

Technical Specifications

Weave	17 x 10 strands / inch (25.4mm)
Yarn Ø	0.64mm
Openness	36%

Black



CASE STUDY | Double One 3, Teneriffe, Brisbane QLD

Residents of this lifestyle-focused development enjoy uninterrupted city, river and district views, thanks to generous balconies enclosed with Alspec's EndurAl balustrade system.

Architect

Cottee Parker

Builder

Devine

Fabricator

Queensland Facades System

With river walks, cycle ways, parks, boutique restaurants and shops literally on the doorstep, there's no more convenient location for a residential development than Teneriffe, Brisbane. Just 2.5km from the CBD, the Double One 3 residential building makes the most of the location offering all the conveniences of modern living nestled alongside the old world charm of Teneriffe's historic buildings.

Consisting of seven residential levels over ground floor commercial premises, a standout feature of the building is the generous balconies enclosed using Alspec's EndurAl balustrade system. Designed to take maximum advantage of the city, river and district views, the balcony balustrades have been configured with three-sided support and a standoff handrail. As well as providing unobstructed views, the balustrades are engineered to deliver a secure, safe and stylish option that suits both the residential and commercial sections of the development.



CASE STUDY | Double One 3, Teneriffe, Brisbane QLD

Products Used

- ProGlide High Performance Sliding Door
- Hunter Evo 101.6mm Single Flush Glazed Framing
- Hunter Evo 150mm Single Flush Glazed Framing
- Swan Evo 45mm Commercial Shopfront Door
- EndurAl Balustrade System



The EndurAl balustrade solution has the added advantage of being able to be powder coated to match the selected window and door framing products, which in this project were ProGlide High Performance Sliding Doors, Swan Evo Commercial Doors and Hunter Evo Flush Glazed Framing. The ProGlide doors provide access to the balconies and ground floor commercial premises and their floor-to-ceiling height ensures light and views are maximised. Able to be configured in up to four stacking panels, the doors are known for their high weather performance credentials and durable heavy duty aluminium profile, making them ideal for high use applications in mixed residential/commercial builds such as this.

For hinged or pivoted door requirements, Swan Evo Commercial Doors were the obvious choice. Like the ProGlide doors, they are particularly durable and feature centre pocket glazing which provides enhanced security benefits. Hunter Evo Flush Glazed Framing was used to provide the fixed window componentry. Being one of Alspec's more versatile framing systems it comes with the option of 101.6mm or 150mm frame depths and can accommodate single and double glazed panels as required.







Carinya
Residential
Windows
and Doors

Smooth as Silk

With the design pedigree established in the demanding commercial window and door market, the Carinya residential range has been created by commercial window powerhouse Alspec to be the leader in its class.

The Classic Range

The Carinya Classic Range includes a variety of windows and doors suitable for all homes. Products include **sliding windows, sliding doors, double hung windows and awning windows.**

The Select Range

The Carinya Select Range includes premium windows and doors for the discerning home buyer. Products include **hinged doors, double hung windows and bi-fold doors/windows.**

The Metro Range

The Carinya Metro Range includes a commercial window and door platform for the residential market. Products include **sliding doors/windows, double hung windows, awning windows and hinged doors.**

Commercially-bred. Clearly better.

Carinya is the new name in premium quality residential windows and doors. The Carinya range has been developed by Alspec, one of Australia's most respected and long-standing suppliers of aluminium products to the commercial building industry.

Thanks to the scale and strength of Alspec's commercial operations, the commercial and industrial pedigree of Carinya products ensures a level of performance and design normally beyond the homebuilder's budget.

Architects and builders will tell you: 'The choice of windows and doors can make or break the outcome of a building project!'

Carinya windows and doors are an investment you will enjoy every day. In fact, the name Carinya is an indigenous word meaning 'Happy Home'.



PREMIUM QUALITY RESIDENTIAL WINDOWS AND DOORS WITH COMMERCIAL DESIGN PEDIGREE.

A Solutions Focused Approach

Carinya invest heavily in Research & Development to come up with innovative solutions in catering for all requirements in the National Construction Code.

Working with Architects and Builders, Carinya have tested and developed products to meet a range of building requirements to cater for upmarket homes and multi-unit residential areas offering a complete solution for all your needs no matter how large or small a project may be.



This icon ensures that our products have undergone stringent testing to ensure that it has met all requirements for windows in BAL-40 zones under AS3959-2009



This icon found in our range of commercial, residential and screening products ensures they have been tested to meet and exceed Australian Standards for Cyclonic Compliance in regions C & D.



Ensure the energy rating on your windows is WERS rated to be confident of its true performance. Visit wers.net for more info.



Carinya Master Key offers the convenience of having 1 key for all your windows and doors.
Carinya Master Key - Less keys, less fuss!

Why Carinya is better

- Commercial design pedigree.
- Superior designer look - created by architects and design engineers.
- Suitable for all glass thicknesses from 4mm – 10.5mm.
- Suitable for double glazing with up to 24mm insulated glass units.
- Infills, end caps and weather seal guard against air, water, grit and insects and increase acoustic performance.
- Fully energy rated and certified to WERS.
- Fully tested and certified to bushfire conditions up to BAL-40.
- Fully tested and certified to high acoustic requirements.
- Fully tested and certified for cyclonic regions C & D.
- The only residential window & door system designed by a market leader in commercial windows and doors.

CASE STUDY | Trigg Private Residence, Perth WA

This new home incorporates Carinya window, door and framing products to deliver a sophisticated and well-protected home.

Architect
AMG

Builder
AMG Home Builders

Fabricator
SV Glass

An inviting new residential home in the coastal suburb of Trigg in Perth, WA, is a showcase for Carinya's extensive range of commercial-quality window and door framing solutions.

Drawing on credentials from the commercial environment, Carinya products provide an affordable option without compromising quality for the residential build environment. Used in a large range of developments from multi-unit residential to high-end homes, the Carinya product line comes with an impressive range of performance specifications to meet acoustic, energy and cyclonic environmental requirements.

For openable windows, Carinya Classic 92mm Awning Windows were selected in the premium 92mm frame option (a slimline 50mm option is also available). With designer bevelled edges and wide sashes, the windows add a distinctly modern style to the home's exterior. In practical terms, the wide sash provides increased strength and a stable base for chain winders, which can be installed with either a standard or restricted opening.

All Carinya sashes feature a heavy duty corner stake, combined with screw fixings, resulting in an extremely strong and durable sash. Carinya Classic Fixed windows, which feature the same styling and technical specifications, were also selected for the build.



CASE STUDY | Trigg Private Residence, Perth WA

Products Used

- Carinya Classic 92mm Awning Window
- Carinya Select Hinged Door
- Carinya Classic Fixed Window
- Carinya Classic Sliding Door
- ProGlide High Performance Sliding Door

Meanwhile a Carinya Select Hinged Door was used to provide access to the laundry area. The combination of an 85mm wide face and a generous 125 mm frame gives the Carinya door a visually balanced finish, as well as making it easy to accommodate screening needs. The door's flexibility also means hardware can be selected from a large range of options, depending on the client's preferences. While Carinya hinged doors are ideal for new residential constructions they are also often used in renovation projects and further options include sidelights, glass louvres and screening for security or insect protection.

On the upper level, access to the outdoor balconies has been provided through Carinya Classic Sliding Doors. Like the Carinya windows, the doors feature a modern look while including important performance features. With end caps concealing all cavities, the home's interior is protected from insects, dust and dirt while the internally concealed weather flaps reduce air and water infiltration. Meanwhile, the proprietary Alspec roller system used in the Carinya doors is the same as can be found in Alspec's commercial ranges. The roller system comes in two options: general use (up to 80kg per panel) and heavy duty (for double glazing loads up to 160kg per panel). The commercially designed hardware which accompanies the doors also ensures durability and secure operation.

At ground level, access to the outdoor entertainment and pool area has been provided by ProGlide High Performance Sliding Doors. With their ability to span large spaces, ProGlide doors enable the indoor and outdoor living areas to be integrated or separated as required with their full-height floor to ceiling openings. Similar to the Carinya range, ProGlide doors have been built with Australia's extremes of climate in mind, featuring high weather performance specifications which allow designers to achieve demanding acoustic and thermal specifications.

As a demonstration of how the Carinya range can produce a stylish and protected home, the new occupants of the Trigg Residence will enjoy both the external visual appeal and the high performance features that come with selecting commercially credentialled window and door framing solutions from Alspec.



A close-up photograph of a black door frame with silver-colored commercial hardware. On the left is a vertical silver handle with a keyhole at the bottom. To its right is a vertical silver strike plate with a brass-colored locking bolt. The background is a blurred indoor setting with a window and a wooden surface.

Commercial Hardware

Few suppliers can match the level of accessory support that Alspec offer for their Aluminium Systems. Stocking of gaskets, seals, door locks, hinges, door closers, fasteners, stays and sealants puts Alspec at the forefront of true System Suppliers. Alspec offer a complete range of Residential Door and Window accessories covering many of the major brand names in the industry.

For Security and Flyscreen customers we stock Fibreglass and Aluminium insect screening, hinged and sliding door locks, screen closers and all of the accessories for the Screening industry. If you need an accessory for an Aluminium System from a major manufacturer it is more than likely it will be in stock at your local Alspec branch.

Visit the Alspec website for a copy of the Hardware Catalogue.



**ALU
SPACE[®]**

by Alspec





A New Space for Architects, Engineers and Specifiers

Alspec, Australia's leading designer of innovative Aluminium Systems, have recently opened AluSpace in Surry Hills, Sydney and in Beverley, Adelaide. AluSpace is the new home for advanced designs in aluminium window and door systems with a focus on large sliding and folding doors designed for the specification industry.

AluSpace offers a versatile meeting space for architects and their clients to meet and discuss design requirements, as well as attend certified CPD presentations.

AluSpace by Alspec | Sydney

235 Commonwealth Street,
Surry Hills NSW 2010

design@alspec.com.au

AluSpace by Alspec | Adelaide

1 Pope Court,
Beverley SA 5009

adelaidealuspace@alspec.com.au

By appointment only

alspec.com.au

alspec[®]
ALUMINIUM SYSTEMS
SPECIALISTS

Colour & Finishes

John Grey Hall of Residence, JCU, Cairns QLD
2019 Dulux Australia Colour Awards Finalist

Powder Coat Colours

At Alspec we are always being asked what the top specified powder coat colours are. To make it easy for consideration with your next project, here is the list of our top 20 warranty powder coat colours for 2018/2019.

Alspec is a Registered Powder Coater of Dulux and Akzo Nobel (Interpon) and can offer an extensive range of colours all powder coated from our inhouse paintlines.



Top 20 Specified Warranty Colours 2018/2019

1.	Dulux	Duratec Zeus Black Matt	900-88702
2.	Dulux	Duratec Zeus Charcoal Satin X15	900-87732
3.	Dulux	Electro Black Ace	906-9116F
4.	Dulux	Duratec Monument Satin X15	900-73075
5.	Dulux	Duratec Monument Matt	900-8189M
6.	Dulux	Duratec Eternity Charcoal Pearl X15	900-88394
7.	Interpon	Ultriva Monument Matt	YL264A
8.	Dulux	Duratec Zeus Lunar Eclipse Satin	900-87734
9.	Dulux	Duratec Zeus Lunar Grey Matt X15	900-88417
10.	Dulux	Electro Dark Bronze	906-8184K
11.	Dulux	Duratec Zeus Grey Satin X15	900-88416
12.	Dulux	Electro Medium Bronze	906-8183K
13.	Interpon	Ultriva Endura Bronze Matt	YY248A
14.	Interpon	Charcoal Lustre	GW215A
15.	Interpon	Ultriva Ebony Matt	YN201A
16.	Interpon	Precis Dark Bronze	YY20BA
17.	Dulux	Duratec Zeus Silver Grey Matt	900-51272
18.	Dulux	Duratec Eternity Citi Silver Pearl	900-7024Q
19.	Dulux	Duratec Zeus Dark Grey Matt	900-51275
20.	Dulux	Duratec Eternity Titanium Pearl X15	900-87728

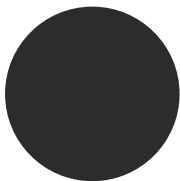




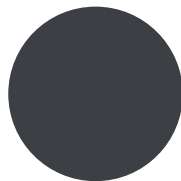
**COLOUR INSPIRATION FOR
YOUR NEXT PROJECT.**

Colour Disclaimer

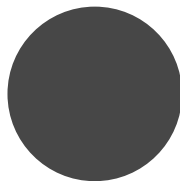
Colour representations in this brochure are for illustrative purposes only. You should request actual samples before placing your order.



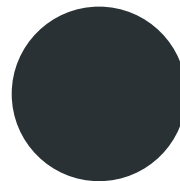
Duratec Zeus Black Matt



Duratec Zeus Charcoal Satin X15



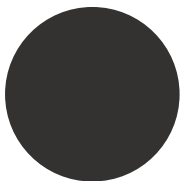
Electro Black Ace



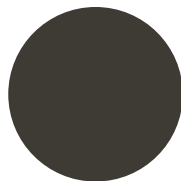
Duratec Monument Satin X15



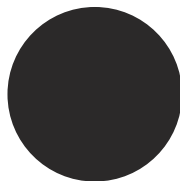
Duratec Monument Matt



Duratec Eternity Charcoal Pearl X15



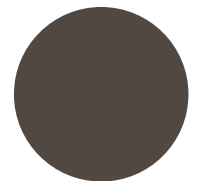
Ultriva Monument Matt



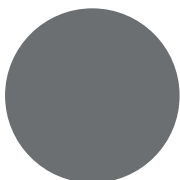
Duratec Zeus Lunar Eclipse Satin



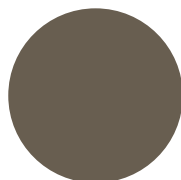
Duratec Zeus Lunar Grey Matt X15



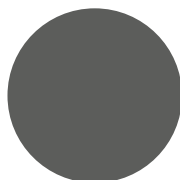
Electro Dark Bronze



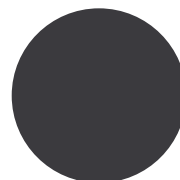
Duratec Zeus Grey Satin X15



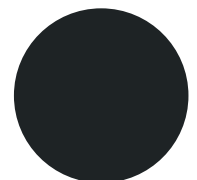
Electro Medium Bronze



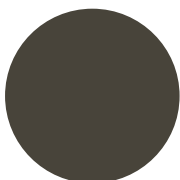
Ultriva Endura Bronze Matt



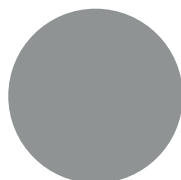
Charcoal Lustre



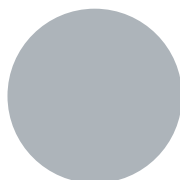
Ultriva Ebony Matt



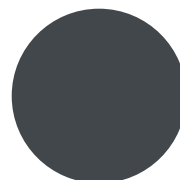
Precis Dark Bronze



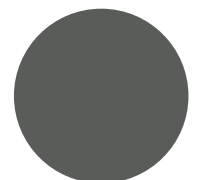
Duratec Zeus Silver Grey Matt



Duratec Eternity Citi Silver Pearl



Duratec Zeus Dark Grey Matt



Duratec Eternity Titanium Pearl X15



HEAD OFFICE | 3 Alspec Place, Eastern Creek NSW 2766
Phone: 02 9834 9500 | Fax: 02 9834 9532 | info@alspec.com.au

AluSpace by Alspec - Sydney | 235 Commonwealth Street, Surry Hills NSW 2010
Phone: 1300 ALUSPACE (1300 258 772) | design@alspec.com.au

AluSpace by Alspec - Adelaide | 1 Pope Court, Beverley SA 5009
Phone: 08 8150 6960 | adelaidealospace@alspec.com.au

SYDNEY BRANCH
3 Alspec Place
Eastern Creek NSW 2766
Phone: 02 9834 9500
Fax: 02 9834 9555
sydney@alspec.com.au

NEWCASTLE BRANCH
95 Griffiths Road
Lambton NSW 2299
Phone: 02 4952 9111
Fax: 02 4952 9728
newcastle@alspec.com.au

PERTH BRANCH
30 Holder Way
Malaga WA 6090
Phone: 08 9209 9100
Fax: 08 9209 9199
perth@alspec.com.au

CAIRNS BRANCH
11 Southgate Close
Woree QLD 4868
Phone: 07 4037 6666
Fax: 07 4037 6699
cairns@alspec.com.au

BRISBANE BRANCH
8-22 Jutland Street
Loganlea QLD 4131
Phone: 07 3089 4900
Fax: 07 3089 4999
brisbane@alspec.com.au

ADELAIDE BRANCH
1 Pope Court
Beverley SA 5009
Phone: 08 8150 6960
Fax: 08 8150 6999
adelaide@alspec.com.au

TOWNSVILLE BRANCH
21 Carroll Street
Mount Louisa QLD 4814
Phone: 07 3089 4965
Fax: 1300 131 747
townsville@alspec.com.au

MELBOURNE BRANCH
26-40 Pound Road West
Dandenong South VIC 3175
Phone: 03 8787 6333
Fax: 03 8787 6399
melbourne@alspec.com.au

DARWIN BRANCH
25 Bishop Street
Woolner NT 0820
Phone: 08 8941 7300
Fax: 08 8941 7322
darwin@alspec.com.au