Horiso® Specialty Venetian Blinds

horiso®

Luxaflex®

Private Residence, Melbourne / Cover Page: NZI Centre, Auckland

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HORISO®

HORISO® SPECIALTY VENETIAN BLINDS

We are committed to supplying innovative design and sustainable technology

Horiso Innovation

Horiso is a leading manufacturer of solar control shading systems for architects, developers and builders. Installed across the globe, including Australia, New Zealand, USA, Canada, and throughout Asia, our trusted products include Specialty Venetian Blinds, Rack Arm systems, Operable Shading Tension systems and Drapery Tracking hardware.

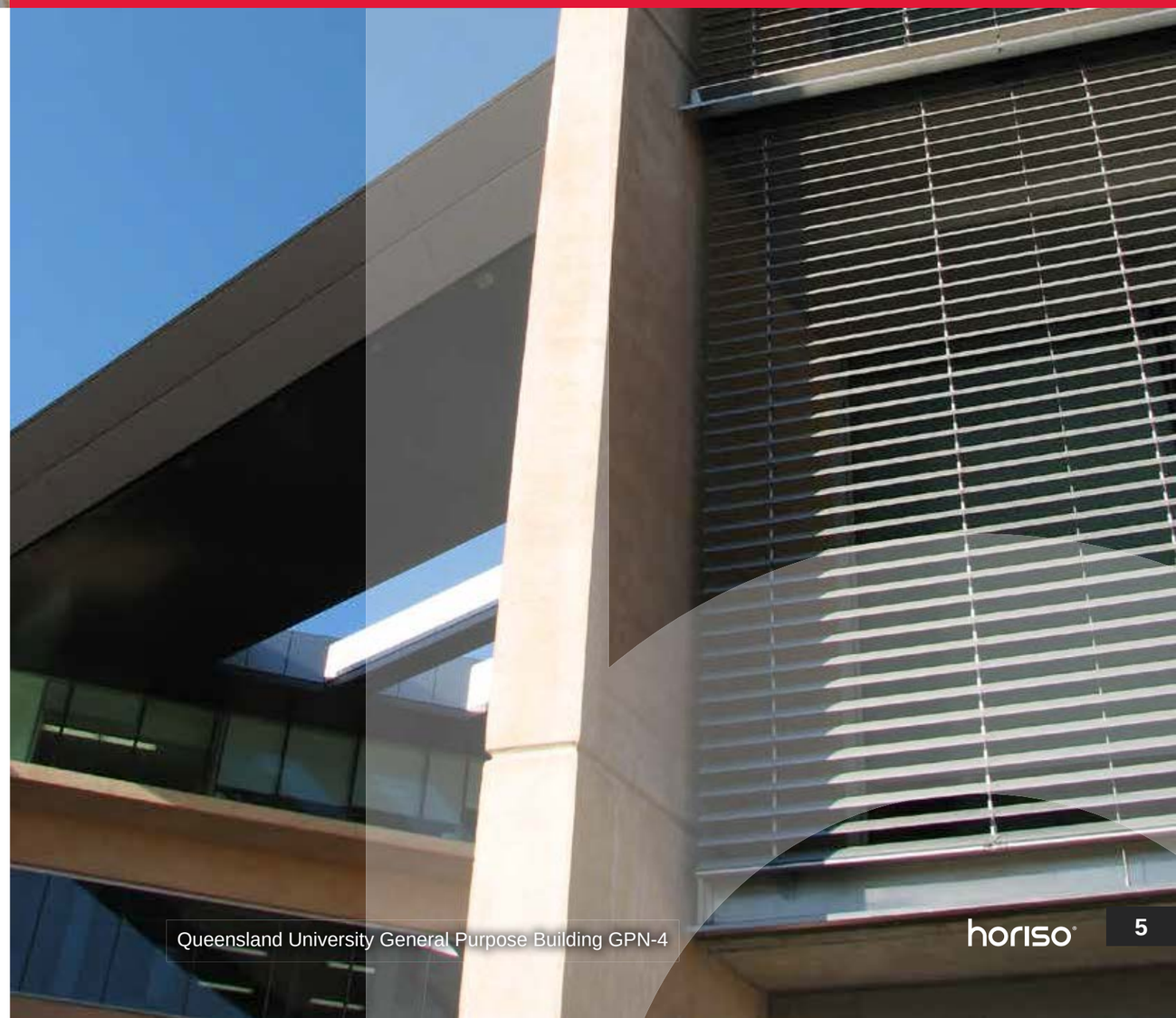
We are committed to supplying innovative design and sustainable technology through our energy efficient product range. With proven expertise in the commercial, hospitality, government, and residential sectors, our products are versatile and adaptable to any context.

With each new project, Horiso provides complete building assessment, detailed planning and specialised system advice based on geographical position, sun angle and reflected glare from surrounding buildings.

Our aim with each application is to provide a solution

Horiso products are able to:

- Control solar heat gain
- Maximise use of daylight
- Reduce air conditioning loads and operating costs
- Improved Internal Environmental Quality (IEQ)



Queensland University General Purpose Building GPN-4

Technically Advanced Design

Horiso shading systems are specially engineered to cater for differing architectural design requirements, including flexibility and efficiency, overall aesthetic, and harsh weather conditions such as wind, snow and extreme heat.

Specifically, our systems:

- Are suitable for external, internal and within double skin facade applications depending on the building's needs and design
- Can be independently controlled or integrated with other building management systems in order to maintain a building's highest performance level
- Offer customisation of system components which can be supplied in a range of colours, finishes, and in varying slat materials including aluminium and timber, enhancing both visual appeal and adaptability
- Provide standard and custom system dimension options allowing design flexibility and encouraging engineering and material advancements

Our rigorous quality control system ensures the ongoing high quality of our products. From processing of materials, to the supply, manufacture and testing of products, right through to installation, Horiso Specialty Venetian Blinds are of utmost reliability, quality and design.

No. 1 Bligh Street, Sydney

Queensland University General Purpose Building GPN-4

Automation Control

Control options for Horiso shading systems can be set to suit building or individual user requirements at various levels of sophistication and comfort. Control options can be installed either by hardwired or wireless control, depending on the most suitable option for each project. From basic switch or remote control, to time scheduled automation, through to integration with building management systems, multiple options with scalability are available.

Additional automation features can be included, such as: linked blind control, individual user programming, and weather sensor-based automation for temperature and wind conditions.

Intelligent automation with predictive sun tracking can be achieved using advanced building environmental modelling which assesses and implements programmed automation, based on a building's geographical location, its shadowing by surrounding buildings, and its solar path positioning.

Automation control options include:

- Switch/remote/WIFI tablet and device control
- Time scheduled automation response settings
- Temperature and wind control
- BMS and A/V integration
- Advanced building environmental modelling
- Sun tracking

Standard Control

Standard Switch and Remote control

Hardwired or wireless control for up and down movement plus tilting functionality.

Standard Automation

Time scheduled response settings

Responsive base control deploys, tilts and retracts at scheduled times. Flexible scheduling set daily, weekly, monthly or yearly.

Sensors

Strategically placed sensors allow the system to react to weather conditions by automatically deploying retracting or tilting. Sensors monitor brightness/illuminance, wind, rain and temperature, set to programmed threshold values.

Group Control

Linked blinds can be controlled in unison for zonal control.

Common Automation Features

WIFI operated tablet and device control

Hardwired or wireless control for up and down movement plus tilting functionality.

Integrated Software

Flexible scheduling, Access Control – User and Group control, history and logging for analytics, system status and overrides, visual interaction with custom floorplans and dashboard views available.

BMS and A/V Integration

Systems communicate directly with BMS/AV systems. Each device is treated as a separate node in the network and given its own unique address.

- Horiso automation systems are BACnet native devices so they integrate and communicate directly with BMS systems for improved reliability and resilience.

Advanced Intelligent Automation

Advanced intelligent automation adds an additional level of sophistication to standard automation with predictive automated control. Louvre systems operate proactively with advanced building environmental modelling algorithms.

Advanced Building Environmental Modeling

Detailed modelling on a building's geographical coordinates, solar path trajectory, overshadowing, reflected glare and sun-blocking from surrounding buildings is assessed for sun tracking control and placement of sensors.

- Strategically placed sensors allow the system to determine overcast, bright overcast, and clear sky conditions
- Detailed modelling for complex shadows in unique building layouts

Sun Tracking

Automated proactive sun tracking tilts slats predictively at various angles throughout the day to control glare and solar heat gain. The sun tracking is programmed to the building's advanced environmental modelling solar path algorithms.

- Sun angle of incidence algorithm takes into account:

  Geographic location
  Fenestration orientations
  Daylight harvesting
  Control of solar heat gain

Sustainable Commitment

Horiso is committed to providing solar control shading systems designed and engineered to help reduce the environmental impact of a building's energy consumption. By combining sustainable materials, innovative thinking and smart control systems, Horiso creates tangible business benefits to ensure all future residential and commercial building projects will be more energy efficient for a cleaner, more sustainable future.

Energy Efficient Systems

Horiso solar shading systems:

- Reduce the need for artificial lighting and air-conditioning
- Improve the air quality of an interior environment
- Save money on heating and cooling systems
- Improve productivity and well-being through increased natural light
- Minimise energy consumption through automated operation

Horiso is continually improving the production process for each system, ensuring that energy consumption and wastage are kept to a minimum. We also ensure that our external suppliers have the highest environmental credentials and certifications.

Manufacturing Commitment

Horiso are committed to:

- Optimising raw material consumption
- Minimising and managing waste during production
- Improving component durability ensuring the longevity of our products
- Using recyclable aluminium
- Sourcing wooden slats from certified suppliers and sustainably managed forests

Horiso® - Specialty Venetian Blinds

Motorised or manual control
Internal or external installation
Aluminium / timber

Specialty Venetian Blind Solar Control

Horiso Australian made Specialty Venetian Blinds control, maintain and optimise natural interior conditions, making them an energy-efficient, environmentally-friendly shading option.

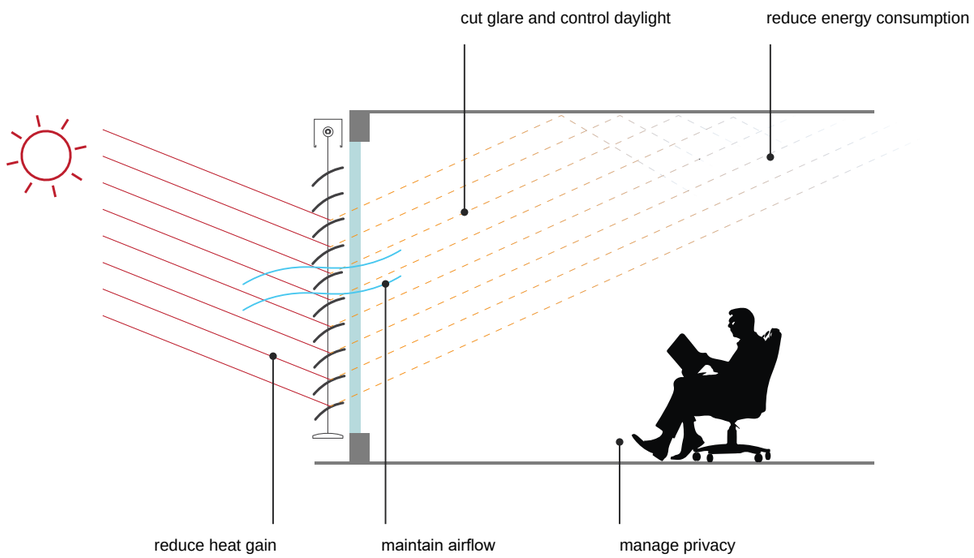
Specialty Venetian Blinds use aluminium / timber slats which can deploy for full window coverage, tilt from 0° to 130° for varying light inflitration, and fully retract by way of manual, motorised or automation control.

The tilting slats provide the optimal amount of daylight, minimising the need for artificial lighting. Slats also preserve views and minimise air-conditioner usage by maintaining effective airflow across the space and reducing overall solar heat gain.

By controlling solar glare, our systems are also able to reduce eye irritation and improve computer screen visibility, contributing to higher comfort and productivity levels.

Horiso Specialty Venetian Blinds:

- Reduce thermal heat gain by up to 93%
- Optimise shading at varying sun angles
- Contribute to achieving a high environmental green building rating
- Prevent potential UV damage
- Provide years of reliable operation with minimal maintenance
- Offer various control options (manual, motorised and automated control)



Showroom in Thailand

External Installation

External Horiso Specialty Venetian Blinds can accommodate large façade openings with widths of up to 6 metres and drops of up to 9 metres. Our systems are engineered to endure all types of extreme weather conditions such as high wind loads, snow and ice. Integration with a wind sensor protects the blinds from damaging winds by automatically tilting the slats at 90º and, in extreme cases, retracting the system entirely.

Our externally installed systems are of the highest durability and longevity due to the exceptional quality of all louvre and component materials, as well as their pretreatment and coating. Double omega punching also stabilises blinds during operation.

External installation not only offers retrofit application which reduces costly construction but can also inspire architectural features, create large outdoor areas, and provide privacy and protection from the sun and other weather conditions.

Externally installed systems provide:

- Optional perforated slats which maintain exterior views even while closed
- Retrofit installation that can be positioned anywhere
- Reduced energy consumption with less artificial lighting
- Reduced heat and cold transfer
- Multiple slat colours and finishes
- Wind sensor integration for high wind and extreme weather protection

Private Residence, Victoria - Tim Roberts Design Sydney

Internal Installation

The internal installation of Horiso Specialty Venetian Blinds offer the benefit of solar control as well as adding a design element to any interior setting. Various control options also ensure easy and convenient operation.

Our internal systems use wider slats to allow more light to infiltrate a room while also reducing thermal heat and glare caused by light reflectivity from water and neighbouring building façades. In this way, not only do they minimise eye irritation but improve the productivity and general comfort of the space.

Internally installed systems also allow for privacy control while perforated slats are available to maintain exterior views while the slats are closed.

The flexible range of slat width and slat sizes means that a retrofit installation is achievable onto existing glass areas without needing costly structural modification. Slat materials, including various timber and aluminium colour choices, complement and integrate with other interior design finishes.

Walsh Bay Apartments, Sydney

Double Skin Facade Installation at No. 1 Bligh Street, Sydney.
50 Most Influential Tall Buildings of the Last 50 Years - Awarded by the Council for Tall Buildings and Urban Habitat (CTBUH)

Double Skin Façade Installation

The installation of Horiso Specialty Venetian Blinds in a double skin façade is a key method of controlling the amount of solar energy that passes through the facade of a building. The blind system is installed within the cavity and is ideal for natural or mechanically ventilated façades.

A particular benefit associated with a double skin facade blind system is that they help maintain a constant, comfortable internal building temperature and limit the need for excessive use of high volume air conditioning systems. Another benefit is their enhancement of natural light, making buildings less reliant on artificial lighting.

Single systems or a bank of systems can operate separately depending on their particular position and thus, can provide maximum zonal comfort levels. Full automation and sun-tracking capabilities are available via a large range of control options.

Aluminium Slats

Crowned aluminium slats are made from a highly elastic alloy, making them flexible, scratch-proof and shock-proof.

The double omega punching, (standard on external and double skin facade installations) combined with 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.

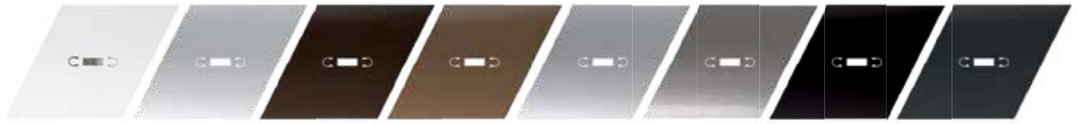
Pre-treatment
AA 5050 marine grade with chromate conversion undercoat

Standard finish
High UV resistant (RUV3) PE (polyester) coil coating

Optional finish
Perforated finish and other custom finishes available on request

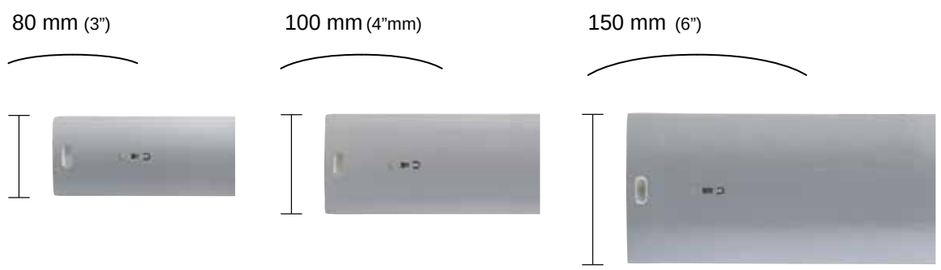
Colours
8 standard colours. Custom colours available on request

Standard slat colours



White	Silver	Dark Brown	Bronze	Silver Pearl	Storm Pearl	Jet Black	Monument Grey
RAL 9016	RAL 9006	RAL 8019	HOR 7140	RAL 9007	HOR 7043	RAL 9005	RAL 7021

Standard slat widths



Deakin University, Geelong, Australia

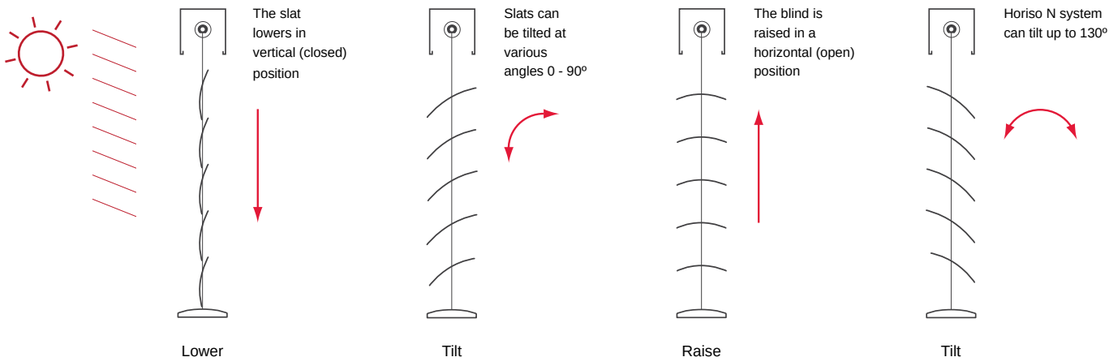
Private Residence, Sydney

Slat Tilting Position

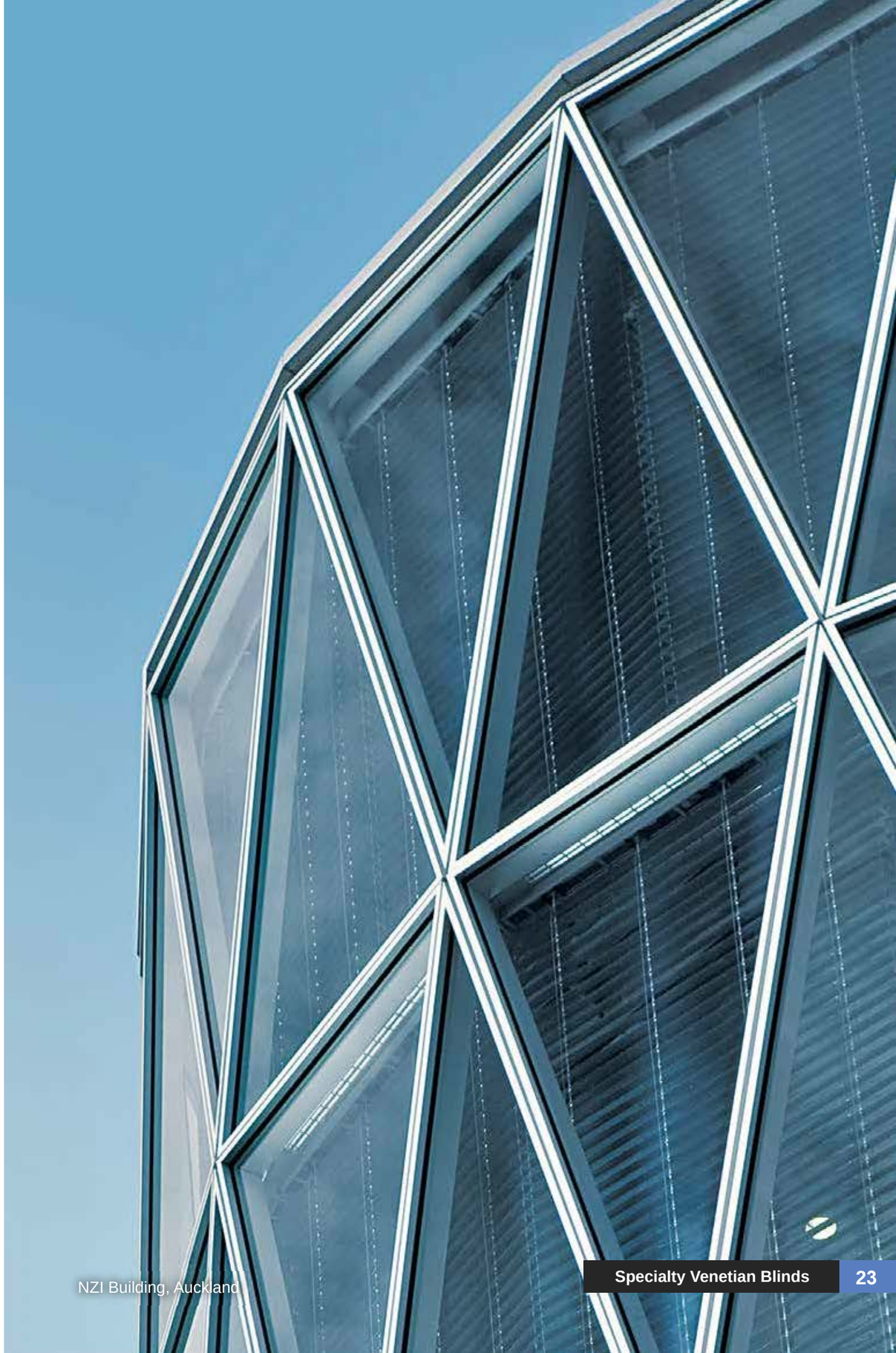
Slats change position and angle to control solar glare and heat gain, and to allow natural light to infiltrate a space.

Louvres can remain open in the horizontal position to allow for either heat gain or airflow. At preset wind speeds the slats can tilt to a horizontal position ready for retraction, allowing stronger airflow to pass between the slats, reducing the impact of wind on the system.

Alternatively, the convex side of the slat can face the sun in order to efficiently reflect solar rays and distribute light further into a room, maintaining comfortable conditions.



Private Residence, Sydney



NZI Building, Auckland

Quality Components

Horiso Specialty Venetian Blinds offer the most durable and advanced components for each system. All standard components are manufactured and sourced from the highest quality materials and suppliers. Products manufactured by Horiso are rigorously controlled and tested according to internal procedures prior to shipping from our factory.

Quality Finishes

Aluminium extruded components are powder-coated or 25 micron anodized to safeguard against environmental damage. Horiso powder-coating finishing processes and products are 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.

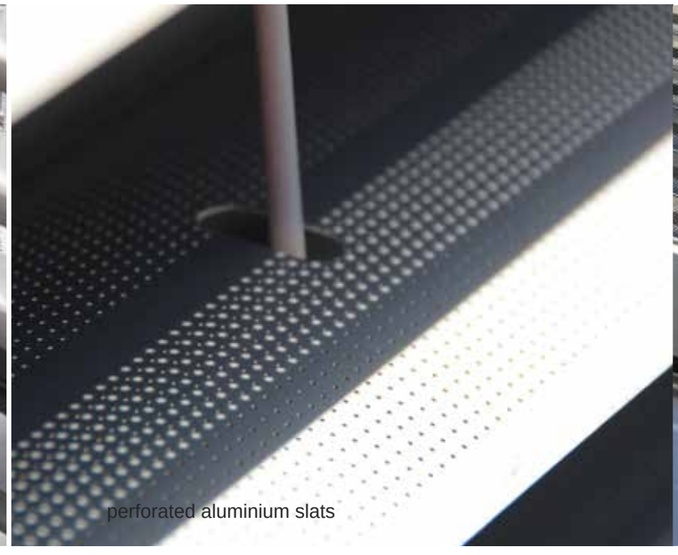
Quality Materials

- Slats: High UV resistant (RUV3) PE (polyester) coil coating
- Aluminium components: 25 micron clear anodized (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

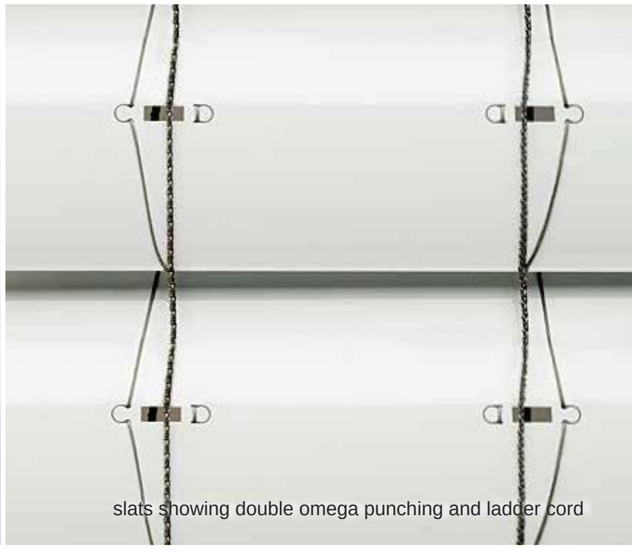

retracted slats within pelmet


L-shaped face fixed termination bracket


quick release custom termination


perforated aluminium slats


base bar and L-shaped termination bracket


slats showing double omega punching and ladder cord

Motors

Motor type specifications depend on the height, width, weight and location of each individual system.

Horiso motor type specifications include:

- Asynchronous box motors
- Quiet and reliable lift/tilt motor with soft break
- 110 or 240 volts
- UL certified motors
- Compatibility with home automation systems
- Compatibility with building management systems
- Adjustable end limits

Features - Standard Motor

IP 44 (splash water protected). Suitable for external and internal use.

Motor Torque

Range 6 - 20 Nm.

Speed

Available in different speeds according to requirements.
*Unless otherwise specified.

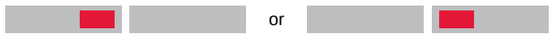
Motor Position

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

- Maximum 3 linked panels*.
- Maximum total area 45 square metres (484 square ft).

1 System

2 Linked Systems



3 Linked Systems

: motor

* Motor options are dependent on system size and control options. For more information regarding your project requirements, please contact Horiso.

Control Options

The complete line of Horiso Specialty Venetian Blind systems can be operated at various levels of sophistication. These include:

Manual crank handle or pull cord operation

Internal and external systems can be manually operated by either a crank handle or pull cord depending on the size and location of each system.

Motorised control via a switch, remote control or touch phone/hand-held device

Motorisation 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 slats when necessary.

Automatic control at varying degrees of customisation

Automation control provides a level of sophistication set to a user's requirements.

The automation function operates at various customisable levels:

- Timer setting - deploys, tilts and retracts at set times
- Sun tracking - louvres tilt at various angles throughout the day based on the sun's position.
- Temperature and wind control - louvres react to external weather conditions by retracting or deploying when necessary
- Integration with building management systems (BMS) e.g. BACnet®, Lonworks® and KNX® This allows the user to control Horiso shading systems through third party BMS systems

* More information on automation control can be found on pages 8 and 9.

System Installation

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

Horiso provides full technical assistance and engineering support while working closely with project shading specialists and installers globally.

Installation options include:

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

A: Recess requirements to accommodate head box

Slat width	Minimum recess widths
80 mm / 3 1/7”	120 mm / 4 5/7”
100 mm / 4”	140 mm / 5 1/2”
150 mm / 6”	190 mm / 7 1/2”

B: Packing / Stacking Heights (80 & 100 Slat widths)

N

DROP (total height of blind)		STACKING HEIGHT 80 slat		STACKING HEIGHT 100 slat	
900 mm	(35 3/7)	156 mm	(6 1/7)	150 mm	(6)
1000 mm	(39 3/8)	160 mm	(6 2/7)	153 mm	(6)
1200 mm	(47 1/4)	168 mm	(6 3/5)	160 mm	(6 2/7)
1400 mm	(55 1/8)	176 mm	(7)	167 mm	(6 4/7)
1600 mm	(63)	184 mm	(7 1/4)	173 mm	(6 4/5)
1800 mm	(70 6/7)	192 mm	(7 5/9)	180 mm	(7)
2000 mm	(78 3/4)	200 mm	(7 7/8)	187 mm	(7 1/3)
2200 mm	(86 3/5)	208 mm	(8 1/5)	193 mm	(7 3/5)
2400 mm	(94 1/2)	216 mm	(8 1/2)	200 mm	(7 7/8)
2600 mm	(102 1/3)	224 mm	(8 5/6)	207 mm	(8 1/7)
2800 mm	(110 1/4)	232 mm	(9 1/7)	213 mm	(8 2/5)
3000 mm	(118 1/9)	240 mm	(9 4/9)	220 mm	(8 2/3)
3200 mm	(126)	248 mm	(9 3/4)	227 mm	(9)
3400 mm	(133 6/7)	256 mm	(10)	233 mm	(9 1/6)
3600 mm	(141 3/4)	264 mm	(10 2/5)	240 mm	(9 4/9)
3800 mm	(149 3/5)	272 mm	(10 5/7)	247 mm	(9 5/7)
4000 mm	(157 1/2)	280 mm	(11)	253 mm	(10)
4200 mm	(165 1/3)	288 mm	(11 1/3)	260 mm	(10 (1/4)
4400 mm	(173 2/9)	296 mm	(11 2/3)	267 mm	(10 1/2)
4600 mm	(181 1/9)	304 mm	(12)	273 mm	(10 3/4)
4800 mm	(189)	312 mm	(12 2/7)	280 mm	(11)
5000 mm	(196 6/7)	320 mm	(12 3/5)	287 mm	(11 2/7)
5200 mm	(204 5/7)	328 mm	(13)	293 mm	(11 1/2)
5400 mm	(212 3/5)	336 mm	(13 2/9)	300 mm	(11 4/5)
5600 mm	(220 1/2)	344 mm	(13 1/2)	307 mm	(12)
5800 mm	(228 1/3)	352 mm	(13 6/7)	313 mm	(12 1/3)
6000 mm	(236 2/9)	360 mm	(14 1/6)	320 mm	(12 3/5)
6200 mm	(244)	368 mm	(14 1/2)	227 mm	(9)
6400 mm	(252)	376 mm	(14 4/5)	333 mm	(13 1/9)
6600 mm	(259 5/6)	384 mm	(15 1/8)	340 mm	(13 2/5)
6800 mm	(267 5/7)	392 mm	(15 3/7)	347 mm	(13 2/3)
7000 mm	(275 3/5)	400 mm	(15 3/4)	353 mm	(13 8/9)

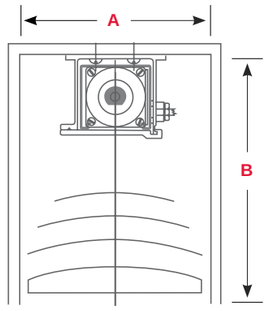
XL

DROP (total height of blind)		STACKING HEIGHT 80 slat		STACKING HEIGHT 100 slat	
7200 mm	(283 1/2)	413 mm	(16 1/4)	365 mm	(14 3/8)
7400 mm	(291 1/3)	421 mm	(16 4/7)	372 mm	(14 2/3)
7600 mm	(299 1/5)	429 mm	(16 8/9)	378 mm	(14 7/8)
7800 mm	(307)	437 mm	(17 1/5)	385 mm	(15 1/6)
8000 mm	(315)	445 mm	(17 1/2)	392 mm	(15 3/7)
8200 mm	(322 5/6)	453 mm	(17 5/6)	398 mm	(15 2/3)
8400 mm	(330 5/7)	461 mm	(18 1/7)	405 mm	(16)
8600 mm	(338 4/7)	469 mm	(18 1/2)	412 mm	(16 2/9)
9000 mm	(354 1/3)	485 mm	(19)	425 mm	(16 3/4)

Pelmet Extension Key

- : No Extension
- : 1 Extension
- : 2 Extensions
- : 3 Extensions
- : Custom Solution

Packing heights may vary significantly depending on the behavior of the lifting tape and ladder braid. The packing heights + tolerances in this table are recommended in order to make sure that the slats are completely retracted in the pelmet.



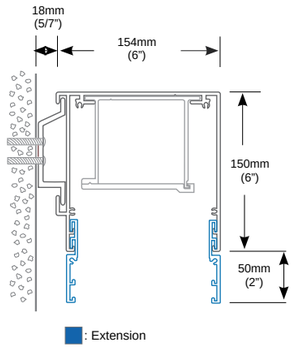
Pelmets

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

Horiso pelmets:

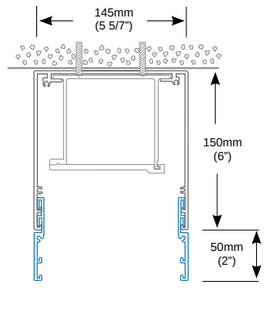
- Come in extruded aluminium 3 mm (1/8”) 25 micron clear anodised
- Are powder-coated in standard or custom colours
- Offer pelmet/fascia extensions in 50 mm (2”) increments
- Have fixing spacing that is subject to site structure and cannot exceed 600 mm (23 5/8”)
- Offer custom pelmet/fascia solutions

Face fix pelmet / fascia



: Extension

Top fix pelmet / fascia



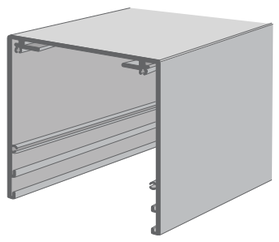
Pelmet / fascia weight in Kgs

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

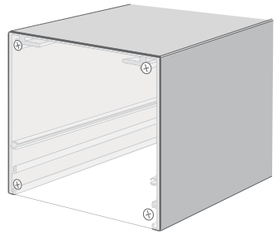
Pelmet / fascia weight in Lbs

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

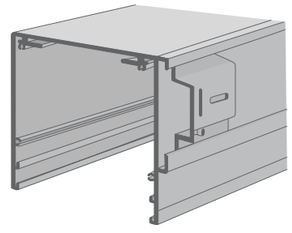
Pelmet Variations



Top fix pelmet/fascia



Top fix pelmet/fascia with end plate



Face fix pelmet/fascia

Components

Head box and Brackets

The extruded aluminium U-shaped head box accommodates the lifting/tilting devices and motors.
The head box 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 boxes can be attached with the opening at the bottom or top.

Lifting and Tilting Devices

Lifting and tilting devices assembled within the aluminium extruded head box enable the slats to change angle direction smoothly. These devices also control the lowering and raising of the system.
The anti-friction texband PES filament lifting tape raises and lowers the slats, operating with minimal wear and tear thanks to maximum UV protection. The ladder braid is attached to the omega punching which ensures correct spacing between the slats, facilitates tilt action, and stabilises the system in high wind areas.

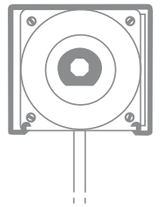
Cable Guides and Termination Brackets

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

The cable guide, made from 316 marine grade stainless steel, is fastened to the top head box by a double spring tension device and is bottom-fixed using a termination bracket via an M8 swage.
Additional supporting cable guides are recommended for high wind areas and when blinds are wider than 3 m (118 1/9”).

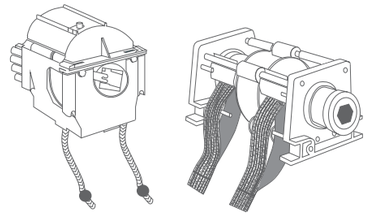
Horiso cable guides can be:

- Fixed into standard aluminium termination bracket, finish 25 micron anodized size 100 mm (4”) or 150 mm (6”) using a M8 swage for bottom termination
- Fixed into wood using threaded swage
- Fixed into concrete or similar material using swage with a M8 bolt 50 mm (2”) or 100 mm (4”) long
- Customised using other available fixings



Head box

60 mm wide x 57 mm high (2 1/3” x 2 1/4”)
Open bottom and open top fixing. Standard 25 micron clear anodised. Powder coated in a large range of colours.

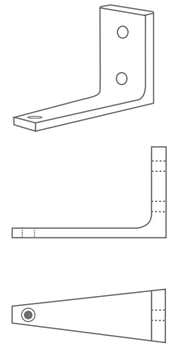


Tilting and Lifting Device

Standard (N) and Heavy Duty (XL) sizes

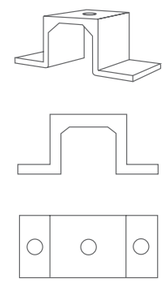
Stainless steel cable and flat top head.

316 marine grade



L-shaped termination bracket

110 mm long (4 1/3”)
163 mm long (6 3/7”)

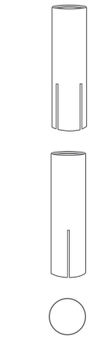


Top hat - bottom termination bracket

3mm (1/8”)
wall thickness

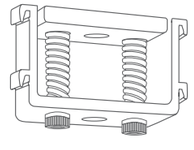
S/S rampa screws

bottom fix termination
for timber 18 & 30 mm
(5/7” &1 1/16”)

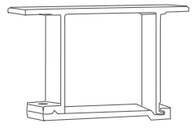


M8 drop in anchor

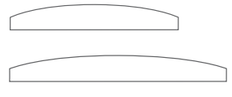
bottom fix termination
for concrete - 30 mm
(1 1/8”)



Double spring bracket

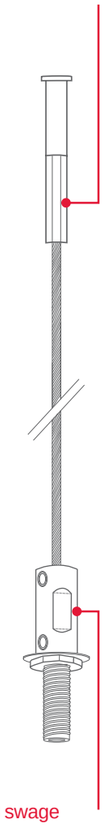


Gate bracket



Base rail

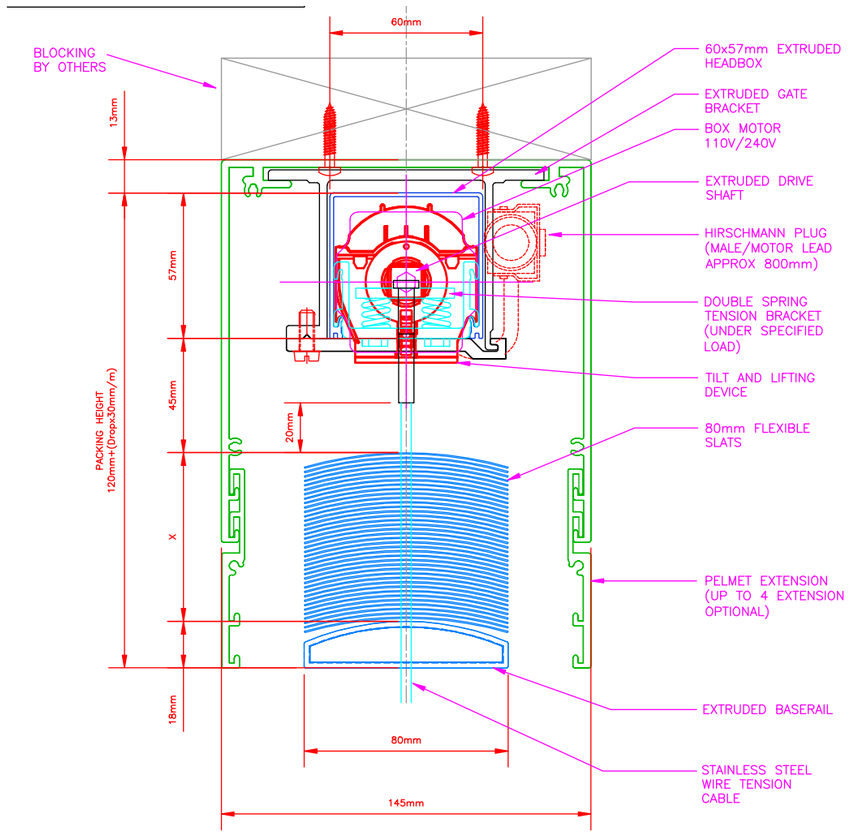
Horiso 80 system &
100 system



M8 swage

bottom termination
50 & 100mm
(2” & 4”)

Design Specifications



Technical diagrams are available at **horiso.com.au**

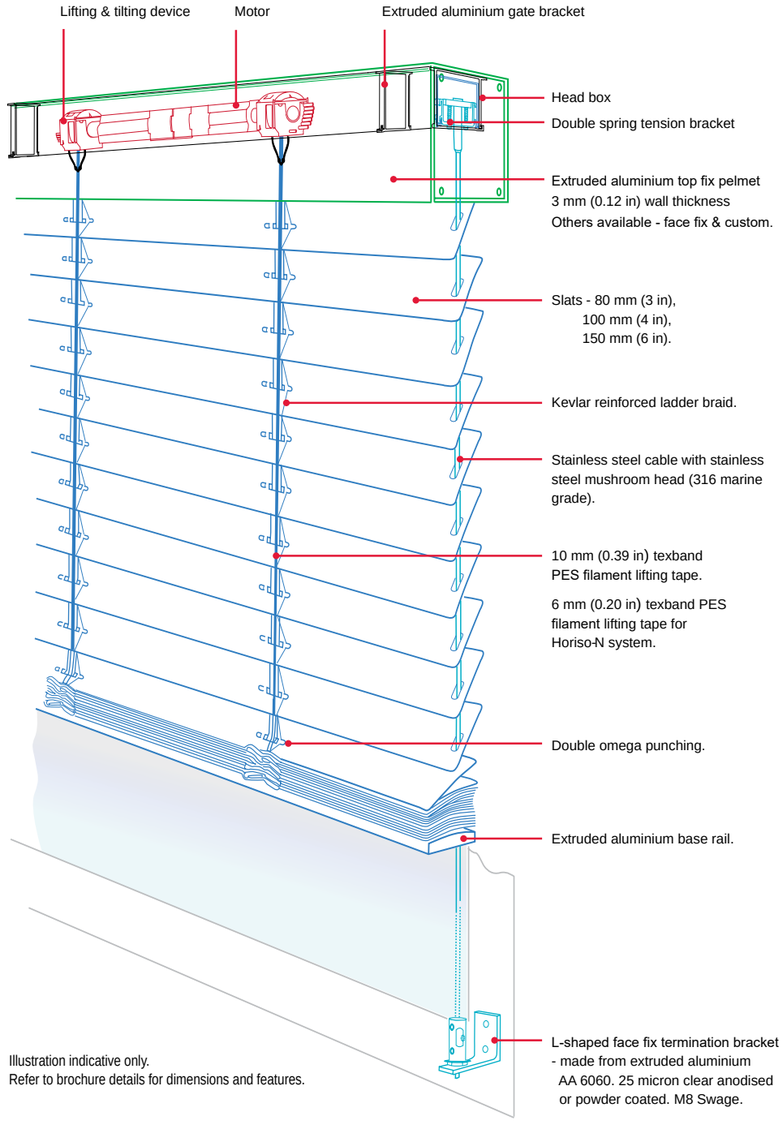


Illustration indicative only.
Refer to brochure details for dimensions and features.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