horiso® Specialty Venetian Blinds

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Cover, insert and left: No. 1 Bligh Street, Sydney - Australia.
Voted "Best Tall Building in 2012" in Australia and Asia by the Council for Tall Buildings and Urban Habitat.

Specialty Venetian Blinds - external. Art Gallery, Queensland.

Specialty Venetian Blinds - double skin facade. NZI, New Zealand.

Introduction

"Looking through the facade, our vision is to produce systems less visible in their operation and more visible in their effect."

Horiso®'s strategy is to look far into the future and continually develop innovative solar control systems. Our systems benefit the continuing evolution of building design and sustainability, as well as the well-being of people living and working in buildings throughout the world.

Solar control solutions are a major consideration in building projects. Horiso® strives to produce technically advanced systems that relieve the need for any human intervention and provide outstanding environmental results.

Horiso® designs, engineers and manufactures a large range of high quality standard and design specific solar shading systems for internal and external building applications. Our systems include Specialty Venetian Blinds, Rack Arm Systems, Specialty Louvres, Shade Tension Systems and Climate Ready® Control Systems.

With our clients and partners, we create custom made solar control solutions for projects requiring particular design, construction, technical and environmental outcomes.

Reaching objectives involves collaboration with key people who contribute their know-how in developing the most suitable solutions within budget. Horiso®'s team of engineers and specialists is fully dedicated to the design, manufacture and testing of the components required for all projects.

Horiso® is proud to have delivered extraordinary solutions for our clients worldwide. They have recognised us as an innovator and "problem solver" in our industry. Numerous commercial building projects have been selected and granted prestigious government and industry awards for outstanding design, technology and environmentally sustainable achievements.

Horiso® manufacturing plants are located in Australia and USA with product research and development capabilities. Horiso® products are sold and serviced by an international network of specialist distributors.

Today, Horiso® teams up with project partners in many countries, including Australia, USA, Canada, New Zealand, Singapore, Thailand, Malaysia, Brunei, Hong Kong, Japan and Taiwan.

Specialty Venetian Blinds - internal. Walsh Bay, Sydney.

Specialty Timber Venetian Blinds - internal. Darling Quarter, Sydney.

Horiso® Specialty Venetian Blinds are suitable for external, internal and within double skin facade applications.

Sun is an essential ingredient in achieving well-being. Whether at home or work, the key objective is to maximise the use of natural light without the problems of solar glare or excessive heat gain.

Environmentally, the Specialty Venetian Blinds maximise internal light conditions, reduce solar heat gain and glare impact. CO^2 emissions from heating and cooling systems and energy usage are significantly reduced while occupants' well-being greatly improves. In addition, the Internal Environmental Quality (IEQ) enhancement leads to higher human productivity achievements.

To maintain a building's highest performance level, the system can be independently controlled or integrated with building management systems. Horiso® Specialty Venetian Blinds have numerous benefits that specifically cater for differing architectural design and engineering requirements, including harsh weather conditions - wind, extreme heat and snow.

The design engineering specifications are shown on page 16 together with system component illustrations and descriptions. The system components can be supplied in a range of colour and finishes with varying slat materials including aluminium and timber finishes adaptable for specific applications.

The varied system dimensions of Horiso®'s Specialty Venetian Blinds provide standard and custom options that give architects design flexibility and encourage engineering and material advancements.

Our commitment to manufacturing products with a sustainable future and strict criteria is outlined in our Climate Ready® statement on page 30.

The implementation of our Quality Control System ensures the ongoing high quality of our products involving all processes of material, supply, manufacturing and testing.

In this brochure, Horiso® has endeavoured to provide accurate information on our Specialty Venetian Blinds system. If you require further details, please contact your Horiso® representative.

Please note: Specifications may change without notice.
Permission has been granted for images that appear in this publication.

Offices, Queensland - Australia.

Darling Quarter, Sydney - Australia.

Key features

- System operation - lowers, tilts and fully retracts.
- Aluminium's innate properties provide:
  - high radiation reflection, low radiation absorption and low transmission values.
- Aluminium's effective energy performance provides:
  - reduction in the energy requirements of mechanical heating/cooling systems.
- High quality and durable components include:
  - stainless steel 316 marine grade for cable guide, mushroom head and termination components
  - 25 micron anodised finish on brackets and head boxes
  - Stainless steel tension bracket
  - high-strength, shrink-resistant and reinforced 100% Kevlar ladder braid
  - anti-friction texband PES filament lifting tape
  - heavy duty extruded aluminium fixing brackets and L-shaped termination bracket (AA 6060. 25 micron clear anodised finish. Powder coating optional)
- Strong wind resistance of up to 90 kph (56 mph)[1].
- Large range of:
  - flexible aluminium slats
  - sustainable timber slats
  - pelmets
  - motor options
  - custom colours and finishes.
- Component options available:
  - perforated or non-perforated slats
  - top or face fixing pelmets
  - standard or custom-designed pelmets, base rails and terminations.
- Recycled content includes:
  - 60% recycled aluminium AA 5050 slat material
  - 30% recycled aluminium AA 6060 and AA 6063 structural aluminium for pelmets, head rails, brackets and base rails.
- System contributes to energy savings.
- Maximum width 6 metres (20 ft).
- Maximum drop 9 metres (30 ft).
- System applications include:
  - new building or retrofit existing building
  - external, double skin facades and internal.
- Automated control options include:
  - switch
  - remote control
  - building / home automation
  - touch phone and hand held devices
  - Climate Ready® Control Systems.
- BIM (Building Information Modelling) 3D modelling system integration including Autodesk® Revit® and ArchiCAD® formats.
- Extended warranty - 10 years.

[1]Capability depends on orientation, terrain, installation method, and control type. System complies with Australian Wind Loading Standards AS1170.2. (Independently tested by Windtech® NSW.)

Key benefits

- System operation:
  - reduces thermal heat gain by up to 93%[1], minimises air conditioning costs
  - maximises interior daylight, reducing the need for artificial lighting
  - controls solar glare to reduce eye irritation and improve working conditions
  - optimises shading at varying sun angles
  - prevents potential UV damage
  - manages privacy
  - allows easy access for cleaning of glazing
  - contributes to obtaining a high environmental green building rating for high performance, sustainability and unprecedented environmental innovation
  - improves human well-being and productivity of employees.
- Aluminium's innate properties alone reduce thermal transfer (heat and cold).
- Aluminium's effective energy performance reduces the amount of floor space required for mechanical cooling/heating plant.
- High quality and durable components:
  - withstand snow/ice and other extreme weather conditions
  - provide years of reliable operation with minimal maintenance.
- High wind resistance system:
  - head box, slats, cable guides and extruded aluminium base rail are engineered to withstand extreme wind loads. [2]
- Recycled content contributes to less greenhouse gas emissions during manufacturing.
- Large range of materials, colours and finishes increases scope for architectural design choices.
- Optional perforated slats allow various degrees of openness to maintain exterior views even while closed.
- Integration with all building management systems for eg. using BACnet®, Lonworks® and KNX® protocols. This contributes to lower energy consumptions, reduction of buildings carbon footprint and increase longevity of system.
- Systems can be manufactured to accommodate large openings in order to reduce overall costs.
- Manufacturing and component options cater for construction flexibility.
- Operating options can include the integration of image facade technology and FIM (Facade Intelligence Modelling), a function of the Climate Ready® Control Systems.
- BIM (Building Information Modelling) 3D modelling library enables professionals to visualise, analyse and document the integration of Specialty Venetian Blinds into project proposals. The results demonstrate performance levels - costs, scheduling and environmental impact.

[1] Subject to three variables:
1 Glazed facade - single, double, ventilated or gas filled
2 Slat - size, colour, finish and angle
3 Control system choice.

[2] Capability depends on orientation, terrain, installation method, and control type. System complies with Australian Wind Loading Standards AS1170.2. (Independently tested by Windtech® NSW.)

Specialty Venetian Blinds - external

Horiso® Specialty Venetian Blinds can be manufactured to accommodate large facade openings with widths of up to 6 metres (20 ft) and drops up to 9 metres (30 ft) with a maximum area of 45 square metres (484 square ft).

Specialty Venetian Blinds' primary benefit is the reduction of solar heat gain and to maximise the use of daylight. It contributes to higher human comfort levels and productivity levels. Energy consumption is reduced with less artificial light required and less air conditioning usage.

The innate aluminium properties of the blinds will reduce glazing specifications, avoid tinting, and lowers construction costs. The double omega punch stabilises the blinds during operation extending the longevity of the system.

The retrofit application reduces costly construction alterations. The high quality slat and component material, pre-treatment and coating provide durability. External applications can also inspire architectural features, create large outdoor areas, provide privacy and protection from sun and other weather conditions.

The blinds are engineered to withstand high wind loads*, snow, ice and other extreme weather conditions.

*Capability depends on orientation, terrain, installation method, and control type. System complies with Australian Wind Loading Standards AS1170.2. (Independently tested by Windtech® NSW.)

Above and left: GPN 4, Queensland - Australia.

- External systems can be positioned as needed for optimal solar control and retracted when not required.
- Glare from the sun is controlled, reducing eye irritation and improving computer screen visibility.
- Use of clear glazing as opposed to tinted glazing provides a better connection to the outside, improving well-being and productivity.
- Increases comfort levels for building occupants.
- Aluminium's innate properties alone reduce heat and cold transfer.
- Decrease in air conditioning usage and overall energy consumption and costs.
- The blinds remain stable and aligned during operation due to their high quality components and advanced features.
- Choice of slat colours and finishes increase scope for architectural design choices.
- Larger slat sizes allow more natural light to infiltrate through glass.
- Integration with a wind sensor protects the blinds from damaging winds by tilting the slats at 90º and, in extreme cases, retracting the system entirely.
- Integration with control systems - see page 29.

Above and right: Private residence, Victoria - Australia.

Specialty Venetian Blinds - double skin facades

The installation of Horiso® Specialty Venetian Blinds in double skin facades is a key method of controlling the amount of solar energy that passes into and through the facade. The blinds are installed within the cavity and are ideal for all types of double skin facades including natural or mechanically ventilated facades.

The high quality components and features of the blinds such as the double omega punch stabilises the blinds during operation extending the longevity of the system.

The blinds' slat positions tilt to minimise internal heat gain and maximise daylight usage, reducing the building's carbon emissions and energy costs. The blinds highly effective solar glare reduction, provides more usable floor space nearer to the facade.

The installation of Specialty Venetian Blinds into double skin facades helps maintain a constant, comfortable internal building temperature and natural light without the excessive use of high volume air conditioning systems and artificial lighting.

Sustainable timbers and aluminium slat material are available for this application.

Above and left: No 1 Bligh Street, Sydney - Australia.

- Blinds can remain partially or fully closed deflecting solar energy to shield the interior from solar heat gain.
- Blinds can remain mostly open and can be operated to maximise passive solar heating and manage glare.
- The blinds remain stable and aligned during operation due to their high quality components and advanced features.
- Each bank of blinds can operate on individual programs, accounting for their particular position and provide maximum internal comfort levels.
- Ongoing building energy costs are significantly reduced with the integration of Specialty Venetian Blinds and solar control systems.
- Reduced heat gain near the facade, increases usable floor space, allowing employees to work closer to the facade.
- Full automation and sun-tracking capabilities via a large range of control options.
- Integration with control systems - see page 29.

Above and right: NZI, Auckland - New Zealand.

Specialty Venetian Blinds - internal

The internal installation of Horiso® Specialty Venetian Blinds adds health, lifestyle benefits and creates a design feature.

The use of wider slats allow more light to infiltrate the room. Privacy is controlled, thermal heat gain and glare are reduced. Light reflectivity from water and neighbouring building facades that can cause eye irritation are managed.

The flexible range of blind width and slat sizes means a retrofit installation is achievable onto existing glass areas without costly structural modification. Perforated slats are also available to maintain exterior views while the blinds are closed.

Slat materials, including various timber and aluminium colour choices, complement and integrate with other design features.

Various control options ensure easy and convenient operation.

Above and left: Private residence, Walsh Bay, Sydney - Australia.

- Maximises the use of daylight by distributing light further into rooms.
- Slats can be automatically tilted to optimise shading at varying sun angles.
- Glare from the sun is controlled, reducing eye irritation and improving comfort levels.
- More efficient cross ventilation can be achieved with wider slats when windows are open.
- Aluminium blind thermal properties ensure heat and cold transfer is minimised.
- Reduction in energy costs all year round.
- Prevents potential UV damage.
- Privacy is easy to control by tilting the slats at various angles.
- Specialty Venetian Blinds create a building design feature.
- Slat colour choices are available to complement interior colour schemes.
- Integration with control systems - see page 29.

Above and right: Stamford Hotel, Sydney - Australia.

Specialty Venetian Blinds - timber

The installation of Horiso® Specialty Timber Venetian Blinds provides control of internal solar heat gain and glare while maximising natural light.

Architecturally, Horiso® Specialty Timber Venetian Blinds evoke a rich feeling of warmth within the building as well as presenting a lighter appearance.

Horiso®'s unique approach includes only using timber from environmentally responsible sources which guarantees the sustainability of the plantation. The high quality timber and mill processes provide long term benefits including excellent product appearance and material strength. In addition, timber stability is high, leading to an extended system longevity.

A range of large slats and colour options are available to provide design versatility.

High quality materials and blind components ensure maximum alignment accuracy, enhancing the aesthetics of the product internally, and quality of the overall facade design.

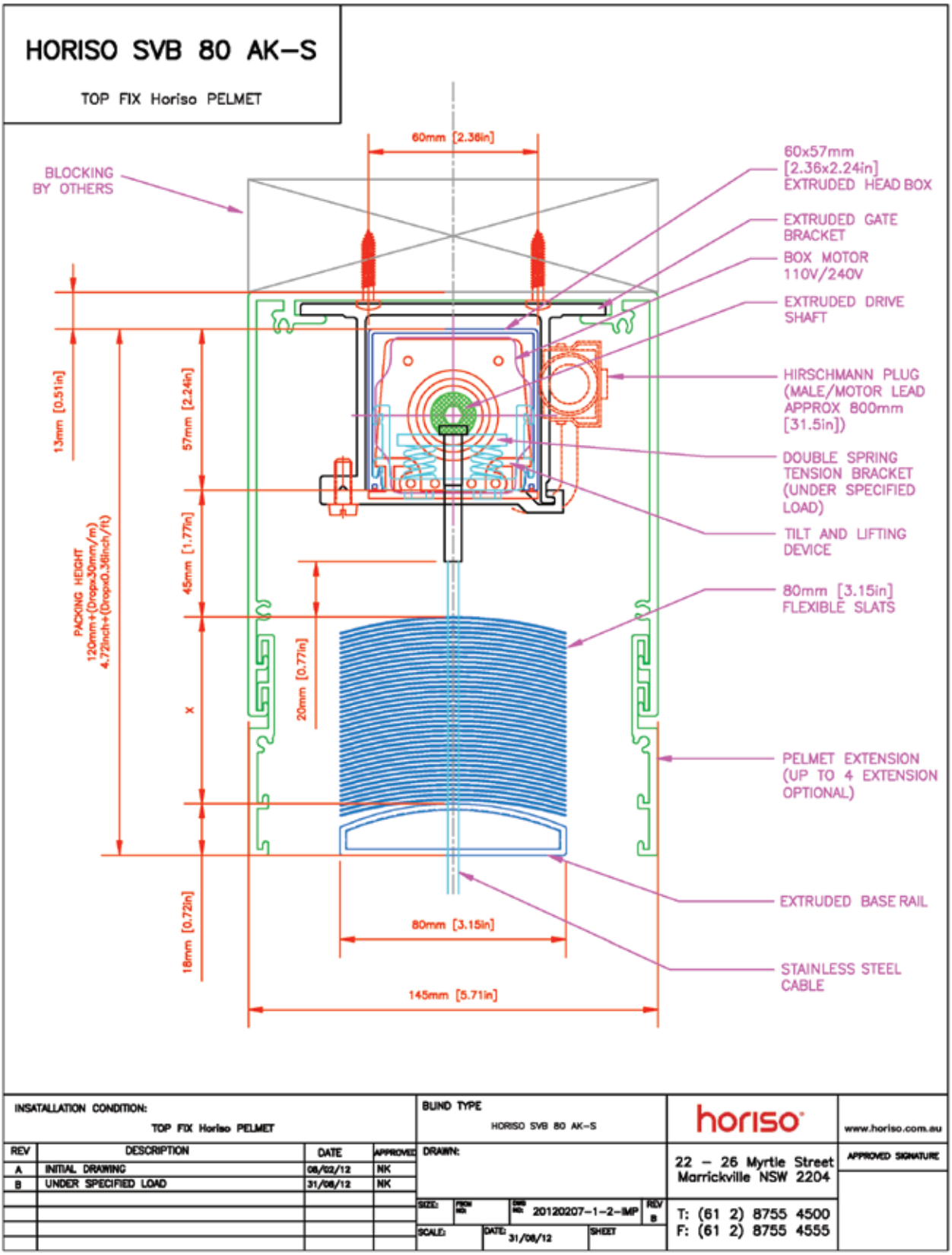
Motorisation will automatically raise, lower and tilt the slats.

Above and left: Darling Quarter, Sydney - Australia.

- Maximises the use of daylight by distributing light further into rooms.
- Automatic tilting of the slats optimises shading at varying sun angles, managing thermal gain.
- Glare from the sun is controlled, reducing eye irritation and improving computer screen visibility.
- Privacy is easy to control by tilting the slats at various angles.
- Advanced drying method of timber before manufacturing ensures greater expansion and contracting consistency after installation.
- Advanced automated timber imperfection removal.
- Edge-grain, edge-glue lamination gives greater unified strength to slats and prevents sagging and bowing particularly on larger slat sizes.
- Milling and sanding practices provide a high quality structurally sound surface with improved sealer coat adhesion and finish longevity.
- Timber stains available to complement colour schemes.
- Range of slat widths and thicknesses available.
- External application available on request.
- Integration with control systems - see page 29.

Above and right: Darling Quarter, Sydney - Australia.

Design specifications



Technical diagrams are available at horiso.com.au

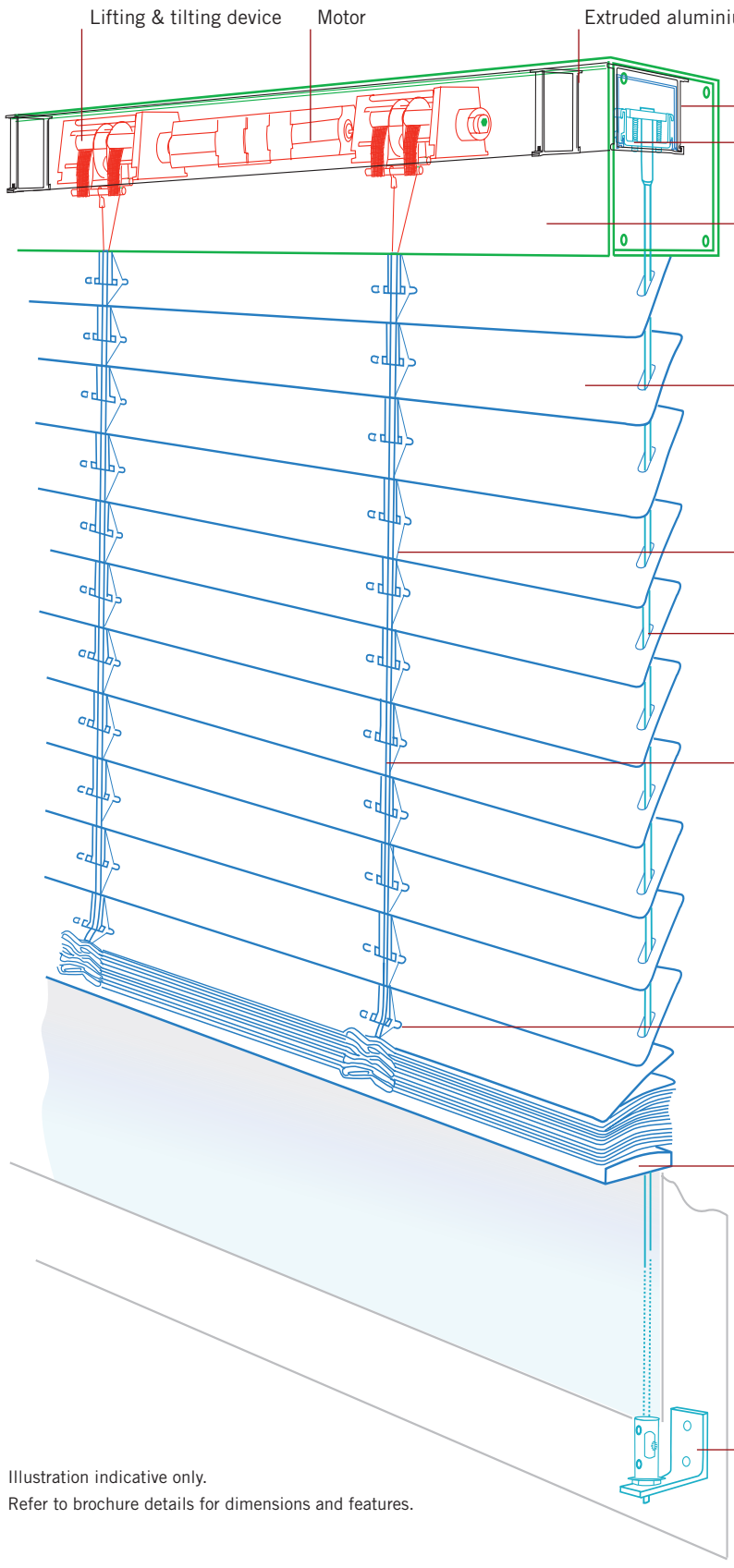


Illustration indicative only.
Refer to brochure details for dimensions and features.

7 Standard colours

White - RAL 9016.

Light Silver - RAL 9006.

Dark Brown - RAL 8019.

Bronze - HOR 7140.

Silver Pearl - RAL 9007.

Storm Pearl - HOR 7043.

Jet Black - RAL 9005.

Aluminium slats

Crowned aluminium slats are made from a highly elastic alloy, making them flexible, scratch-proof and shock-proof. Metal slat gauge size of 0.45 mm (0.017 in).

The double omega punching, (standard on external and double skin facade installations) combined with the ladder braids ensure smooth closing of the slats. They also retain slat alignment and stability in most weather conditions and minimise excessive movement. No additional plastic components are necessary to stabilise the slats.

Pre-treatment

- AA 5050 marine grade with chromate conversion undercoat.

Standard finish

- PE3 - Polyester 3 layer coil coating.
- Double oven baked edge coating.

Optional finish

- “DecoWood” type finish.
- Other custom finishes available on request.

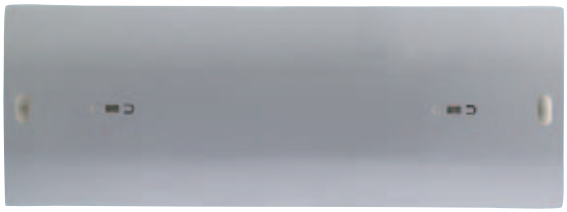
Colours

- 7 standard colours.
- Custom colours available on request.*

*Minimum quantity order may apply. Colour sample reproduction is a guide only. Please consult your representative.

80 mm (3 in) slat.

100 mm (4 in) slat.



150 mm (6 in) slat.

Standard slat widths

- 80 mm, 100 mm & 150 mm (3 in, 4 in & 6 in) Solid or perforated are available in all slat widths.
- Custom slat widths available on request.

Stains and coatings

Light Oak.

White.

Timber slats

Horiso selects timber for the manufacturing of timber slats from environmentally responsible sources which guarantees the sustainability of the plantation. Only mature trees are cut to protect natural eco-systems and to avoid damaging soil erosion.

The air and kiln drying processes reduce and stabilise the timber's moisture content down to 9% before the milling and the sanding process improves the sealer coat adhesion and longevity of the finish.

The finishes are hypoallergenic and environmentally friendly with zero volatile emissions.

The edge-grain, edge-glue lamination process gives greater and uniform strength throughout the slat, to prevent sagging and bowing particularly on larger slat sizes.

Material and process

- Edge-grain, edge-glued Cottonwood (Poplar).
- Low temperature kiln drying process - 50˚C (120˚F).
- Milling and sanding thickness tolerances - within 0.1 mm (0.0040 in).
- Grey-scale technology - automated timber imperfection removal.

Standard finish for painted slats

- 3 coats of 100% solids UV primer applied by roller, 1 coat 100% solids UV primer applied by vacuum coater, 100% solids UV top coat, applied by vacuum coater.

Standard finish for stained slats

- Spray and auto-wiped UV stain application, UV sanding sealer by vacuum coater, 100% solids UV top coat, applied by vacuum coater.

Colours

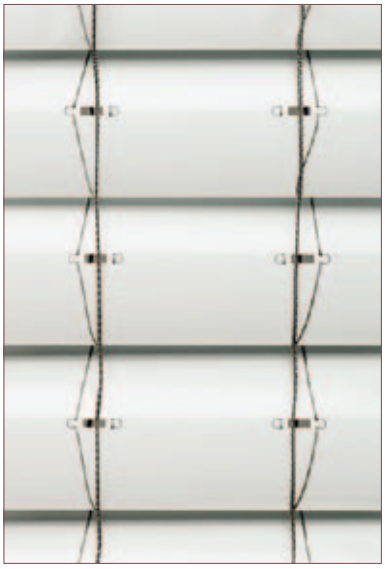
- 3 whites available.
- Range of stain colours available.*

Slat dimensions

- Widths - 86 mm, 111 mm & 137 mm (3 3/8 in, 4 3/8 in & 5 3/8 in).
- Lengths - Maximum slat length 3,657 mm (144 in).
- Thicknesses - 3.2 mm & 5.8 mm (0.126 in & 0.228 in).

*Please consult your representative. Colour sample reproduction is a guide only.

Ladder braid and lifting tape.



Double omega punching for positive ladder cord attachment.

The ladder braid attached to the omega punching ensures correct spacing between the slats.

Tilting and lifting devices

Horiso® offers three types of lifting and tilting devices for the varied system applications and dimensions.

Tilting and lifting devices assembled within the aluminium extruded head box enable the slats to change angle direction smoothly. The devices contribute to the function of lowering and raising the system.

Horiso®-N

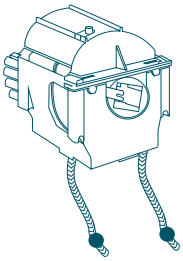
Horiso®-N is assembled in head box size of 60 mm wide x 57 mm high (2.36 in x 2.24 in).

Ladder braid

- High-strength, shrink-resistant and reinforced 100% Kevlar.

Lifting tape

- Tear resistant up to force 700N (157 Lbs).
- Dimensions: 6 mm x 0.28 mm (0.24 in x 0.011 in).



Horiso®-N - Tilting and lifting device.

The anti-friction texband PES filament lifting tape raises and lowers the slats and operates with minimum wear and tear. The filament has a maximum UV protection. The ladder braid is attached to the omega punching ensuring the correct spacing between the slats, facilitating tilt action and stabilising the system in high wind areas.

Horiso® AK-S & AK-G

Horiso® AK-S is assembled in head box size of 60 mm wide x 57 mm high (2.36 in x 2.24 in).

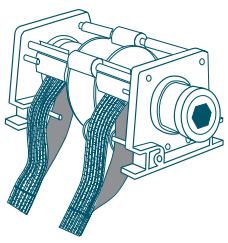
Horiso® AK-G is assembled in head box size of 80 mm wide x 75 mm high (3.15 in x 2.95 in).

Ladder braid

- High-strength, shrink-resistant and reinforced 100% Kevlar.

Lifting tape

- Tear resistant up to force 1,100N (247 Lbs).
- Dimensions: 10 x 0.28 mm (0.39 in x 0.011 in).



Horiso® AK-S & AK-G - Heavy duty tilting and lifting device.

Port of Brisbane, Queensland - Australia.

Slat positions and angles

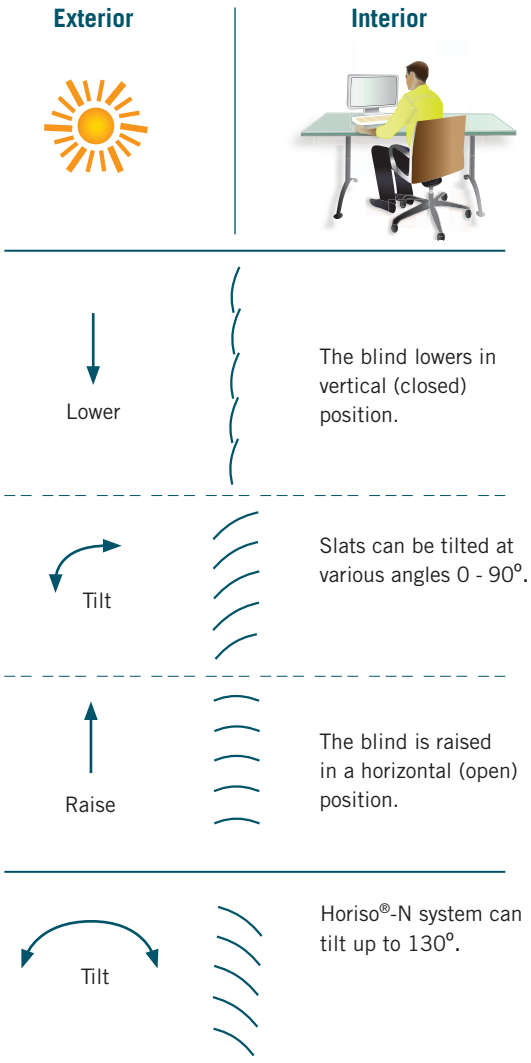
The system is lowered in the vertical (closed) position (0º) and raised in the horizontal (open) position (90º).

Slats can be tilted at various angles from 0º - 90º. Horiso®-N slat system can tilt up to 130º and raises in a closed position (130º).

Slats change position and angles to control solar glare, heat gain and to allow natural light to infiltrate the interiors. At other times, the slats remain open in the horizontal position to allow some heat gain and change angles to reduce the effects of solar glare at different times of the day.

The convex side of the slat faces the sun in order to efficiently reflect the solar rays and ensure maximum reduction of solar heat gain and glare. The convex side of the slat deflects solar rays and distributes light further into the room, maintaining comfortable conditions.

At preset wind speeds the slats can tilt to a horizontal position ready for retraction. This allows the stronger air flow to pass between the slats onto the glazed area, reducing the impact of the wind on the system.



Private residence, Auckland - New Zealand.

Control

Horiso® Specialty Venetian Blinds can be manually operated with a crank handle or motorised for all four product applications featured in this brochure:

- External
- Double skin facades
- Internal - aluminium
- Internal - timber.*

*External application available on request.

Crank operation for Specialty Venetian Blinds

Systems using any slat size can be manually operated using a gear box and crank handle. Handle lengths can be specified to project requirements.

Motorisation for Specialty Venetian Blinds

Motorised operation is the most effective control for Specialty Venetian Blinds. The electric motor is concealed within the head box and incorporates limit switches and internal thermal protection against overheating. Risk of wind damage is minimised when integrated with a wind sensor which automatically tilts and safely retracts the blind when necessary.

Installation

Quality installation is a determining factor in achieving optimum performance and longevity of the Specialty Venetian Blind system. It is recommended that shading requirements, building structure assessment, precise measurements and design are considered.

Horiso® provides technical assistance and engineering support to architects, engineers, builders and construction experts. Horiso® is proud to closely collaborate with project shading specialists and installers throughout the world.

Installation options for Horiso® Specialty Venetian Blinds include:

- Installation into existing building recesses.
- Installation using top fix pelmet fitted onto building structure. Pelmet extensions available if required.
- Installation using face fix pelmet fitted onto building structure. Pelmet extensions available if required.

Custom termination bracket fixings can be manufactured to suit the particular architectural design and construction material of the building.

Showroom -Thailand.

Motor types

Motor type specification depends on the height, width, weight and location of the individual blinds. Motors available:

- Linear box motors
- Quiet and reliable lift / tilt motor with soft break*
- 110 or 240 volts
- UL Certified motors (Canada & US)
- Compatible with home automation systems
- Compatible with Climate Ready® Operating Systems
- Compatible with building management systems
- Adjustable end limits.

Features of standard motor type

- IP 44 (Splash water protected).
- IP 54 (Dust and low pressure water jet protected). Available on request.
- Suitable for external and internal use.

Motor torque

- Range 5 - 20 Nm.

Speed

- Available in different speeds according to requirements.

*Unless otherwise specified.

Position of motors

Horiso® Specialty Venetian Blinds can be motor controlled individually or in mechanically linked systems. The motors are usually positioned at the centre of the system operating the blinds.

- Maximum 4 linked panels*.
- Maximum total area 45 square metres (484 square ft).

Examples of motor positions

A - 1 panel

B - 2 linked panels

OR

C - 3 linked panels

D - 4 linked panels*

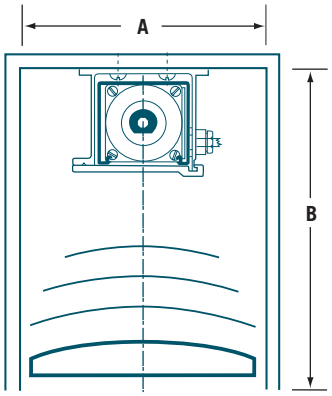
OR

* Conditions apply. See your technical representative for details.

Macquarie University Library - Sydney.

System installation requirements

The recess requirements to accommodate the head box, retracted slats and base rail.[1]



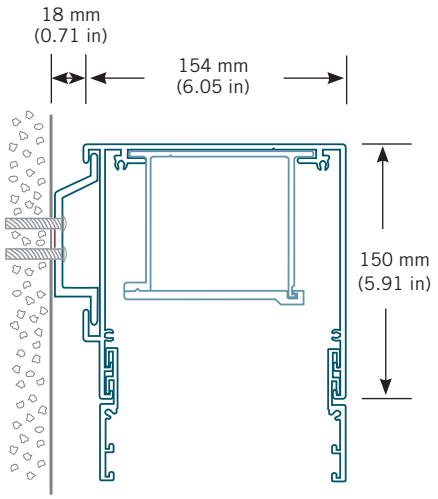
A - Recess widths in mm / in

Slat width	Minimum recess widths
80 mm / 3.15 in	120 mm / 4.72 in
100 mm / 3.94 in	140 mm / 5.51 in
150 mm / 5.90 in	190 mm / 7.48 in

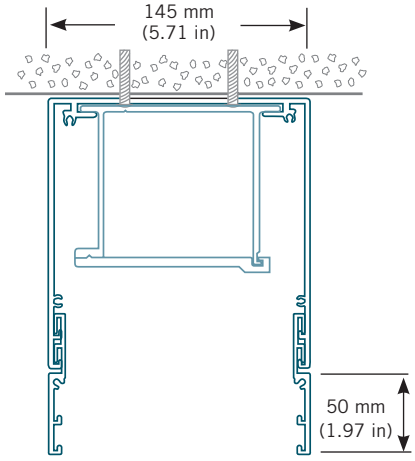
B - Packing/Stacking heights in mm / in

Total height of blind		Stacking height for different slat widths with AKS, AKG and Horiso N systems												*Not available. Indicative dimensions only	
		80 AK-S		80 AK-G		80 N		100 AK-S		100 AK-G		100 N		Rolled edge 80 mm*	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
1,500	59.0	180	7.08	185	7.28	180	7.08	170	6.69	175	6.89	170	6.69	210	8.26
2,000	78.4	200	7.87	205	8.07	200	7.87	187	7.36	192	7.56	187	7.36	245	9.65
2,500	98.4	220	8.66	225	8.86	220	8.66	203	7.99	208	8.19	203	7.99	285	11.22
3,000	118.1	240	9.45	245	9.65	240	9.45	220	8.66	225	8.86	220	8.66	320	12.60
3,300	129.9	252	9.92	257	10.12	252	9.92	230	9.05	235	9.25	230	9.05	-	-
4,000	157.5	-	-	285	11.22	280	11.00	-	-	258	10.15	253	9.70	395	15.55
5,000	196.9	-	-	325	12.80	320	12.60	-	-	292	11.49	287	11.30	-	-
6,000	236.2	-	-	365	14.37	360	14.20	-	-	325	12.80	320	12.60	-	-
7,000	275.6	-	-	405	15.94	400	15.80	-	-	358	14.09	353	13.90	-	-
8,000	317.7	-	-	445	17.52	-	-	-	-	392	15.43	-	-	-	-
9,000	354.3	-	-	485	19.00	-	-	-	-	425	16.73	-	-	-	-

[1]Tables are indicative only. Packing heights may vary significantly depending on the behaviour of the lifting tape and ladder braid.



Face fix pelmet/fascia with 1.97 in (50 mm) extension. Suitable for 3.15 and 3.94 in slats only (80 and 100 mm).



Top fix pelmet/fascia with 1.97 in (50 mm) extension. Suitable for 3.15 and 3.94 in slats only (80 and 100 mm).

Custom pelmet on a curved facade.

Pelmets

The aluminium extruded pelmet accommodates the head box, slats and bottom rail. Pelmets are top or face fixed and supplied with end plates.

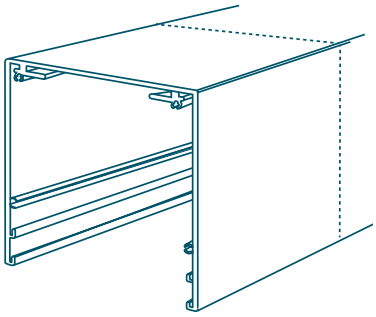
- Extruded aluminium 3 mm (0.12 in) 25 micron clear anodised.
- Powder coated in standard or custom colours.
- Pelmet extensions are available in 50 mm (1.97 in) increments.
- Pelmet fixing spacing is subject to site structure and cannot exceed 600 mm (23.62 in).
- Custom pelmet solutions available.

Pelmet weight in kgs

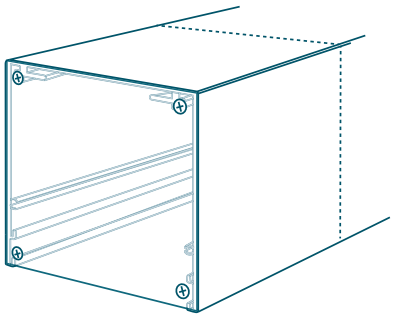
Extension Qty	Weight / metre
0	4.5 Kgs
1	6.1 Kgs
2	7.7 Kgs
3	9.3 Kgs

Pelmet weight in Lbs

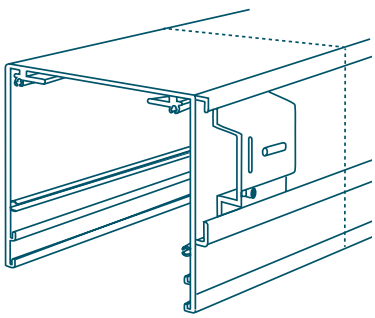
Extension Qty	Weight / feet
0	3.02 Lbs
1	4.10 Lbs
2	5.18 Lbs
3	6.23 Lbs



Top fix pelmet.



Top fix pelmet with end plate.



Face fix pelmet.

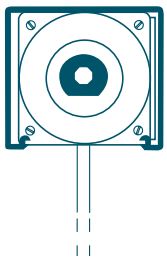
Apartments, Sydney - Australia.

Head boxes, gate brackets and base rails

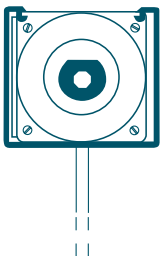
Head boxes and brackets

The extruded aluminium u-shaped head boxes accommodate the lifting/tilting devices and motors. The head boxes can be fitted directly onto the building with gate brackets if pelmets are not required. In situations where pelmets are used, the head boxes are fitted via gate brackets into the pelmets.

- U-shaped head box can be attached open at the top or bottom.



Head box - open bottom.
Recommended for exterior applications.



Head box - open top.

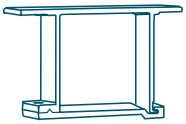
Head box dimensions

- Horiso®-N and AK-S: 60 mm wide x 57 mm high (2.36 x 2.24 in).
- Horiso® AK-G: 80 wide x 75 mm high (3.15 x 2.95 in).
- Extruded aluminium head box 1.6 mm thick (0.063 in).

Head box finishes

- Standard 25 micron clear anodised.
- Powder coated in a large range of colours.

Gate brackets



- Extruded aluminium gate bracket.
- Custom brackets.

Gate bracket finishes

- Standard 25 micron clear anodised.
- Powder coated in a large range of colours.

Gate bracket layout

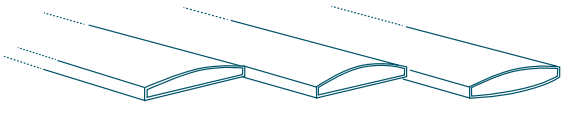
- Spacing between gate brackets maximum 600 mm (23.60 in).

Base rails

- Semi-elliptical aluminium extrusion.
  Dimensions widths x height x thickness:
  80 x 18.6 x 2 mm (3.15 x 0.73 x 0.08 in).
  100 x 18.6 x 2 mm (3.94 in x 0.73 x 0.08 in).
  150 x 18.6 x 2 mm (5.90 in x 0.73 x 0.08 in).
- Surface finishes - 25 micron clear anodised or powder coated to match slat colour.

Base rail options

- Elliptical aluminium extrusion 80 mm wide (3.15 in).
- Custom colours available on request.



Semi-elliptical 100 mm (3.94 in).
Semi-elliptical 80 mm (3.15 in).
Elliptical 80 mm (3.15 in).

Floor fix standard termination.

Quick Release Mechanism (QRM) termination.

L-shaped face fix termination bracket.

Cable guides and termination brackets

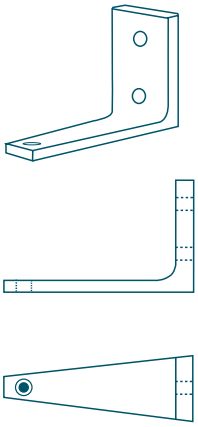
Cable guides run through punched holes at both ends of the slat length, guiding the position of the slats. In addition, the cable guides limit the movement of the blinds in windy weather conditions, without causing excessive noise.

The cable guide is fastened to the top head box by a double spring tension device and bottom fixed using a termination bracket via an m8 swage. Additional intermediate cable guides are recommended for high wind areas and when blinds are wider than 3,000 mm (118.11 in).

- Stainless steel cable with stainless steel mushroom head (316 marine grade).

Termination bracket fixing

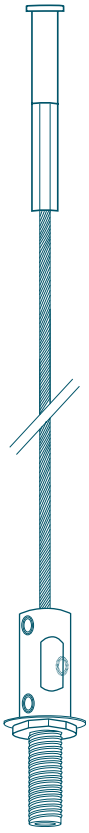
- Fixed into standard aluminium termination bracket, finish 25 micron anodised size 100 mm (3.94 in) or 150 mm (5.91 in) using a m8 swage for bottom termination.
- Fixed into timber using threaded swage.
- Fixed into concrete or similar material using swage with a M8 bolt - 50 mm (1.97 in) or 100 mm (3.94 in) long.
- Custom fixings available.



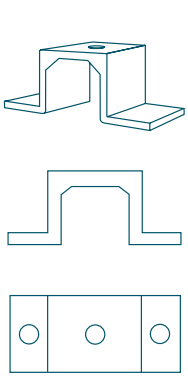
L-shaped termination bracket x 2 sizes
110 mm long (4.33 in)
163 mm long (6.42 in).

m8 drop in anchor for bottom fix termination for concrete - 30 mm (1.18 in).

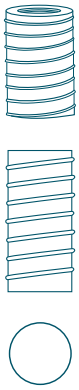
Stainless steel cable with stainless steel mushroom head.



m8 swage for bottom termination
50 & 100 mm
(1.97 & 3.94 in).



Top hat - Bottom termination bracket
3 mm (0.12 in)
wall thickness.



S/S rampa screws for bottom fix termination for timber 18 & 30 mm (0.71 & 1.18 in).

NZI, Auckland - New Zealand.

Optional daylight control

The optional daylight control proves more effective for smaller floor spaces where work stations are situated closer to the glazing. Reflection on display screens is prevented, while improving the optimum amount of daylight through upper portions of the blind.

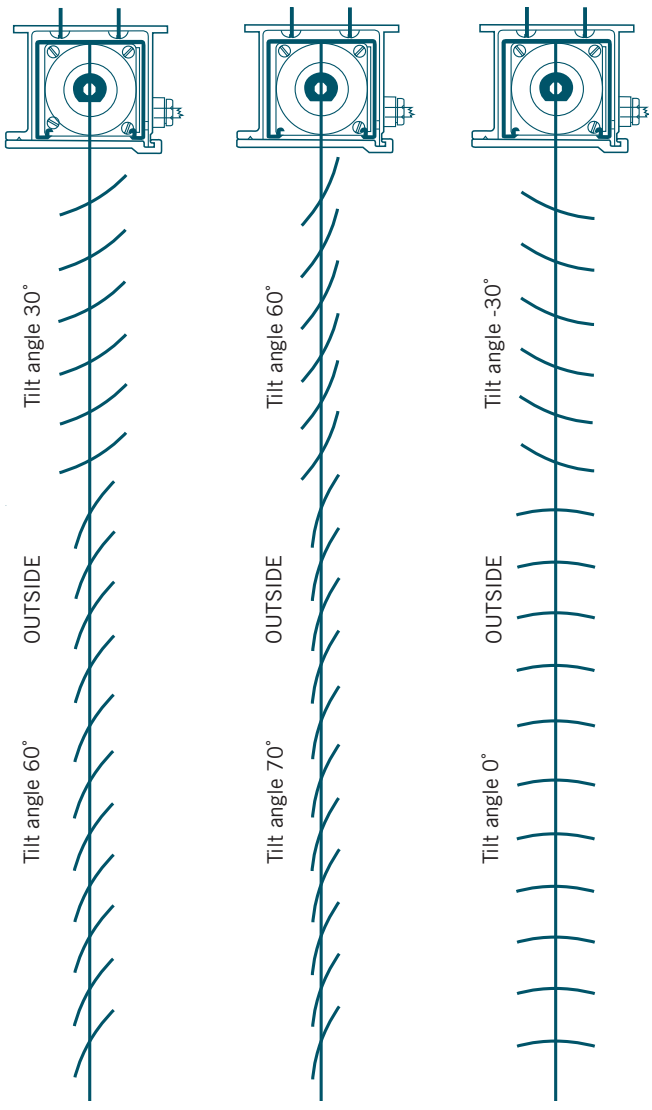
The ladder braid positioning allows upper slats to tilt at different angles to the bottom slats, resulting in an integrated 'light shelf' system that spreads natural light further into the building while still providing the solar performance of a standard custom blind.

Features

- Suitable for internal and external applications.
- Concave / convex combination - portion of the slats tilt in a open position turned downwards, and the other portion are open turned inwards.
- Full automation and sun-tracking capabilities via a Climate Ready® Operating System.

Benefits

- Improved control of daylight and solar glare.
- Reduction in the use of artificial lighting.
- Can reduce energy consumption.



Port of Brisbane, Queensland - Australia.

Automated control solutions

Motorised Horiso® Specialty Venetian Blinds can be controlled in different ways:

- Motorised via a switch
- Motorised via remote control
- Motorised via home automation integration
- Motorised via touch phone and hand held devices
- Motorised via Climate Ready® Control System - optimum building management solution.
- Motorised via Building management system for eg. using BACnet®, Lonworks® and KNX® protocols.

A range of sensors can also be integrated to react to external weather conditions.

Automatic controlled shading systems optimise the benefits of the system compared with manual control.

Benefits of automated control include:

- Improvement in well-being
- Increase in productivity
- Reduction in energy costs
- Optimum use of daylight
- Ease of operation
- Optimum use of shading system during different times of the year
- Protection against most weather conditions
- System longevity.

Climate Ready® Control Systems

Unique building design calls for unique operating systems. Horsio will establish individual project requirements and address these in the controller programming and commissioning phases. Climate Ready® Control Systems allow customised functionality for individual buildings with the operating system performing effectively as a component of the overall facade. Software functions include:

- Shading devices compatibility
- Horiso “Smart Control” - safety soft limits, precise shade adjustment in angle degree or mm for facade conformity. Preset stops. Programmable parameters. Basic scheduling with up grade options.
- Switch user/override capabilities
- Sensors - Dynamic wind and brightness response
- Maintenance mode
- Building management system interface
- Reporting and alarms.

Options

- Air conditioning integration.
- ST[a]ATS (solar tracking automatic tilt synchronisation)
  - solar path calculus
  - FIM options (Facade Intelligence Modelling)
  - ECO-Mode - preserves the inside temperature of the building by extending the shades over night and utilising solar radiation during the day (winter mode).
- User apps for hand held devices.
- Graphical User Interface (GUI)
- User control web application.

"Climate Ready®" commitment

Horiso®'s commitment and action to reducing the effects of climate change has resulted in our development of a Climate Ready® status for projects that fit strict criteria including:

- Designed to fully utilise the environmental conditions of a building and its surroundings
- Manufactured with recycled materials to conserve natural resources
- Local manufacturing and assembly to reduce transportation impact
- Installation and operation by a Climate Ready® Control System to minimise energy consumption and maximise the use of daylight.

A Horiso® "Climate Ready®" solution encompasses consideration of:

- A building's location including the geographical position, sun angles, reflected glare from other buildings and natural environment such as city or country position
- A building's orientation and the glazed areas on different facades
- Robust products and systems needs due to extreme weather exposure
- The architectural requirements of the building.

The manufacturing standards for a solution are:

- Conservation of energy and water during the entire supply chain process
- Reduction in CO^2 emissions
- Low impact on air quality during manufacturing
- Reduction of waste materials
- Use of recycled materials
- Recycling of product components
- Production of products with exceptional durability and low maintenance.

The key to Horiso®'s "Climate Ready®" solution is the integration of its energy efficient Climate Ready® Control System. Benefits include:

- Operates any motorised element of the facade
- Controls solar heat gain
- Improves solar heat loss and heat gain insulation
- Manages glare
- Maximises the use of daylight
- Reduces air conditioning loads and operating costs
- Provides remote accessibility - low impact on the environment through reduced carbon emissions
- Achieves higher productivity from improved Internal Environmental Quality (IEQ)
- Gives a dynamic impact on a building's facade.

By combining the use of green building materials with innovative thinking and smart control systems, Horiso® has created tangible business benefits and sustainable solutions to ensure all future residential and commercial building projects will be more energy efficient and Climate Ready®.

Quality implementation

Horiso® has designed and implemented an Internal Quality Management System which defines procedures for product design and development, production, quality control and documentation of the entire process chain.

This system ensures high quality standards in:

- Consultation procedures and recordings
- Planning
- Product design and engineering details - in particular custom design components for special projects
- Design validation - to satisfy defined customer and end user needs and product intended use
- Product manufacturing and production procedures and services
- Packaging and transportation.

Quality materials

All standard components are manufactured from the highest quality raw materials and /or sourced from the highest quality suppliers.

Quality criteria are based on material durability and manufacturing excellence.

Quality finish

Aluminium components are powder-coated or 25 micron anodised to safeguard against environmental damage.

Horiso®'s powder coating finishing processes and products are now approved by Qualicoat® - Class 1.5 an internationally recognised powder coating licensing authority.

Qualicoat® administers a licensing system for powder applicators or coaters. This ensures that our quality specifications and product warranty remain consistent on every project.

Quality specifications

Horiso®'s quality standards include specifying the following:

- Slats - PE3 - Polyester 3 layer coil coating and double oven baked edge coating
- Aluminium components - 25 micron clear anodised (unless other specification required)
- Heavy duty cables - stainless steel cable with stainless steel mushroom head
- Lifting and tilting device - high-strength, shrink-resistant and reinforced 100% Kevlar
- All steel components are stainless steel 316 marine grade.

Quality testing

Products manufactured by Horiso® are rigorously controlled and tested according to internal procedures prior to shipping from our factory.

www.horiso.com.au

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