

# External Venetian Range

evaya 





### External versus Internal Shading Systems

Many reputable studies have been conducted into the efficiency of external and internal shading systems. Research findings by Australian Institutions and summary figures are available through the CSIRO. The objective with any shading device is, of course, to keep the inside temperature in a range where our bodies feel comfortable and perform at their best. It has been well established that these temperatures range between 18° and 25° Celsius. To achieve and maintain this comfort zone we need to spend valuable energy cooling and heating our homes and workplaces.

#### Benefits:

Utilising the innate properties of aluminium, which provides high solar radiation reflection and low absorption and transmission values, the ev80 and ev93D act to effectively reduce:

- household energy requirements.
- carbon dioxide and greenhouse gas emissions.
- expenditure.

Locally and environmentally, these systems maximise internal light and thermal comfort levels whilst allowing external views to be maintained.

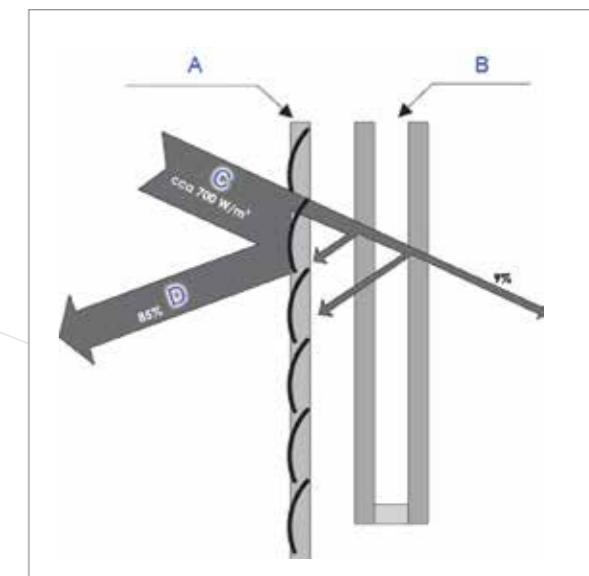
### Effectiveness of External Venetian Blinds

Assessing the impact of heat gain through glass.

Heat gains that occur within internal spaces can be classified on the basis of their origin. These may result directly from internal sources of heat or from the external environment.

Heat gains from the external environment are caused by the passage of solar radiation through mediums and structures such as walls, ceilings, glazed window surfaces, doors and the infiltration of external air. External Heat Gains have a decisive impact on the thermal load of buildings. Window design, surface area and orientation are all factors which affect this loading dramatically. External systems that also act as barriers against cold winter nights will save money in two ways:

1. The upfront investment into a smaller heating and cooling unit.
2. Ongoing savings in running and maintenance costs.



- A ev-Slats angled at 45 degrees
- B Double glazing
- C Sun's radiation
- D Reflection

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### Effective use of External Venetian Blinds

As a general rule, the ev80 and ev93D are lowered in the vertical or closed (0 degrees) position and raised in the horizontal position (90 degrees). The slats can be tilted and rotated at various angles between these parameters. This may be altered, if required, with a maximum 180 degree operating range possible for the ev80.

### To reduce heating energy requirements in Winter

In the space between a window and a closed external venetian blind, an air pocket forms which prevents heat from being transported outside. Buildings with unshaded windows will emit radiation towards the outside environment and experience significant energy loss as a result.

The slats act as an effective radiation shield to prevent the loss of heat. The amount of solar radiation and light entering through the glazing can also be incrementally controlled. Simply tilting the blinds allows sunlight to be focused into a room which assists with passive warming during the cooler months.

### To reduce cooling loads in Summer

- Open the windows whenever the outside temperature is lower than the temperature inside the building.
- Close the windows when the outside temperature exceeds the inside temperature.
- If it is necessary to ventilate a room during high outside temperatures, do so briefly and intensively.
- Use cross ventilation whenever possible.
- Over the entire day keep the system in a closed position such that there is just enough light to eliminate the need for artificial lighting. (The visible spectrum of solar radiation contains a great deal of thermal energy which will heat up the room).
- Adjust the slats in such a way that ideal lighting is maintained using daylight for the whole day.
- Avoid using artificial lighting, noting that daylight provides the room with four times the brightness per watt, which in turn means that artificial lighting heats the room up to four times as much as daylight. In addition and most importantly, daylight increases people's sense of comfort.
- In the evening, they should be opened to enhance night-time cooling results.



## Function

Streamlined and functional, the ev80 and ev93D are capable of efficiently shading large expanses of glass whilst at the same time creating a striking facade. Their unique design means they can be operated to allow the entrance of natural light without glare, all the while maintaining exterior views.

The aluminium slats of the blinds can be either tilted to varying angles or retracted by remote control, switch operation or integration with CBUS and Building Management Systems. Incorporation of Sun and Wind Sensors means optimal operating parameters may be achieved automatically.

## Form

Ongoing product development and investment in the latest manufacturing technologies ensures we are able to provide our clients with modern, innovative solutions, engineered to benefit the evolution of building design.

The ev80 and ev93D range are available for residential, commercial and architectural applications and can be found wherever high performance shading systems are required. Both are engineered and produced at our administration and manufacturing plant located on the Mornington Peninsula. This not only ensures we can provide unique lead times, it also means that critical client support is readily available.

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# ev80

Demanding and adaptable, the ev80 is by far the most versatile external venetian in the market. The 80mm rolled edge C-Shaped slats allow the blinds to be rotated, stopped and tilted through a 180 degree range of movement, ensuring precise and incremental control of light, heat, glare and privacy. Available with a suite of side channel systems with the option of alternating or consecutive side guide pinning, ladder locking and the addition of intermediate wire guides for enhanced wind stability, the ev80 is the perfect shading solution for the Australian climate.

## Type 1: Wire Guided:

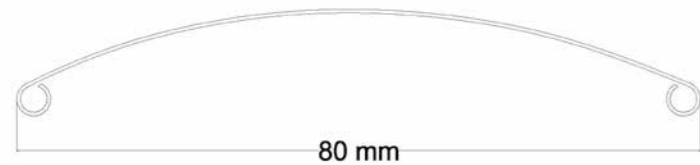
Wire guides are an effective means of anchoring external venetian blinds to their fixings and provide minimal visual obstruction. High quality 316 marine grade stainless steel wire is utilised, which is coated with a UV stable PVC sheath to prevent interference and friction with the slat surface. A unique attachment system fastens the wire to the headrail and numerous options are available as anchoring or termination points, including deck plates and stand offs. It must be noted that, as with all wire guided blinds, wind loading will result in the blind vibrating and resonating and there will always be an associated 20 percent filtering of light through the slats due to their single concave/convex design.

## Type 2: Side Pins

As a world first, we are pleased to announce the release of a revolutionary new addition to our range. After thorough testing we are able to offer stainless steel side guide pins. A marine grade finish provides the highest level of protection and resistance against salt corrosion. Where stable and refined operation is required the benefits of utilising side channel guidance systems far outweigh any other means of securing external venetians. Side pins, constructed from either Zamac or Stainless Steel, are an innovative means of stabilising and improving the performance of these blinds. These pins are machine riveted to the slats which then engage into the side channels. Each extruded aluminium side guide has a plastic insert (or keder) which acts to minimise friction, resistance and resonance.

## Type 3:

Specifications as per Type 2 with the addition of Double Pinning which incorporates Side Pins on both sides of individual slats. This configuration is often recommended in extremely windy settings to enhance performance and stability.



## Type 4:

Left Hand Side Channel with Right Hand Wire guide.

## Type 5:

Left Hand Wire guide with Right Hand Side Channel.



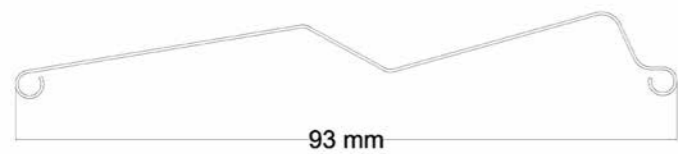
## ev93D

We are pleased to introduce the latest addition to our external venetian range, the ev93D. The unique 93 mm slats have been designed to enhance wind stability and light control, with the D in its name directly referencing its room darkening capabilities. The clever contour of the slat allows each blade to interlock perfectly to block out unwanted light whilst at the same time allowing minimal stack heights when retracted. These features, when coupled with a Neoprene rubber insert on the front edge of each slat to prevent noise and damage whilst enhancing its thermal reflective properties, create one of the most technologically advanced automated louvre systems of our era.

In addition to these developmental design benefits, each ev93D is constructed with Hagofix slat attachment and guidance systems. The Hagofix system embeds a stainless steel connector into the rolled edge beading of the slat which then attaches to a spigot fastened to a Kevlar/aramid woven tape. This provides extremely secure fastening and stability and allows extensive and incremental control of blade angles. It also ensures that each slat cannot swivel or slide out of position. The UV resistant woven synthetic connecting element, with exact fold points, further acts to provide perfect closure and minimal stacking.

The ev93D is typically lowered closed (vertically at 0 degrees) and raised in the horizontal (90 degrees open) position.

Stable, secure and refined operation is also guaranteed by the Zamac side pins which are mechanically riveted to the slats and engage in our range of extruded aluminium side guides. Each side channel has a patented keder insert to reduce any associated noise and friction. Similar to the ev80, the lifting system relies on a UV stable Texband tape which passes through Precision machined, punched and drawn holes along the length of the slats.







# Slat colours



White



Silver



Dark Silver



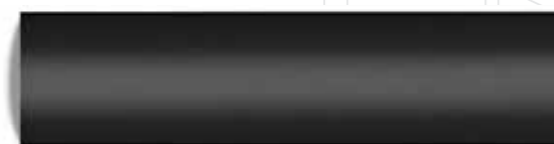
Graphite



Dark Bronze - Dulux Elecro Dark Bronze



Matt Black - Dulux Elecro Black Ace



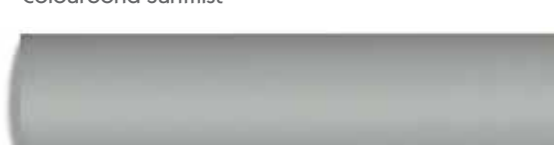
Black



Colourbond Monument



Colourbond Surfist



Colourbond Shale Grey

## Each evaya Rolled Edge Aluminium Slat is:

- Reinforced with copper free aluminium alloy to provide added strength and flexibility.
- 0.45 mm gauge, chemically pre-treated and stove enamelled.
- Roll Formed and Machined on our premises utilising the most advanced technology and operating systems.
- Scratch, shock and corrosion resistant.
- Available in a range of Standard Colours and Project Specific Alternatives.
- Custom Colours available upon request.

Precision machining punches and draws holes along the length of the slats to allow the passage and fastening of ladderbraids, Hagofixing, Texband Lifting tapes and coated stainless steel wire guides, where required.

Omega Punching, a process by which a horse shoe shaped cleft is produced at various intervals along the length of the slat, ensures correct spacing between the louvres. This facilitates both the incremental adjustment of blade angles and closure, while at the same time enhancing wind stability.

As with any colour sample or swatch, this brochure is a representation of the evaya 80C and 93D Colour Range and is meant as a guide only. Every effort has been made to present these colours as accurately as possible and as closely as modern printing processes allow. Please note that appearance may vary according to light source.

Where accuracy is vital a section of slat can be requested to confirm selection and colour match.

Please feel free to discuss alternatives with one of our representatives who will be more than happy to help you with your selection.

## Nano Technology

We are fortunate to be one of the few companies globally to have unique access to titanium dioxide (TiO<sub>2</sub>) photocatalytic coil coating nano technology. Under the effect of sunlight the TiO<sub>2</sub> acts as a catalyst and causes the decomposition of organic dirt particles.

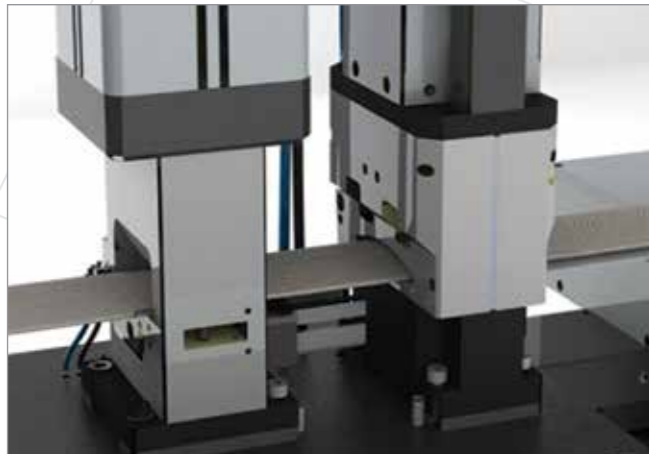
Over time organic substances and other environmental contaminants deposit on surfaces, to which dirt and dust particles can then easily adhere. With the photocatalytically active coating, organic substances are decomposed under irradiation by UV(A) light and transformed into carbon dioxide and water. Non-organic dirt particles adhering to coated surfaces are thus minimized.

Indirect sunlight and limited moisture are sufficient to activate the self-cleaning process. The TiO<sub>2</sub> coating has a self-cleaning effect even on surfaces which are not directly exposed to rain. Once the coating has been activated the surface becomes hydrophilic (attracts water). The water is then distributed evenly over the surface in a thin film. As a result the coating dries very quickly without leaving any drop marks.

The titanium dioxide contained in the coating not only contributes to cleaning the surface, but is also capable of eliminating harmful substances from the air we breathe. TiO<sub>2</sub> is a semiconductor. UV light generates electrons on the surface, which then form oxygen radicals. Oxygen radicals break down many harmful pollutants in the air, such as nitrogen into harmless nitrate, volatile organic compounds into CO<sub>2</sub> and water, and ozone into oxygen.

## Eco-friendly and sustainable

Titanium dioxide is completely safe and environmentally friendly. The photocatalytic process is continuous, remains undiminished by UV light and does not release nanoparticles. Its use and processing is completely harmless.



### Technology

The 'Made by evaya' quality is ensured with each ev80 and ev93D produced at our Manufacturing and Administration Plant located on the Mornington Peninsula. The latest innovative software, technology, equipment and high speed production lines ensures precise:

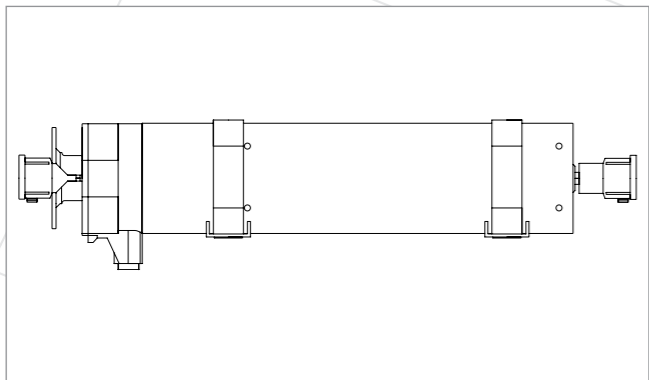
- Roll-forming of aluminium coil.
- Machining of material.
- Fixation of guide elements.
- Automated threading and stacking of slats.
- Intelligent Production Supervision.
- Quality Control.



### Blades

Aluminium coil coating technology is the most efficient, reliable, stable, and environmentally friendly means of applying a durable paint finish to each individual slat.

The coils we utilise in the manufacturing process are reinforced with copper free aluminium to provide added strength and flexibility. The 80c rolled edge and 93D slats are formed and machined on our premises utilising the most advanced operating systems and machinery.

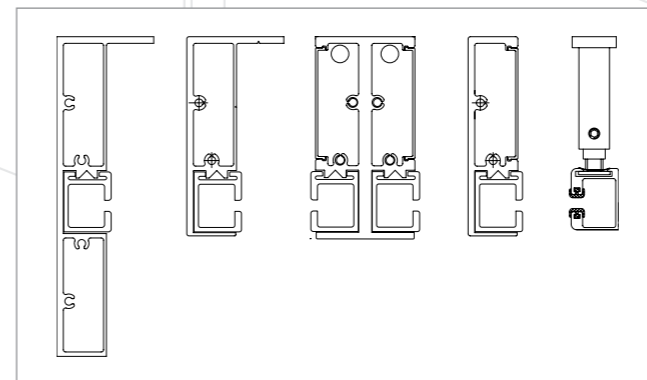


### Motorisation

The ev80 and ev93D are driven by German Engineered, market leading, Geiger GJ56 Venetian Blind Motors, a perfect combination with no compromise. These are the most innovative, practical, reliable and quietest drive solutions in their class.

#### The GJ56 silent motor

- Requires minimal energy consumption.
- Ensures longer running times due to its design which prevents over heating.
- Is manufactured with the most reliable and proven components.
- Has the most optimal torque values of any motor of its type.



### Profiles, Side Channels and Pelmet Systems\*

- Extruded with non-corrosive Aluminium Alloys.
- Available but not limited to a standard range of RAL and powder-coat colours.
- Modern, Innovative and aimed at benefitting in the evolution of building design.
- Environmentally Sustainable and readily recyclable.
- Created and Engineered by evaya.



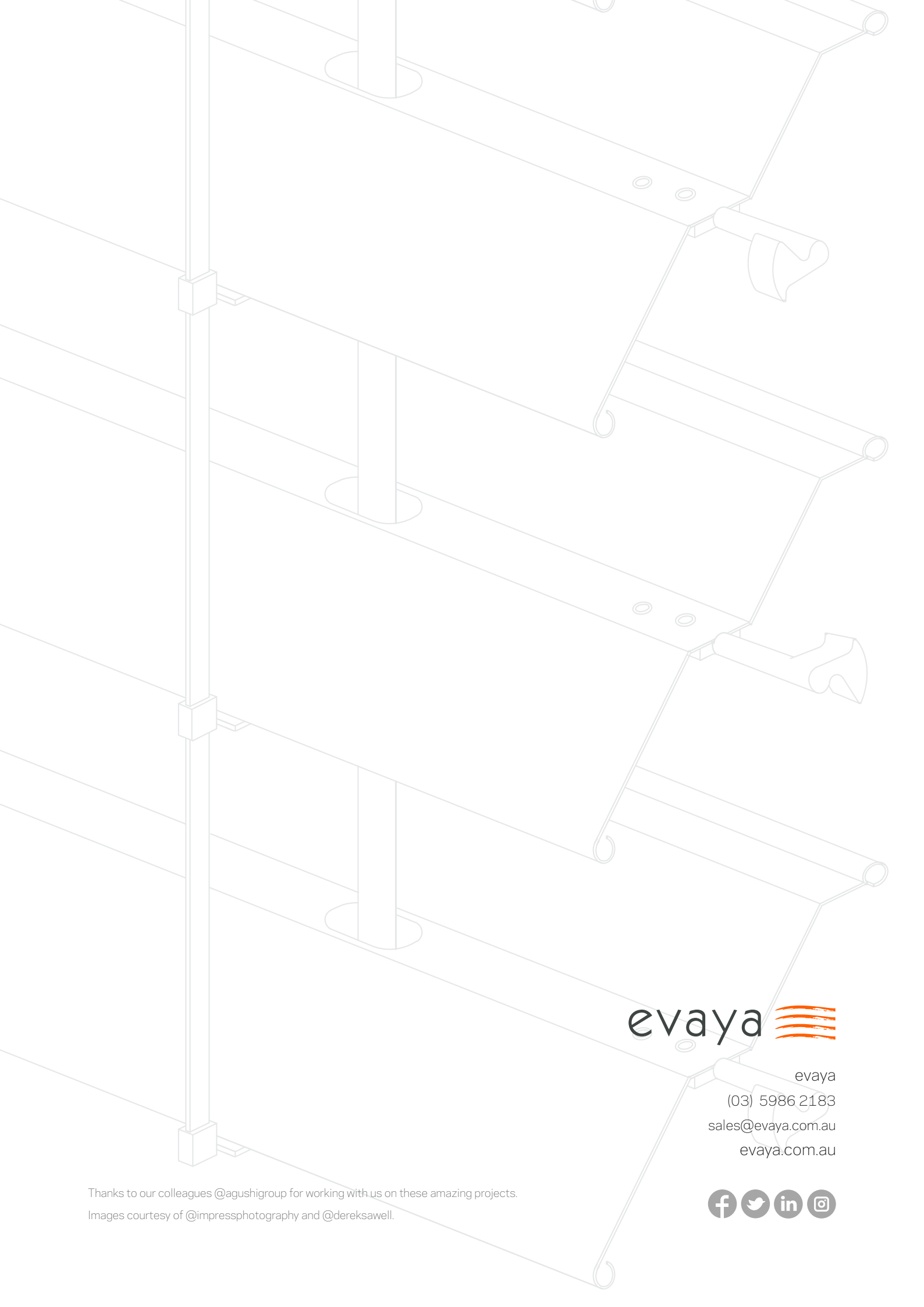
### Tilting and Lifting Devices

- The Ladderbraid, and Hagofixing, upon which the slat is either rested or fastened, is woven and reinforced with Kevlar Aramid fibres.
- 8mm Texband Anti-Friction and UV Stable Lifting Tape is used to raise and lower the slat bundles.
- The correct spacing between blades, enhanced incremental adjustment of blade angles and the inherent wind stability of the ev80 and ev93D is a result of a process called Omega punching, which acts to fasten the slat to the ladderbraid.



### The Brand

The name evaya is an acronym of many individual elements. Like our team and product range these have been fashioned to work in perfect harmony. When you see the evaya logo you can be assured that you have become part of an organisation that is driven by solutions, performance and passion. With established clientele, we endeavour to strengthen our position in the market through continual product improvement and unique lead times, whilst ensuring critical client support is always readily available.



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Thanks to our colleagues @agushigroup for working with us on these amazing projects.  
Images courtesy of @impressphotography and @dereksawell.

