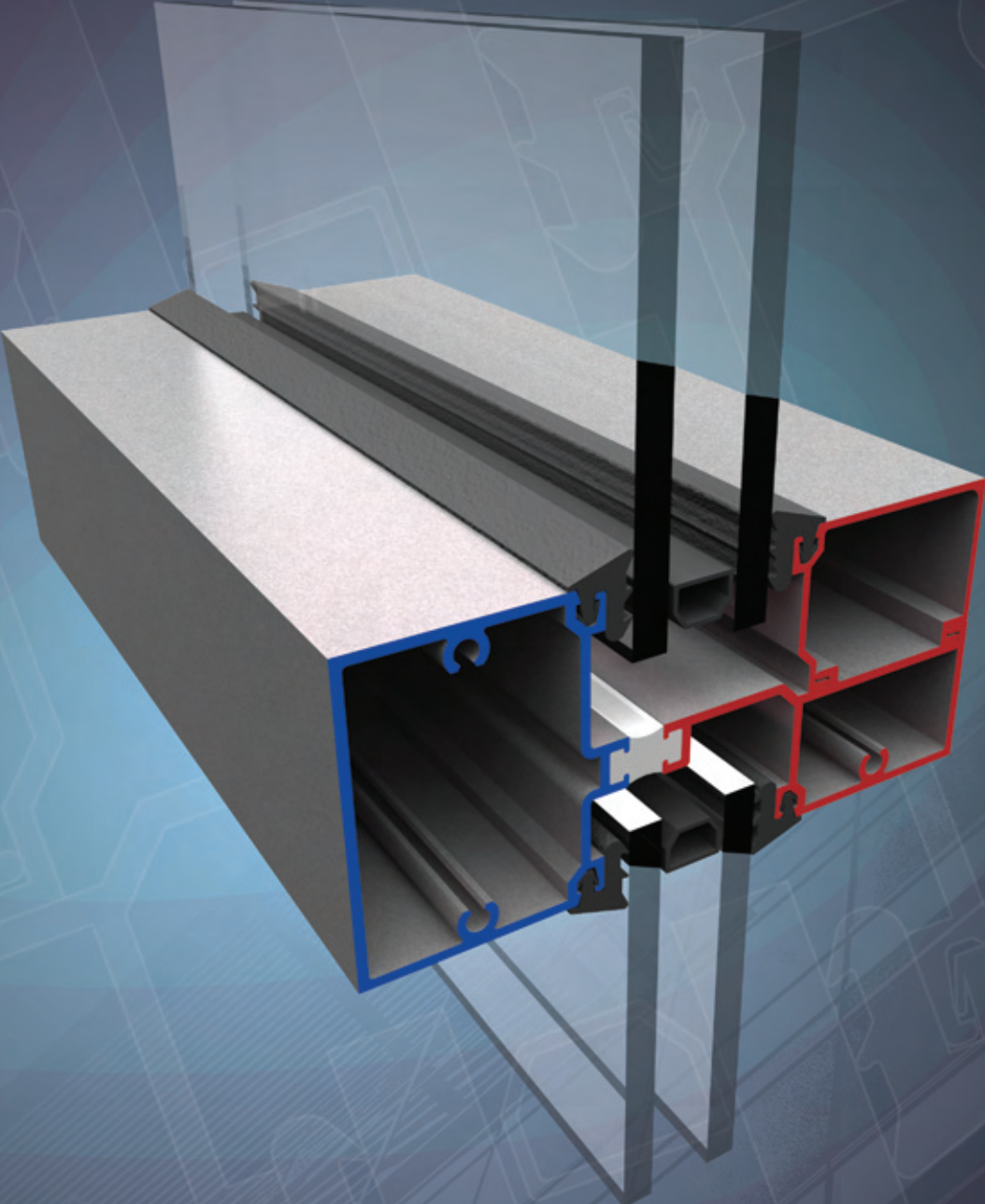


the evolution of thermal break framing

U-max



The Evolution of Thermal-Break Window Framing

Aluminium Industries is about to revolutionise the commercial window framing landscape in Australia. The Release of U-max™ represents a major development in commercial window framing systems. U-max™ will change the way we think about commercial windows.

Why U-MAX - Thermal-Break Technology

Australian architects are striving to produce projects that are energy and cost efficient. Developers and even tenants are appreciating the environmental and commercial importance of energy efficient buildings. Window framing systems are the front line between external and internal environments. Until now building designers have been reliant on glass selection alone to maximise U-value performance of the complete window. With U-max™ from Aluminium Industries, all this changes. The U-max™ system will deliver an energy loss reduction of up to 35% compared to conventional framing systems.

Thermal Break Methodology

There are two main schools of thought when it comes to Thermal Break Technology. For decades Americans have utilised pour and de-bridge (P&DB) polyurethane systems to prevent through frame energy loss in commercial projects. Polyurethane technology is tried and tested; it provides exceptional results and is highly suitable to the larger frame designs used in commercial applications. In Europe the system of choice utilises a solid Polyamide strip crimped between two or more extrusions to provide the thermal break. This methodology also provides great results and is especially suitable for smaller more intricate extrusions.

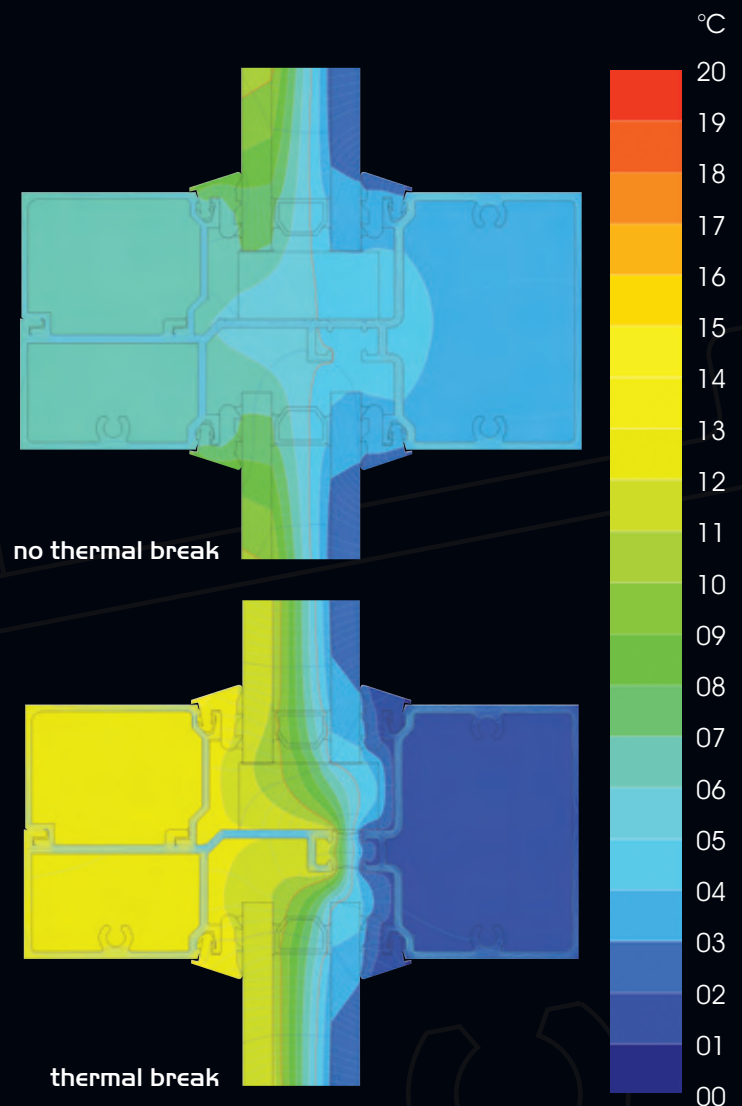
U-max™, the first thermal-break system designed for Australian Conditions

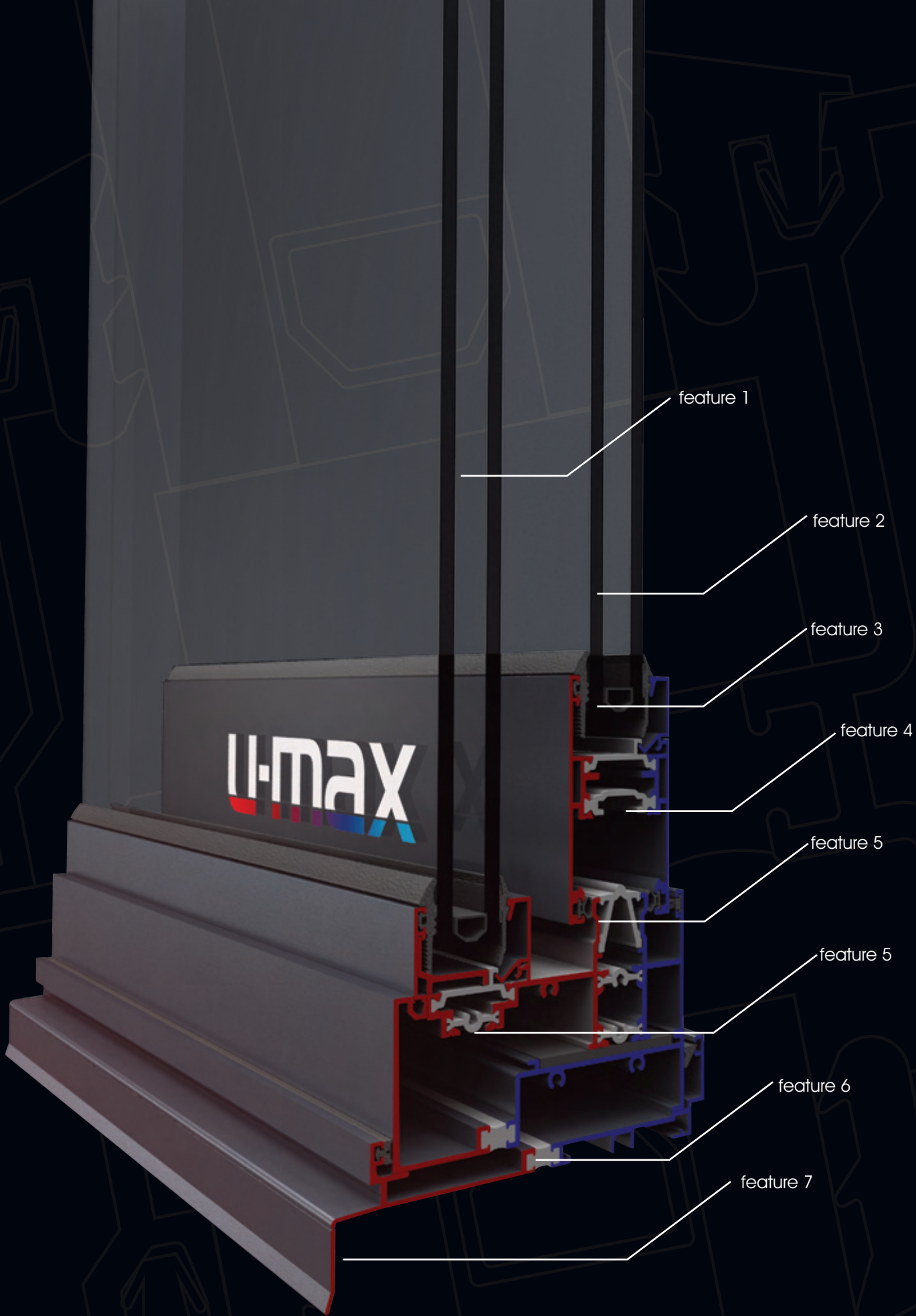
Aluminium Industries have adopted world's best practise to combine both Polyurethane and Polyamide strip technology to provide a range of suites designed specifically to suit Australian conditions and current building practises. Our in-house designers are working alongside two of the world's leading experts in thermal barrier technology. Dr. Claudio Gambogi (APA consulting, Verona, Italy) and Mr J.D. Williams (Aluminum Fronts, USA) have collaborated with AI to design a range of systems specifically for our conditions and our market.

U-MAX is neither a European nor American product; it's an Australian product that maintains a synergy with current conventional products in use across Australia and New Zealand.

The Real Benefits of U-MAX

Quite simply put U-max™ allows building designers the option of reducing the capital outlay for exotic glass. Alternatively, by combining U-max™ and Low-E Glass you will have a project that will provide enormous energy savings for the life of the building.





Testing

U-max™ systems have been tested and certified by one of the world's leading laboratories for window testing, HTL (Hurricane Test Laboratories) in Atlanta, USA. HTL's facilities provide one of only two 'hotbox' test platforms in the USA. Hotbox testing provides actual performance data and fact. Unlike most window systems currently available in the Australian market, U-max™ performance is proven with actual data rather than just simulated computer modelling. We believe that facts should speak for themselves - our test reports are readily available.

Our System

The U-Max Commercial Range

- Thermal Break - Awning Sash & Casement Windows
- Thermal Break - Apartment Sliding Doors
- Thermal Break - 120 x 55mm Front Glazed Windows Suite
- Thermal Break - 120 x 55mm Centre Glazed Windows Suite
- Thermal Break - 120 x 55mm Structural Glazed Windows Suite

Features

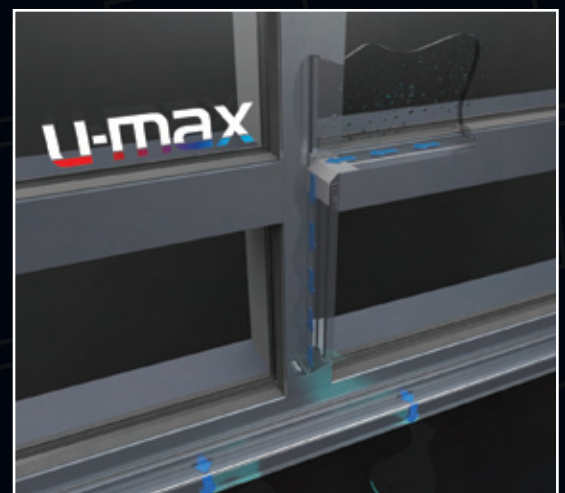
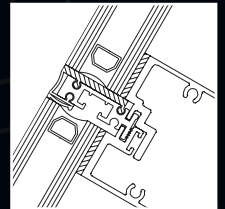
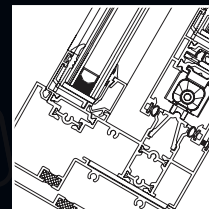
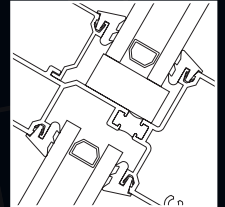
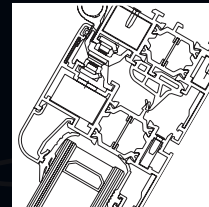
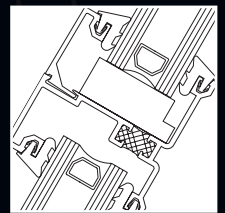
- Panel type installation with screw flute joinery
- System can be shop fabricated and shipped to job site assembled into panels
- Top Load EPDM gaskets to position and weather-seal the glass in aluminium glazing pocket
- EPDM gaskets meet ASTM C864 Specification with Anti-Stretch reinforcement cords inserted
- System allows full 12.7 glass bite
- Lanced retaining edges completely encapsulated by polyurethane polymer provides for an aluminium/polymer composite with the highest shear test results of all thermal barriers
- Outstanding thermal performance with standard 25.7 insulating glass
- Overall system U-Factor = 0.36 [projected]

Performance Testing

- Meets or exceeds AS2047 for Residential and Commercial Applications

Introducing Watershed™

Another first with the release of U-max™ is the introduction of Watershed™, Al's patent pending rainwater evacuation system. Watershed™ is designed to manage and direct the internal flow of rainwater through the frame system to the external perimeter of the building. The Watershed™ system ensures dry interiors and prevents the buildup of still water the cause of recurring condensation and even mould that can occur in standard framing systems.



System Accreditation

It is our desire, with U-max™, to raise awareness within the industry of the benefits of high quality window systems installed by fabricators with a high degree of workmanship. U-max™ window framing systems will only be available from an accredited U-max™ manufacturer.

The performance of our suites requires high valued workmanship and joinery. All U-max™ accredited fabricators will be required to enrol both site and factory operators in the appropriate U-max™ training program.

Features

- Principles of thermal efficient windows - design, performance and characteristics.
- Joinery techniques - excellence in window manufacturing.
- Glazing best practice - gasket glazing, principles of pressure equalization and water management.
- Waterproofing and sealing (understanding air and water penetration)
- Installation and handling of U-max™ Framing Systems.

Technical Support and Project design

U-max™ framing systems are backed up with technical and design support from our architectural design team based in Melbourne. Extrusion profiles can be custom designed for specific projects and applications. Speak to your AI architectural specialist for further information.

Finishes

U-max™ will be available in the complete range of AI finishes including anodized and powdercoated. AI operates its own powdercoat line adjacent to our Dandenong manufacturing facility.



Professional Affiliations

Aluminium Industries is a member of the Australian Window Association.

Testing for U-max™ products is performed by Hurricane Test Laboratories in Atlanta, Georgia.

U-max™ products are subjected to the Window Energy Rating System.



Contact Us

Stay current with the release and availability of U-MAX, register your interest at u-max.com.au

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