



horiso[®]

Engineered shading solutions





Specialty Venetian Blinds

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RA 75E system, skylight installation - High School in Sydney

Horiso Innovation

Horiso is a leading manufacturer of solar control and shading systems for specifiers, engineers, developers and builders. Our products are locally manufactured in Australia and sourced from sustainably conscious manufacturers. Our shading systems have been installed across the globe, including Australia, New Zealand, USA, Canada, and throughout Asia.

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

Horiso provides complete technical advice and support on our specialised systems based on the project requirements.

Horiso products are able to:

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

We aim to work with you to provide a solution

**We are
committed
to supplying
innovative design
and sustainable
technology**



RA 155E system, private residence

Technically Advanced Design

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 shading systems are of the utmost reliability, quality and design.

Specifically, our systems:

- Are suitable for installation externally, internally and within double skin facade applications
- Can be independently controlled or integrated with building management systems
- Offer customisation of components which can be supplied in a range of colours, finishes, and in varying slat widths materials including aluminium and timber
- Provide standard and custom options



Timber Rack Arm System to match the building facade



RA 88E system



Automation Control

Horiso's control options for shading systems can be set to suit building or individual user requirements. From a basic switch, remote control or time scheduled automation, right through to integration with building management systems, multiple options with scalability are available.

Additional automation features can be included, such as: group 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/Wi-Fi tablet and device control
- Time scheduled automation response settings
- Temperature and wind control
- BMS and A/V integration
- Advanced building environmental modelling
- Sun tracking
- Phone Apps

Standard Control



Standard Switch and Remote control

Hardwired or wireless control for opening, tilting and closing functionality.

Standard Automation



Time scheduled response settings

Responsive base control opens at scheduled times. Flexible scheduling to set daily, weekly, monthly or yearly.



Sensors

Strategically placed sensors allow the system to react to weather conditions by automatically closing. Sensors monitor brightness/illuminance, wind, rain and temperature, and can be set to programmed threshold values.



Group Control

Linked systems can be controlled in unison for zonal control.

Common Automation Features



Wi-Fi operated tablet and device control

Hardwired or wireless control for opening and closing 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 floor plans 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 resiliency

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 Modelling

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 louvres 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

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:

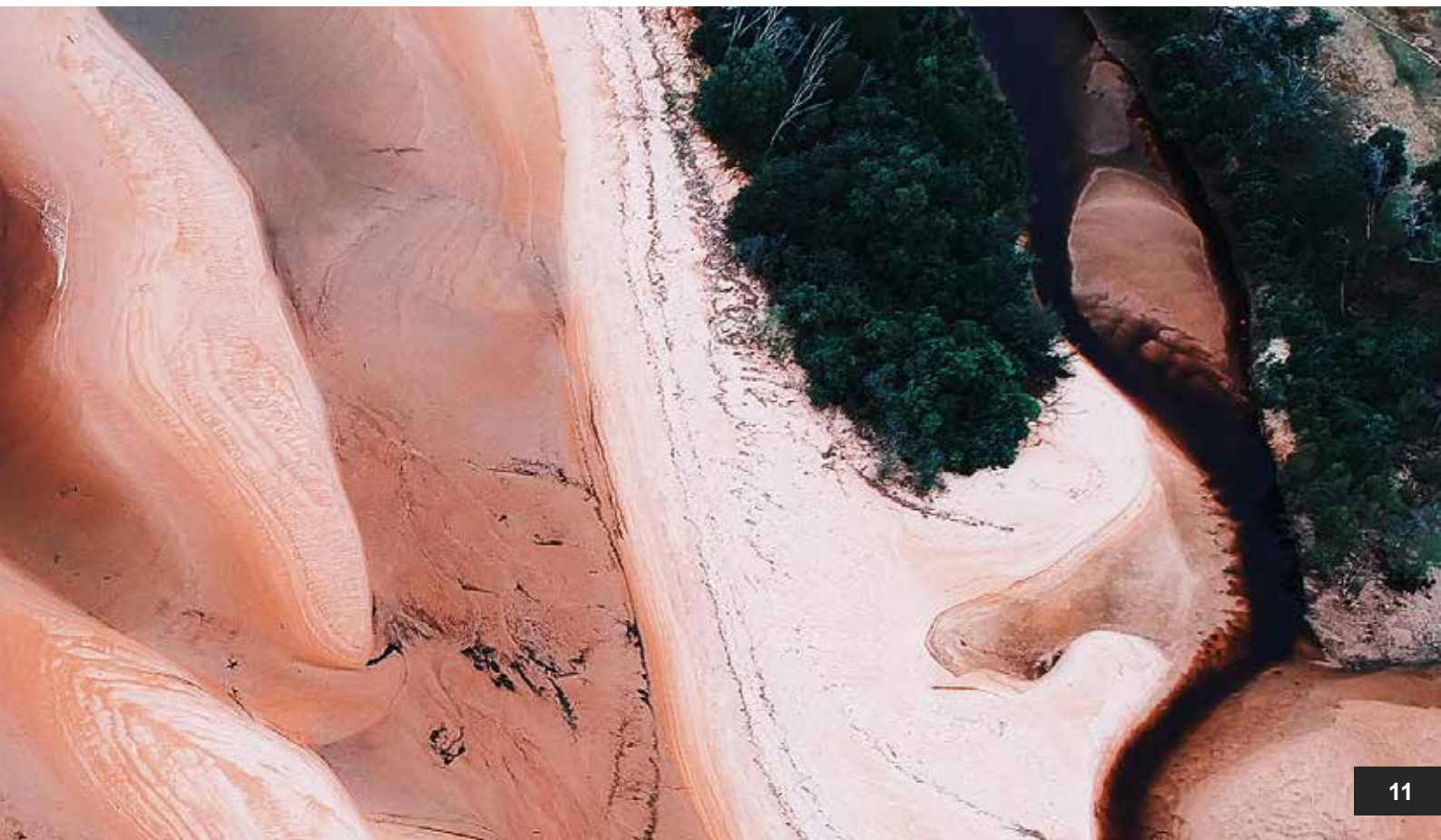
- Reduce the need for artificial lighting
- Reduce energy consumption by reducing the usage of heating and cooling systems
- Improve the thermal comfort of an interior environment
- Reduce discomfort from glare
- Improve productivity and wellbeing through increased natural light
- Minimise energy consumption 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
- Recycling offcuts and wastage
- Improving component durability to ensure the longevity of our products
- Using recyclable aluminium and renewable materials
- Sourcing wooden slats from certified suppliers and sustainably managed forests



Horiso - Specialty Venetian Blinds

Motorised/manual control
Internal/external installation
Aluminium/timber



Specialty Venetian Blind

Solar Control

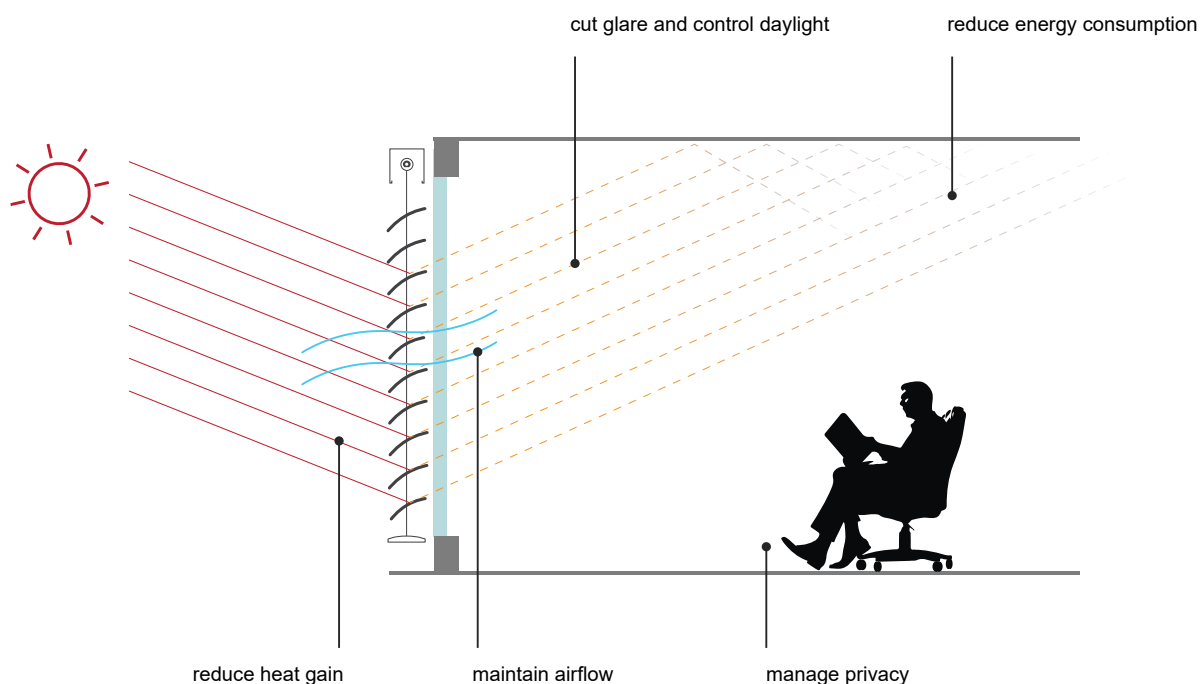
Horiso Specialty Venetian Blinds are an energy-efficient, environmentally-friendly shading option. They control, maintain and optimise interior conditions and improve thermal comfort.

The tilting of the slats can provide the optimal amount of daylight, minimising the need for artificial lighting. Simultaneously, slats limit air-conditioner usage by maintaining effective airflow across the space and reducing overall solar heat gain on the facade of the building.

By controlling solar glare, our systems can also reduce eye irritation and improve computer screen visibility, contributing to higher comfort and productivity levels within a space.

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
- Offer various control options (manual, motorised and automated control)





Showroom in Thailand

External Venetian Blinds Installation

External Horiso Specialty Venetian Blinds can accommodate large facade openings with widths of up to 6 metres and drops of up to 9 metres with a maximum overall coverage of 42m². Our systems are engineered to withstand 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 90° and, when required, retracting the system completely.

Our externally installed systems are of the highest durability 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 offers retrofit application that reduces costly construction and 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:

- Insulating properties that reduce energy consumption
- Reduced heat and cold transfer
- Wind sensor integration for high wind and extreme weather protection
- Multiple slat colours and finishes
- Optional perforated slats which maintain exterior views even while closed

*Wind sensors are recommended for all external applications



Private Residence, Victoria - Tim Roberts Design Sydney

Internal Venetian Blinds Installation

The internal installation of Horiso Specialty Venetian Blinds offers the benefit of solar control and adds a stylish element to any interior setting. Various control options also ensure easy and convenient operation.

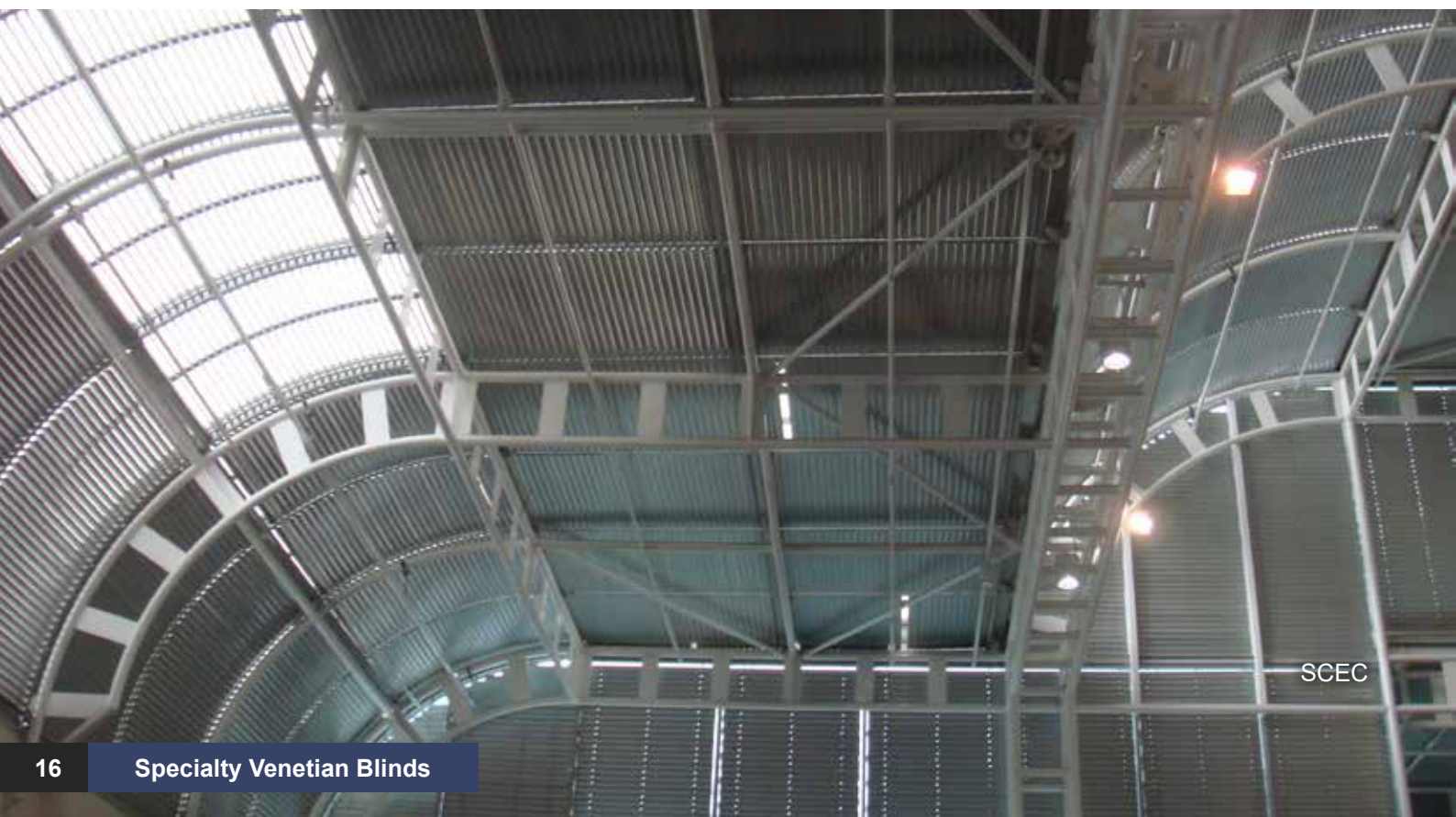
Our internal systems use wider slats to allow more light to infiltrate a room while also reducing thermal heat and glare caused by light reflectivity from water and neighbouring building facades.

They not only minimise eye irritation but improve the productivity and general comfort of the space. Internally installed systems also allow for privacy control.

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 in 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.

Horiso Specialty Venetian Blinds are the most versatile window coverings, offering tilt and close functions with the option of full retractability.



SCEC



House, Brisbane



Double Skin Ventilated 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)

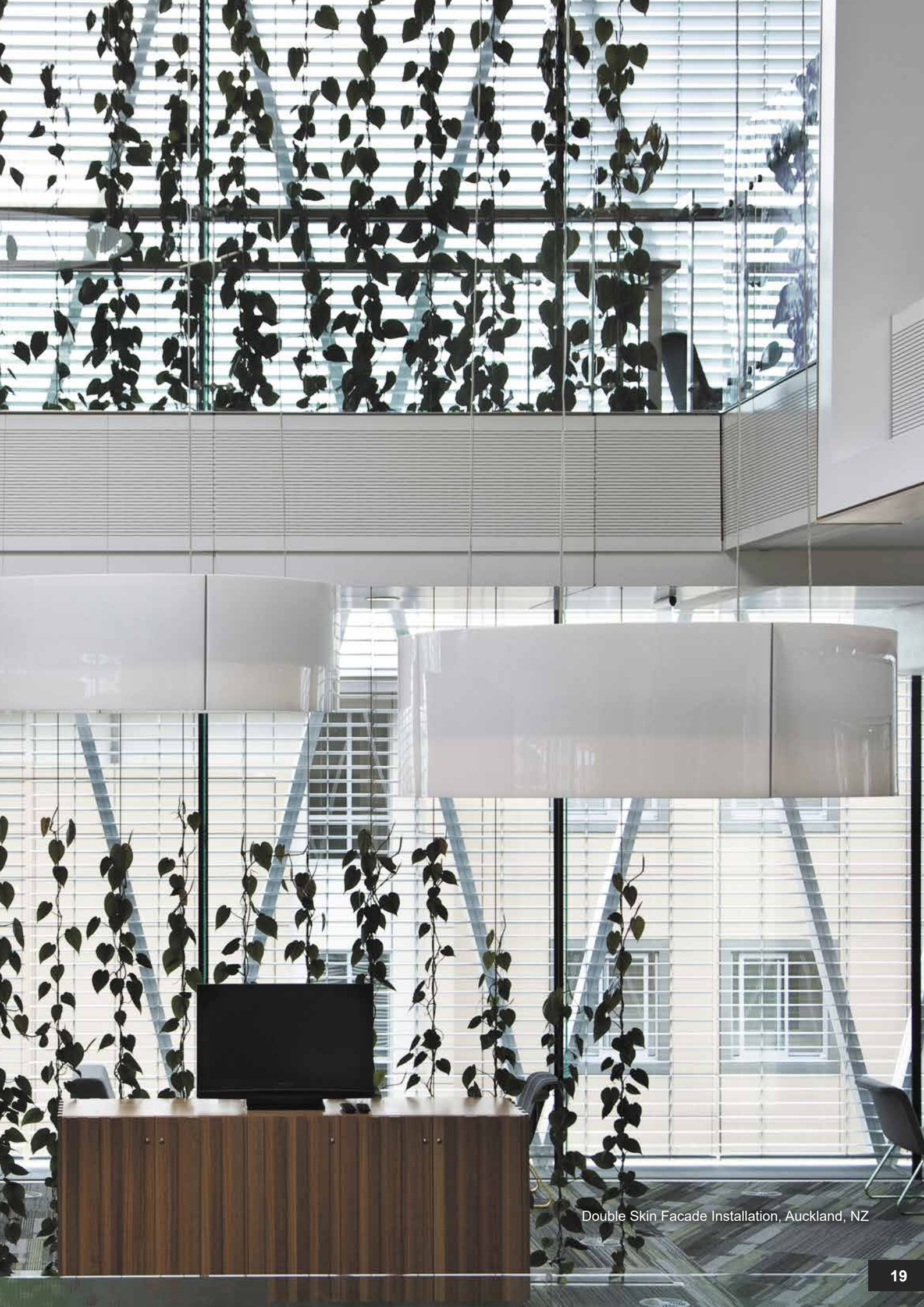
Double Skin Specialty Venetian Blinds Facade Installation

The installation of Horiso Specialty Venetian Blinds in a double skin facade 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 ventilated facades.

Double skin facade blind systems help maintain a constant, comfortable internal building temperature and limit the need for air conditioning systems. They allow natural light, making buildings less reliant on artificial lighting.

Our systems are designed for Ventilated Cavity Facades (VCF) and Closed Cavity Facades (CCF), using motors that can withstand temperatures up to 80 C°.

Automation and sun-tracking capabilities are available via a large range of control options.



Double Skin Facade Installation, Auckland, NZ

Aluminium Slats

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

The double omega punching, (standard on external and double skin facade installations) ensures smooth movement of the slats. They also stabilise the slat alignment 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

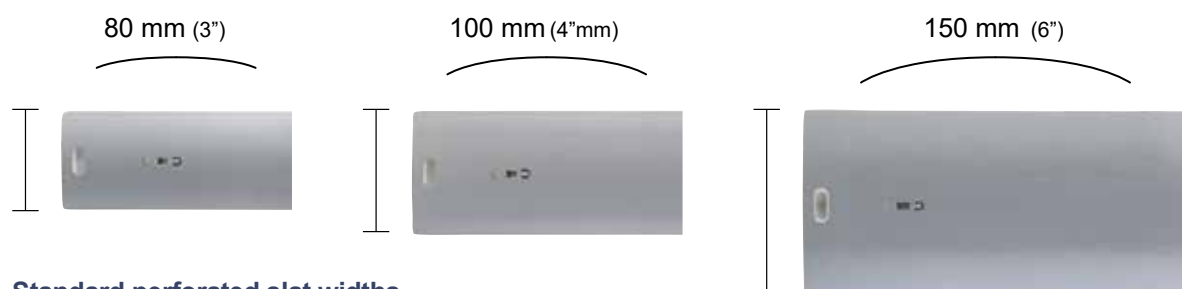
Colours

8 standard colours. Custom colours available on request

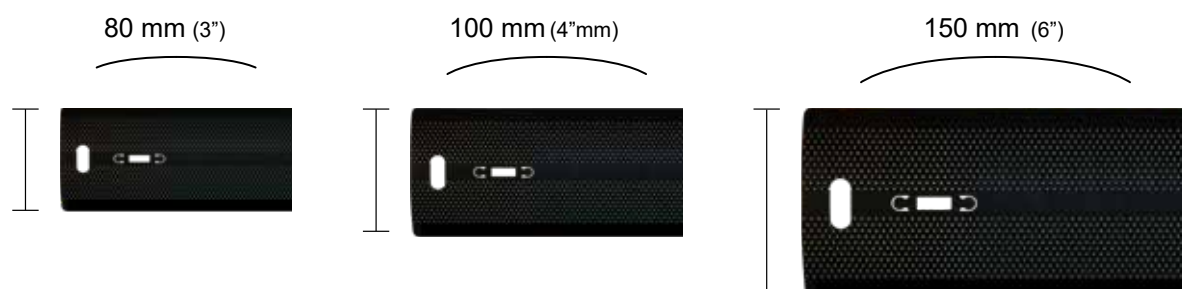
Standard slat colours



Standard slat widths



Standard perforated slat widths





Private Residence, Sydney

Timber Slats

Timber slats add natural warmth and light glow from filtered light reflection to an interior space. Slats are offered in various wood species, blade sizes and finishes which can be matched with other interiors.

Horiso selects timber from sustainably managed forests to manufacture slats. Air and kiln drying processes reduce and stabilise the timber's moisture content before milling and sanding, which improves the sealer coat adhesion and longevity of the finish. The slat finishes are hypo-allergenic and environmentally friendly with zero volatile emissions.

Horiso timber slats are:

- Available in various timber species and colour finishes
- Dimensionally stable and warp resistant
- Have a visually appealing grain structure
- Free of all knots, defects and similar blemishes on all faces and edges
- Selected from certified sources to Australian standard (AS 4707 - products originating from certified forests through all phases of ownership, transportation and manufacturing)

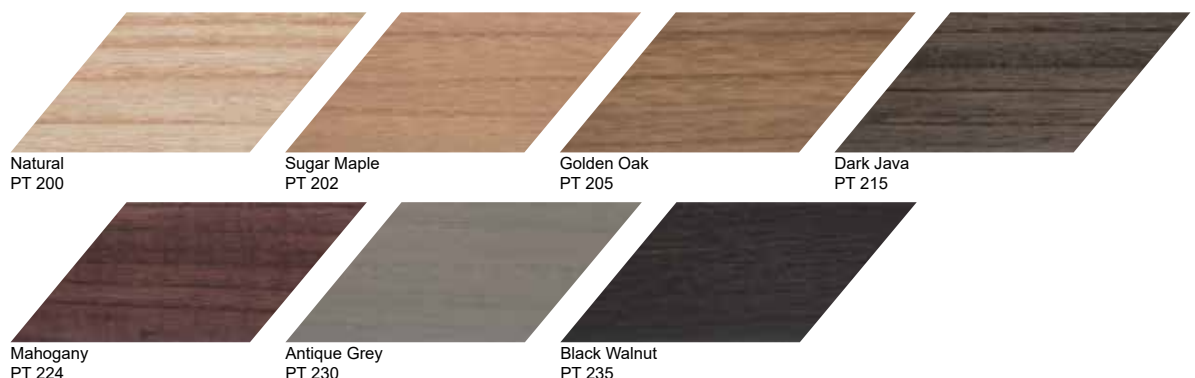
Slat widths

Slat widths and lengths vary depending on the selection of timber species. A Horiso representative can offer more accurate width and length options at the time of contact.

Slat Colours

An array of slat options are available in timber species, oil colour stains and lacquered finishes. A Horiso representative can offer more accurate colour, sample and availability options at the time of contact.

Interior



Choice of species (63mm x 3mm - 84mm x 5mm - 111mm x 5mm)

Western Red Cedar

A dimensionally stable timber under most weather conditions and is not prone to shrinkage or swelling. Due to its versatility, it can be used for both internal and external applications.

Exterior



Red Western Cedar (84mm x 4mm)



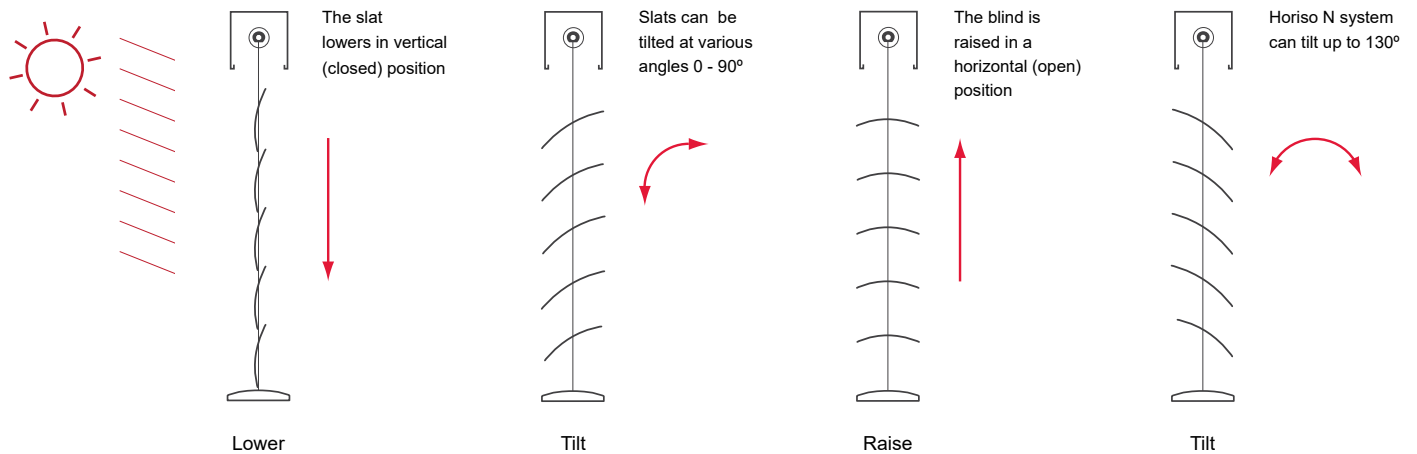
Darling Quarter, Sydney

Slat Tilting Position

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

Louvres can remain open in a horizontal position to allow for either heat gain or airflow. On windy days, the slats can tilt to a horizontal position, allowing the air to pass through them, thereby reducing the impact of the 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 into a room, maintaining comfortable conditions.



Private Residence, Sydney



NZI Building, Auckland

Quality Components

Horiso Specialty Venetian Blinds offers durable and advanced components. 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 before 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. 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
- Head rail open on the underside to give access to the gearbox and to the tilt shaft and tape spools for maintenance as required
- Top-fix 'saddle' brackets, Manufactured from aluminium alloy 6060-T5/6 extrusion, (HORISO® Gate Brackets)
- 80mm or 100mm wide high flexible crowned slats w/ double HORISO® Omega punch
- Double oven-baked slats that are shockproof, bend and scratch resistant
- TEXTBAND® lifting tape manufactured from PES Filament with high tenacity in warp and weft
- Base Rails carry plastic moulded Nylon66 end caps and cable guide conduits
- Horiso N systems are equipped with a multi-function tape roll support which allows slats to fully open and fully close over approx. 170 degree (adjustable limits)
- The Head boxes, base rails, drive shafts and pelmets are a high grade extruded aluminium

Local Manufacturing

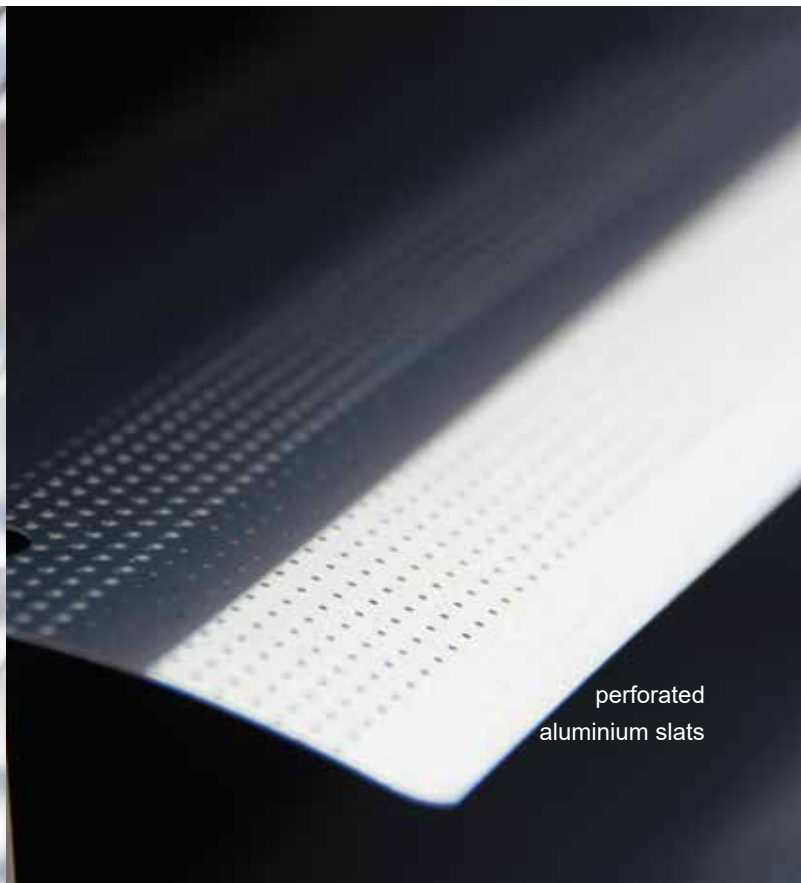
- All Aluminium extrusions and injection mould parts are manufactured in Australia
- Ladder Braid, Lifting Tapes and aluminium coil is imported from Europe
- Horiso VarioTec bearing is manufactured in Sydney using local extruded parts
- Blades are roll formed, cut and punched in Sydney
- The final Product is fully assembled and tested in Sydney

Warranty

- 5 Years Manufacturer's Warranty – details see Horiso T&Cs



Kevlar ladder braid
and lift tape



perforated
aluminium slats



L-shaped termination bracket
and heavy duty steel cable



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
- 240 or 110 volts Japan & North America
- UL-AU 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

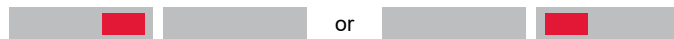
Horiso Specialty Venetian Blinds can be motor controlled individually or in mechanically linked systems. The motors are usually positioned at the centre of each system.

- Maximum 3 linked panels*
- Maximum total area 42 square metres (480 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.



Automation 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® - 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.

Horiso provides comprehensive 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)

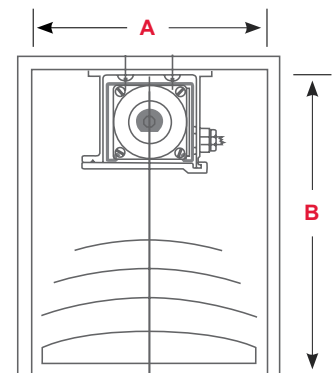
DROP (total height of blind)	STACKING HEIGHT	
	80 slat	100 slat
900 mm (35 3/7)	156 mm (6 1/7)	150 mm (6)
1000 mm (39 3/8)	160 mm (6 2/7)	153 mm (6)
1200 mm (47 1/4)	168 mm (6 3/5)	160 mm (6 2/7)
1400 mm (55 1/8)	176 mm (7)	167 mm (6 4/7)
1600 mm (63)	184 mm (7 1/4)	173 mm (6 4/5)
1800 mm (70 6/7)	192 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)	327 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)

DROP (total height of blind)	STACKING HEIGHT	
	80 slat	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
- : 4 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.



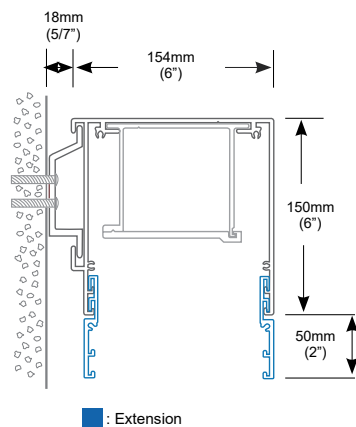
Pelmets

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

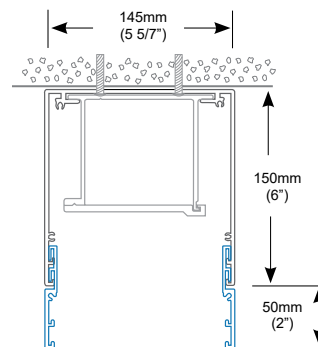
Horiso pelmets:

- 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
- Are 26mm wider than the slats

Face fix pelmet / fascia



Top fix pelmet / fascia



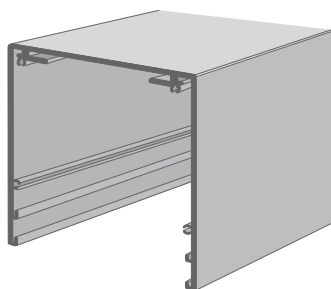
Pelmet / fascia weight in Kgs

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

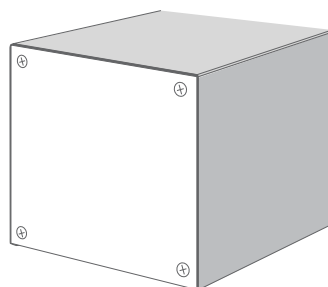
Pelmet / fascia weight in Lbs

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

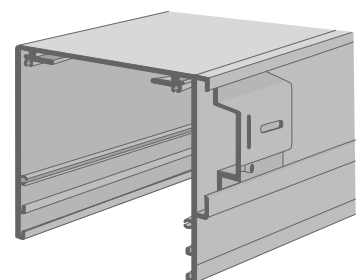
Pelmet Variations



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 Kevlar lifting tape raises and lowers the slats, operating with minimal wear and tear. 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. The cable guides limit the movement of the blinds in windy conditions without causing excessive noise.

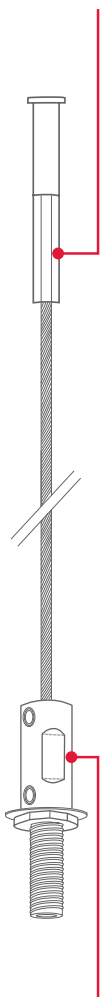
The cable guide is made from 316 marine grade stainless steel and is fastened to the top head box by a double spring tension device, fixed to the bottom using a termination bracket via an M8 swage. Additional supporting cable guides are recommended for high wind areas and 3m (118 1/9") wide blinds.

Horiso cable guides can be:

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

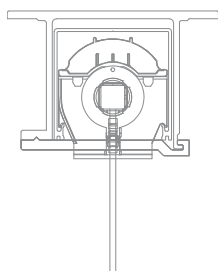
Stainless steel cable and flat top head.

316 marine grade



M8 swage

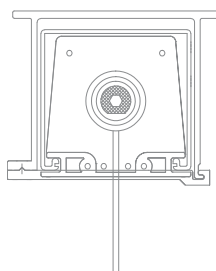
bottom termination
50 & 100mm
(1.97" & 3.93")



Head box 60mm with N bearing

60 mm wide x 57 mm high (2.36" x 2.24")

Open bottom and open top fixing. Standard 25 micron clear anodised. Powder coated in a large range of colours.

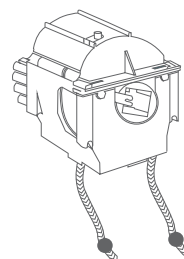


Head box 80mm with XL bearing

80 mm wide x 75 mm high (3.15" x 2.95")

Open bottom and open top fixing. Standard 25 micron clear anodised. Powder coated in a large range of colours.

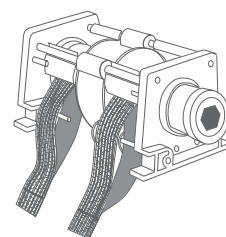
N Bearing



Tilting and Lifting Device

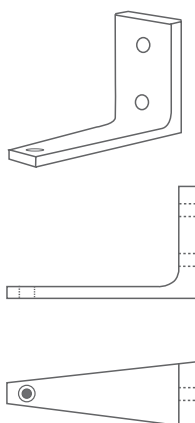
Standard (N)
<7m in drop

XL Bearing



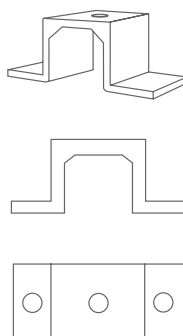
Tilting and Lifting Device

Heavy Duty (XL)
>7m - 9m in drop



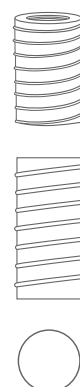
L-shaped termination bracket

110 mm long (4.33")
163 mm long (6.42")



Top hat - bottom termination bracket

3mm (0.12")
wall thickness



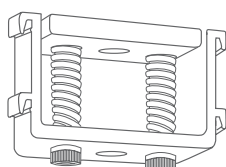
S/S rampa screws

bottom fix termination
for timber 18 & 30 mm
(0.71" & 1.18")

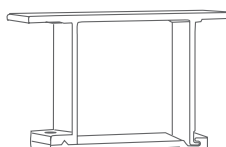


M8 drop in anchor

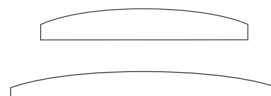
bottom fix termination
for concrete - 30 mm
(1.18")



Double spring bracket



Gate bracket

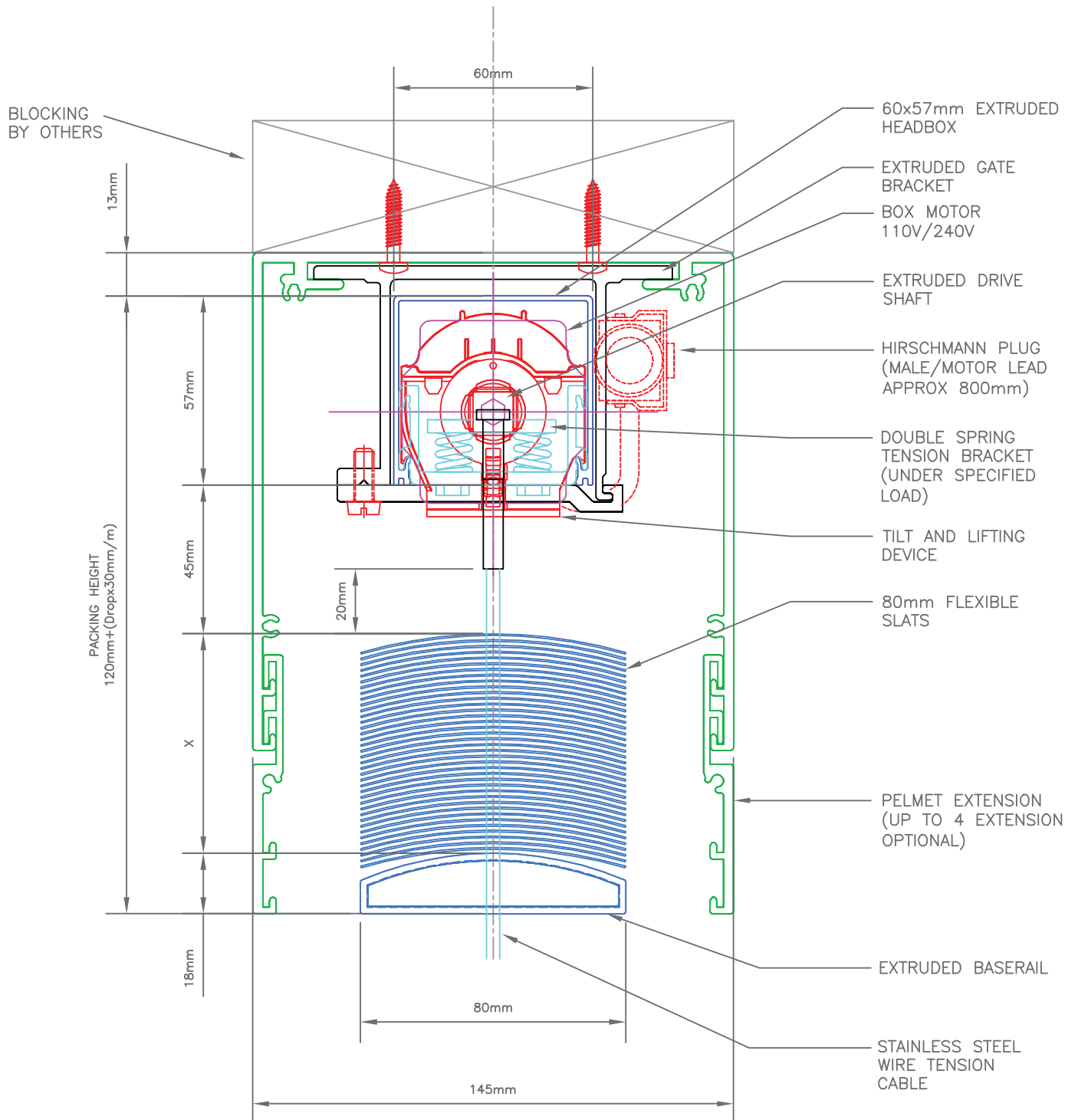


Base rail

Horiso 80 system &
100 system

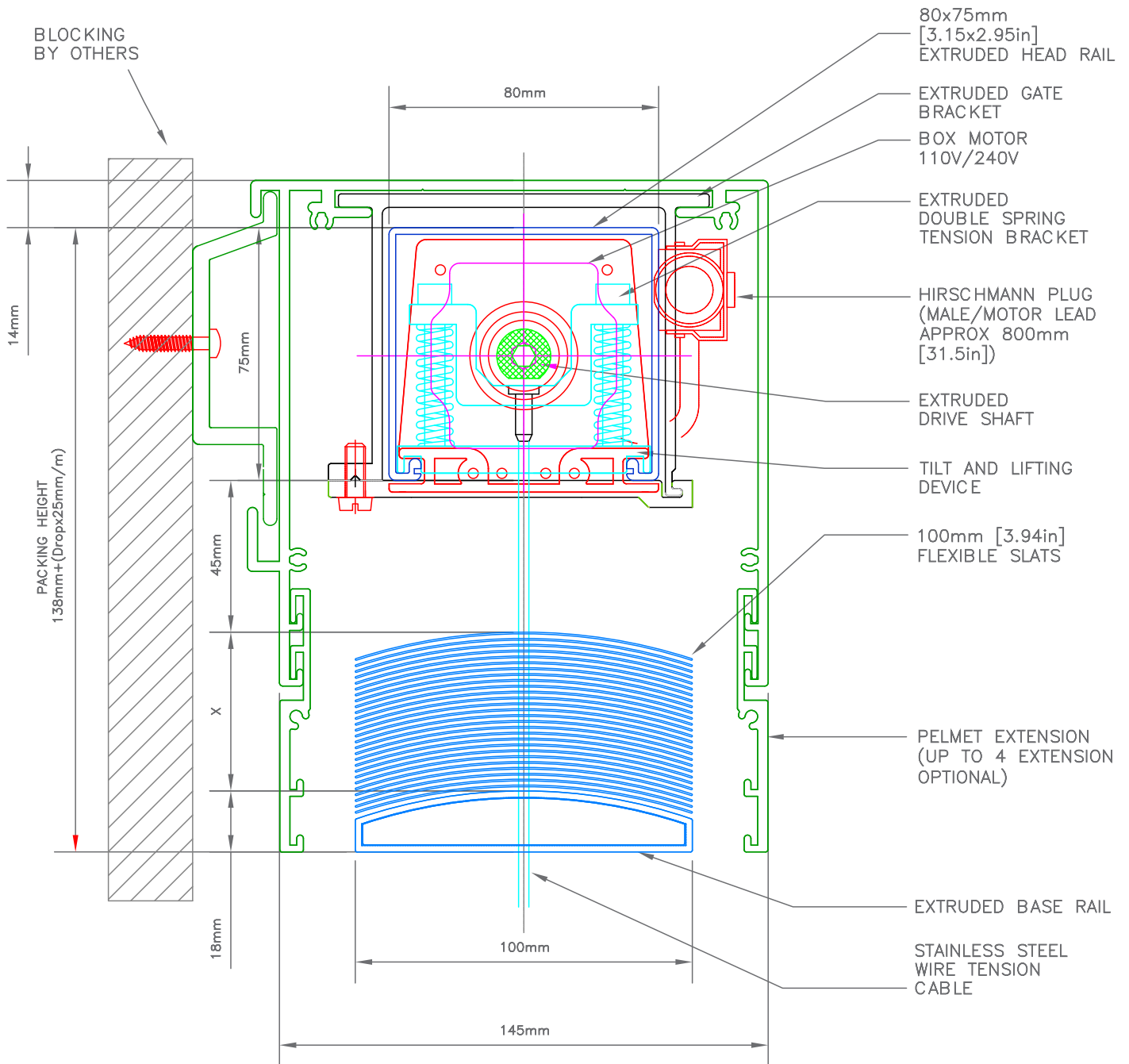
Design Specifications

(80mm-Top Pelmet)



Technical diagrams are available at horiso.com.au

Design Specifications (100mm-Face Pelmet)



Sunshield - Rack Arm Systems

Motorised or manual control
Internal or external installation
Aluminium / timber







RA 155E system, private residence

Solar Control

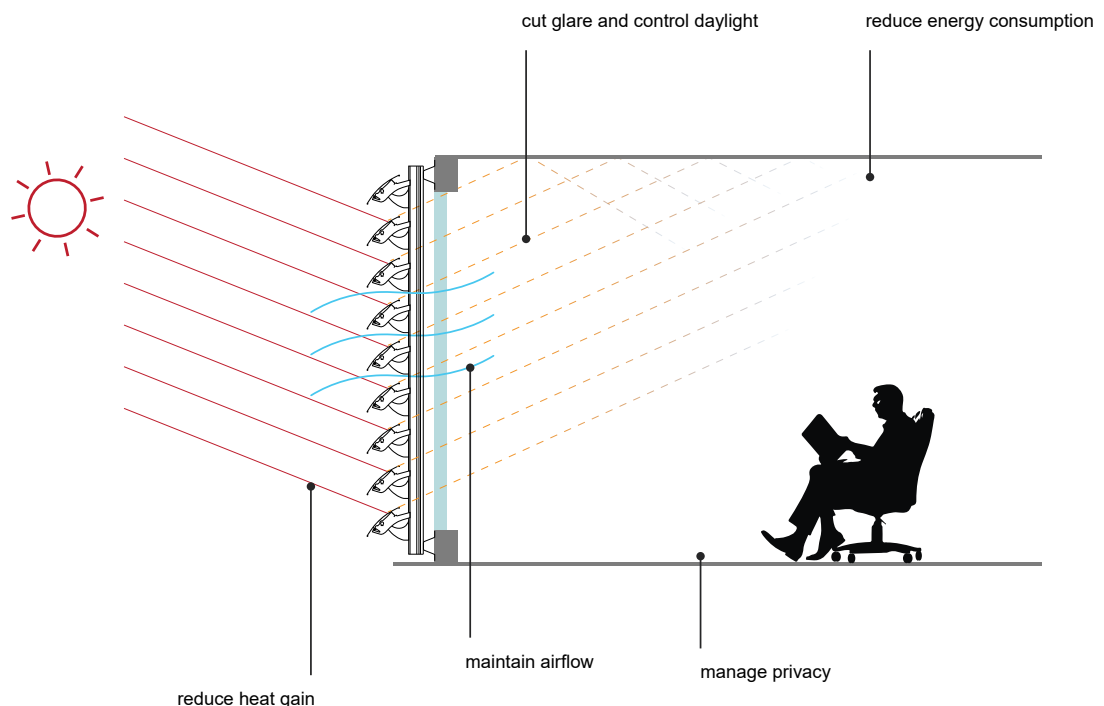
Horiso Rack Arm Systems control, maintain and optimize natural interior conditions, making them an energy-efficient, environmentally-friendly shading solution.

The tilting slats provide the optimal amount of daylight, minimising the need for artificial lighting. They reduce the need for air conditioning by effectively controlling the airflow reducing the overall solar heat gain.

By controlling solar glare, our louvres help reduce eye irritation and improve computer screen visibility, contributing to higher comfort levels.

Horiso Rack arm Systems:

- 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)
- Are designed to withstand up to 100 km/hr wind speeds



Applications

Facades



The wide range of aluminium and wooden louvres allow you to create the style and look you want. Triangles, trapezoids, arches and even circles are possible. Systems are customised to the shape and size of each facade. Bedrooms can be specified with slats specific for reducing light into the glazing.

Louvre Roofs



Rack Arm systems are particularly suitable for pergolas, awnings and veranda roofs for solar protection, maximising daylight and light filtration. Systems can be installed in a flat roof or angular roof position. Special shapes, slat finishes, edge box finishes and rain sensors for automatic closure are all available.

Rooflights & Glass Roofs



Horiso Rack Arm System provide the best option for optimising natural light with the added benefits of airflow, control of the indoor environment, glazing protection and privacy to conservatories, atriums or glass roofs with clear glazing

Interior Skylights



Horiso Rack Arm Systems can also be installed internally, providing additional benefits to an interior space. Heat gain, glare and airflow can be controlled throughout the day. Interior Rack Arm Systems are perfect interior shading options for sloped glazing, skylights, angular, shaped and high glass windows.



RA 88E system, private residence

External Installation

Rack Arm Systems' implementation can reduce solar heat gain and manage the use of daylight, contributing to higher 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 slats reduce glazing specifications, avoid tinting and lower construction costs while the high-quality slat, component material and coating provide durability.

External applications can be extended to create large outdoor areas, providing privacy and protection from sun and other weather conditions.

Externally installed louvres provide:

- Versatile external systems to fit a range of glazing inclinations, shapes and sizes.
- Choice of slat colours and finishes for architectural design choices.
- Glare control, reducing eye irritation and improving computer screen visibility.
- Increased comfort levels for building occupants.
- Decreased air conditioning usage and overall energy consumption and costs.
- Larger slat sizes to allow more natural light to infiltrate through the glazing.
- Integration with various control options

Internal Installation

Internal installation of Horiso Rack Arm Systems control natural light, heat gain and glare. This application is particularly beneficial in galleries, museums and libraries where natural light is preferable.

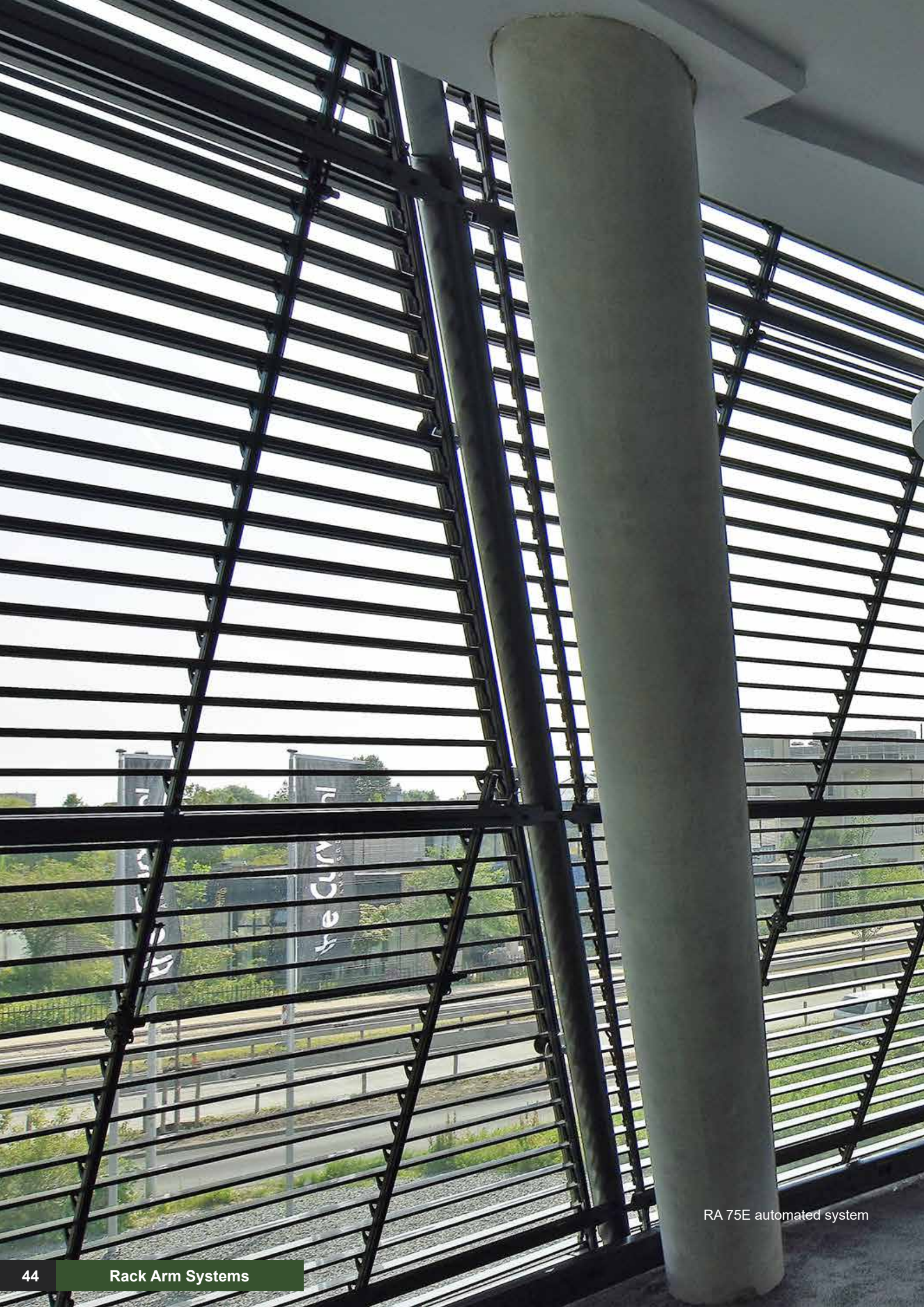
An internal application can also act as a ceiling, functioning design feature or wall. Glare is minimised and, if required, the addition of brushes achieves light blackout when fully closed.

The flexible range of rack arm width and slat sizes means a retrofit internal installation is achievable onto glazed structures without costly modification. The choice of custom colours provides design flexibility and various control methods ensure easy and convenient operation.

Other interior applications include conservatories, sunrooms and glazed ceiling verandahs.



RA 145E, private residence



RA 75E automated system

Extruded Aluminium Slats

Horiso Rack Arm aluminium slats are made from durable lightweight aluminium alloy extrusions. The high-quality slats are finished with a polyurethane (PE) coating and are offered in eight standard colour options.

Custom colours are available on request*

Standard slat colours



* Custom powder coat colours are available and may incur a surcharge. Please contact Horiso for further information.

RA 75E automated system

Timber Slats

87W



74W



153W



Timber Rack Arm systems integrate seamlessly with timber building facades, can provide a natural timber element to a building exterior and introduce a warm filtered light to an interior.

Horiso selects timber for the manufacturing of timber louvre slats from sustainably managed forests in both western red cedar and Accoya® varieties.

Western Red Cedar

A dimensionally stable timber under most weather conditions and that is not prone to shrinkage or swelling. Due to its versatility, it can be used for both internal and external applications.

Accoya®

Accoya® is modified timber in which a process called acetylation, a cutting-edge patented technology, enables it to resist rot, defy the elements and stay strong for decades. Accoya® wood is sourced from sustainable sources, including FSC® and Cradle to Cradle™ Gold environmental certification.

Examples of Oil Finishes



Light Finish

Medium Finish

Dark Finish

For external stains, refer to Cetol colours





Rack Arm Components

Rack Arm systems comprise of a series of support arms (rack arms) onto which slats are mounted. The rack arm design incorporates a tilt shaft to enable rotation 0° - 90°, from fully open to fully closed.

Aluminium extruded 75E, 88E, 145E and 155E slats are suitable for both interior and exterior use. Systems 88E and 155E also provide total light exclusion with the addition of brushes installed at both sides of the system.

Extruded Aluminium Components

Manufactured from 3 mm AA 6060 T6 aluminium with clear anodised finish including:

- 75E, 88E, 145E and 155E slats
- Operating strip, rack arm extrusion and link arm

Rack Arm Extrusion

The rack arm extrusion is a "T" profile and incorporates a groove to hold the pivots with two nut slots for fixings.

Operating Strip

The operating strip is attached to the rack arms ensuring alignment for the smooth operation of the system.

Polycarbonate components

These weather-resistant and long-wearing components are manufactured from UV stabilised nylon 6 (polycarbonate) and include:

- Pivots
- Rack arm
- Slat clip
- Bearing bracket & tilt arm- standard system

Standard clip colours: Light Grey and Black

Pivot Arms

The pivots are inserted into the notches of the rack arm extrusions and are not removable.

Bearing brackets, tilt shafts and link arms

The rotating arm is attached to the operating strip via the link arm. The operating strip converts into the rotational movement of the rack arms around the pivots allowing the tilt shaft to operate the system from open to fully closed.

Brushes

Brushes are an optional component that help achieve blackout when the system is closed. They slot into an angle bracket that is fixed onto the building structure or window mullion.

21mm (5/8") x 118mm (1/9")

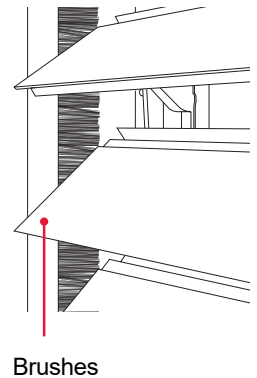
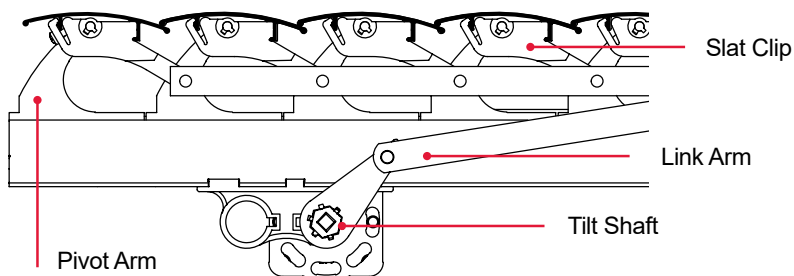
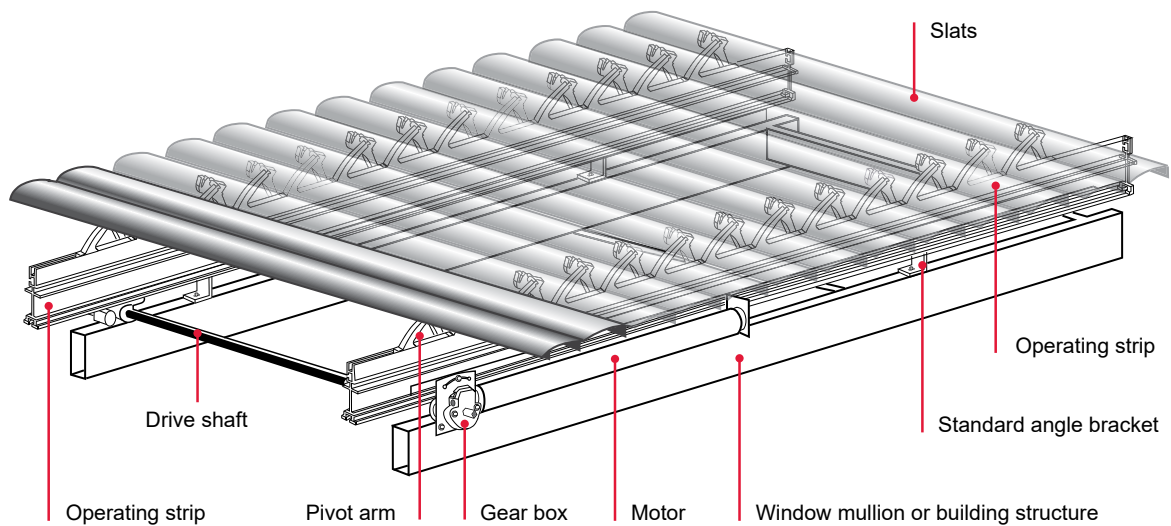
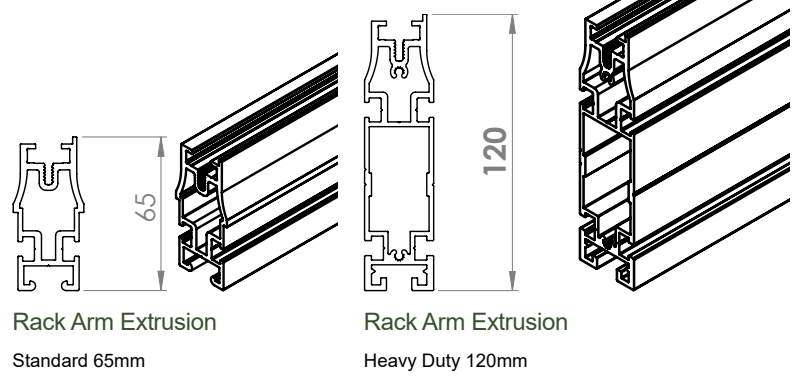
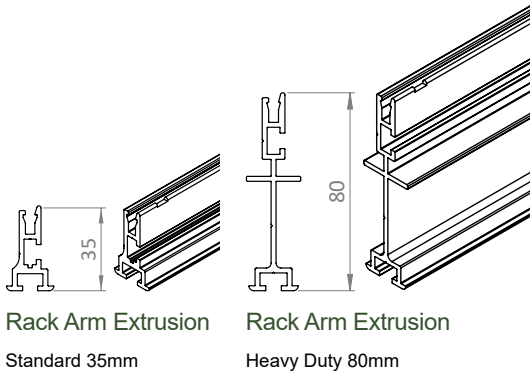
Side Support with Edge Pivots

These additional supports are incorporated into irregular-shaped rack arm installations to ensure the smooth operation of the systems.

Rack Arm Types

For 75/88E

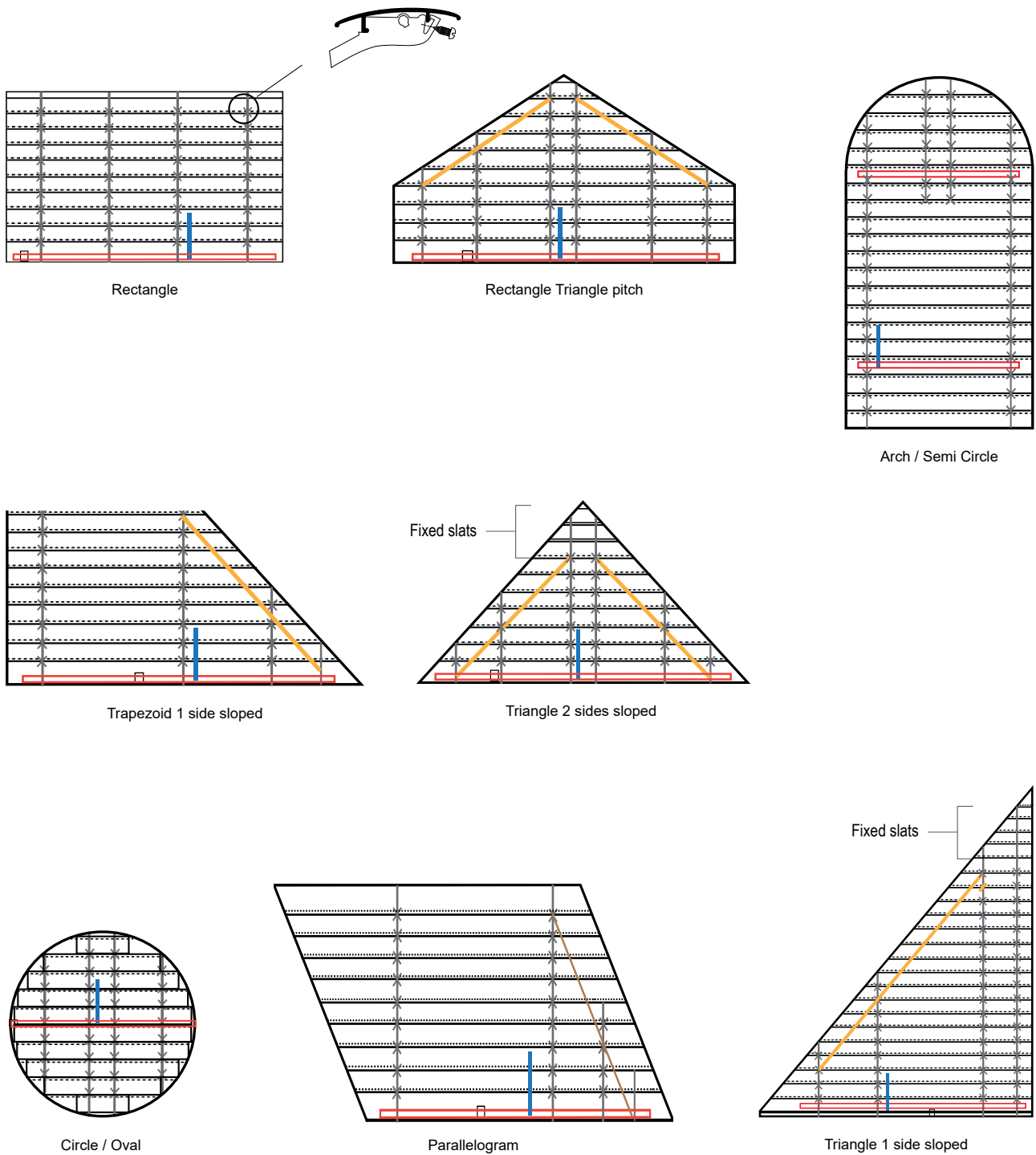
For 145/155E



Heavy Duty Components

Heavy-duty components are available for all rack arm systems and are recommended for installations with non-standard configurations and unsupported span widths. Heavy duty components include rack arm extrusions, bearing brackets, tilt shafts, and pivot arms.

System Configurations



Drive shaft



Side rack arm support with edge pivots



Motor

*motor must be positioned downwards towards the drive shaft



Aluminium Slat Profiles

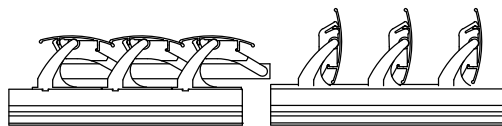
Aluminium slat systems come in a curved (75E, 145E) or flat finish which overlap or interlock providing the best solar control and light filtration. 88E and 155E flat finished slats interlock when closed ensuring maximum light blackout, security and privacy.

Aluminium slat systems come in various colours and customisable options with colour coordinating components. Timber slats are offered as a customisable option in various timber species slat shapes angles, treatments, stains and finishes.

Louvre Positions

A

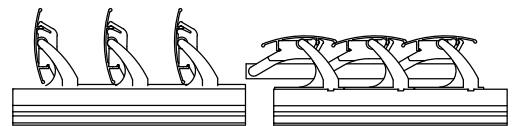
indoor



outdoor

B

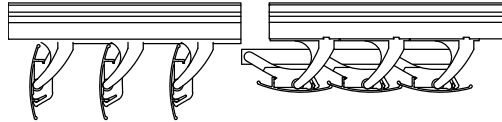
indoor



outdoor

C

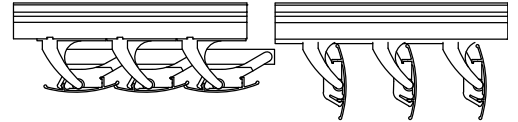
indoor



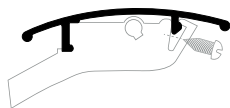
outdoor

D

indoor

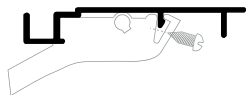


outdoor



RA 75E

75 mm extruded aluminium - external / internal



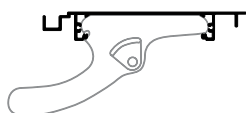
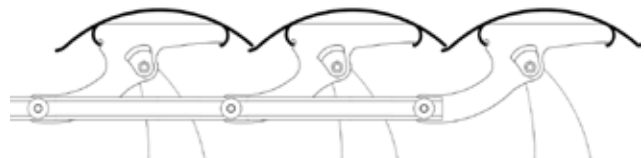
RA 88E

88 mm extruded aluminium - external / internal



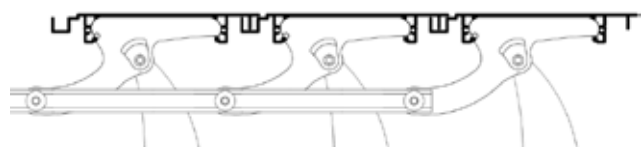
RA 145E

145 mm extruded aluminium - external / internal



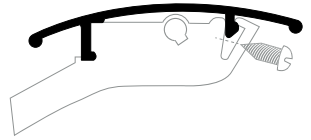
RA 155E

155 mm extruded aluminium - external / internal



RA 75E

Slat Profile



The 75E curved Louvres are highly versatile and lightweight. The possibilities in width, height, special shapes and operation are almost unlimited.

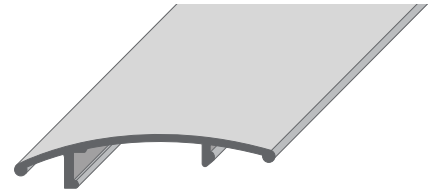
Material: high grade extruded aluminium

Width: 75 mm width

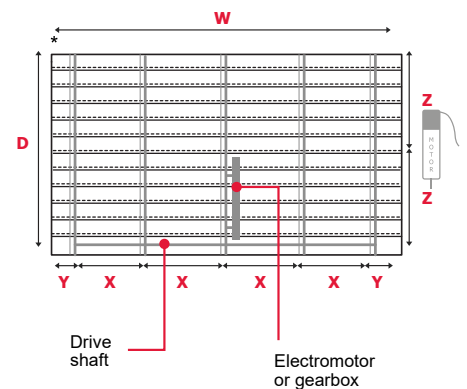
Thickness: 1.5 mm

Application: internal or external installation

Configuration: all types of shaped windows for horizontal, vertical, and sloping facades

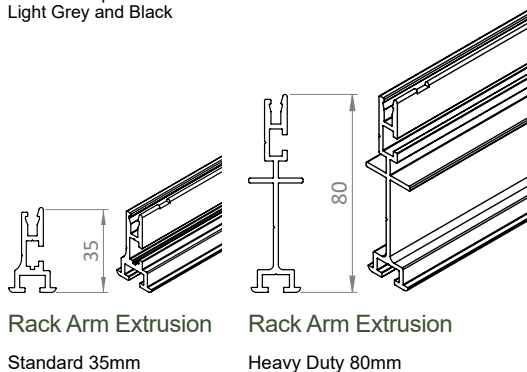


Technical Information		
	Internal	External
Maximum width (W)	Maximum 6000 mm	Maximum 6000 mm
Maximum drop (D)	Maximum 6000 mm	Maximum 6000 mm
Maximum area gearbox (rod & crank)	Maximum 16 m2	Maximum 12 m2
230 V tubular + gear 7:1	Maximum 20 m2	Maximum 18 m2
Minimum no. of rack arms	2200 mm = 2 pcs	1900 mm = 2 pcs
	2210 - 3600 mm = 3 pcs	1910 - 3200 mm = 3 pcs
	3610 - 5000 mm = 4 pcs	3210 - 4500 mm = 4 pcs
	5010 - 6000 mm = 5 pcs	4510 - 5800 mm = 5 pcs
		5810 - 6000 mm = 6 pcs
Rack arm distance (X)	1400 mm	1300 mm
Maximum slat side overhang (Y)	400 mm	300 mm
Support distance: (Z)		
ST. Rack Arm 35 mm	1800 mm	1500 mm
HD. Rack Arm 80 mm	3000 mm	2800 mm



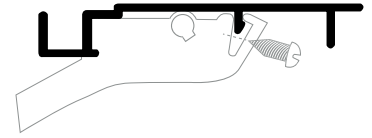
*Looking at the front of the system.
Viewed from the outside.

Standard clip colours:
Light Grey and Black



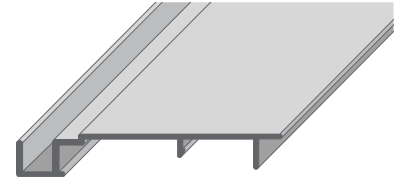
RA 88E

Slat Profile

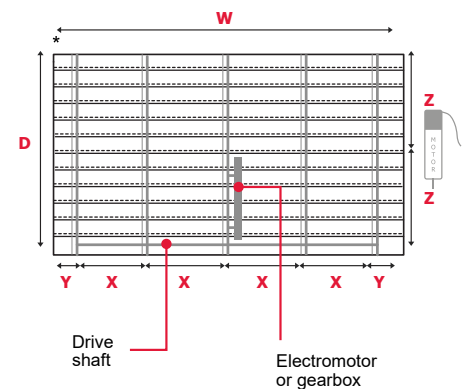


The interlocking design of the 88E louvre offers a light black-out system option with the addition of fascia baffles and brushes. The flat finish of the louvres in the closed position also provides a suitable design option when matching with other building finishes.

- Material:** high grade extruded aluminium
- Width:** 88 mm width
- Thickness:** 1.5 mm
- Application:** internal or external installation
- Configuration:** all types of shaped windows for horizontal, vertical, and sloping facades

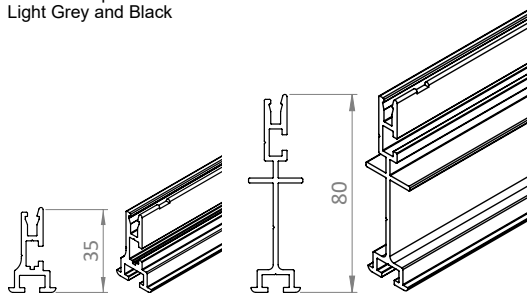


Technical Information		
	Internal	External
Maximum width (W)	Maximum 6000 mm	Maximum 6000 mm
Maximum drop (D)	Maximum 6000 mm	Maximum 6000 mm
Maximum area gearbox (rod & crank)	Maximum 16 m2	Maximum 12 m2
230 V tubular + gear 7:1	Maximum 20 m2	Maximum 18 m2
Minimum no. of rack arms	2200 mm = 2 pcs	1900 mm = 2 pcs
	2210 - 3600 mm = 3 pcs	1910 - 3200 mm = 3 pcs
	3610 - 5000 mm = 4 pcs	3210 - 4500 mm = 4 pcs
	5010 - 6000 mm = 5 pcs	4510 - 5800 mm = 5 pcs
		5810 - 6000 mm = 6 pcs
Rack arm distance (X)	1400 mm	1300 mm
Maximum slat side overhang (Y)	400 mm	300 mm
Support distance: (Z)		
ST. Rack Arm 35 mm	1800 mm	1500 mm
HD. Rack Arm 80 mm	3000 mm	2800 mm



*Looking at the front of the system.
Viewed from the outside.

Standard clip colours:
Light Grey and Black



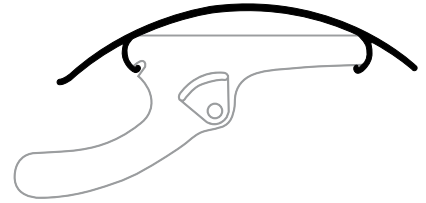
Rack Arm Extrusion
Standard 35mm

Rack Arm Extrusion
Heavy Duty 80mm



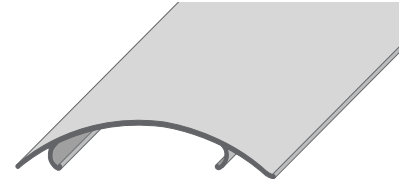
RA 145E

Slat Profile

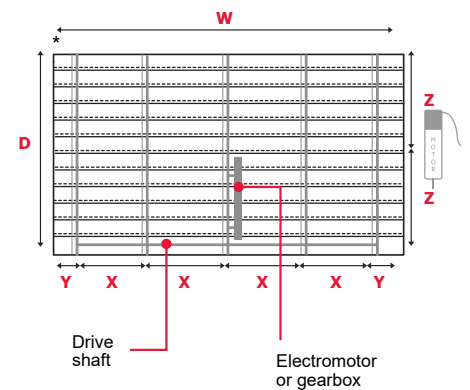


The 145E dome-shaped louvres are more suitable for external applications and are the preferred choice for pergolas and facades.

Material: high grade extruded aluminium
Width: 145 mm width
Thickness: 2 mm
Application: internal or external installation
Configuration: all types of shaped windows for horizontal, vertical, and sloping facades

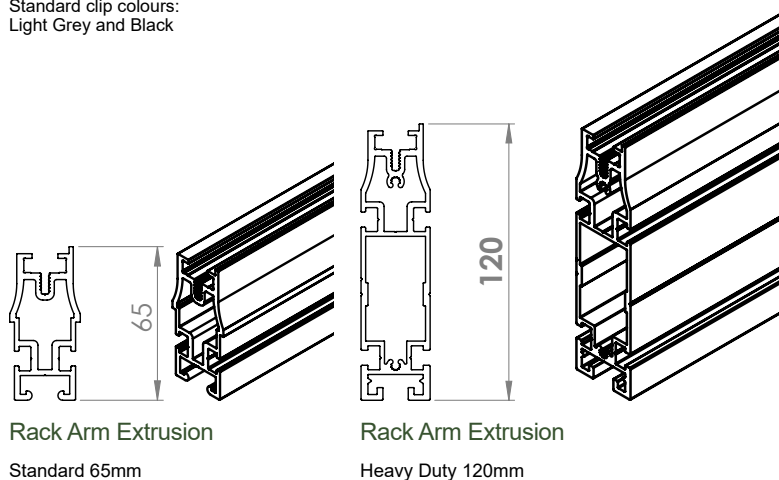


Technical Information	
	External
Maximum width (W)	Maximum 6000 mm
Maximum drop (D)	Maximum 6000 mm
Maximum area gearbox (rod & crank)	Maximum 18 m ²
Linear motor	Maximum 30 m ²
Minimum no. of rack arms	2000 mm = 2 pcs
	2010 - 3600 mm = 3 pcs
	3610 - 5400 mm = 4 pcs
	4510 - 6900 mm = 5 pcs
Rack arm distance 65 / 120 (X)	1800 mm / 1800 mm
Maximum slat side overhang 65 / 120 (Y)	400 mm / 400 mm
Support distance: (Z) Rack Arm 65 / 120	2250 mm / 4000 mm



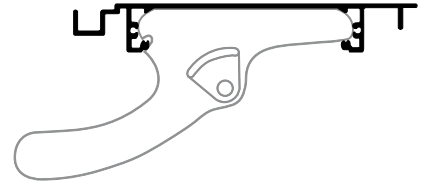
*Looking at the front of the system.
Viewed from the outside.

Standard clip colours:
Light Grey and Black



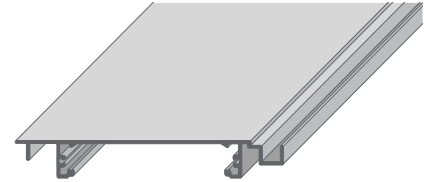
RA 155E

Slat Profile

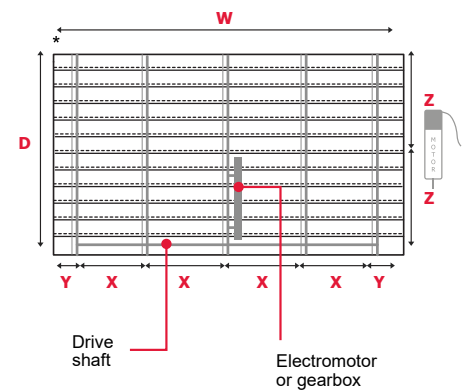


The 155E is the widest extruded aluminium slat in the Horiso range. The slat is designed to interlock in the closed position to block out light with the addition of fascia baffles and brushes

Material: high grade extruded aluminium
Width: 155 mm width
Thickness: 1.5 mm
Application: internal or external installation
Configuration: all types of shaped windows for horizontal, vertical, and sloping facades

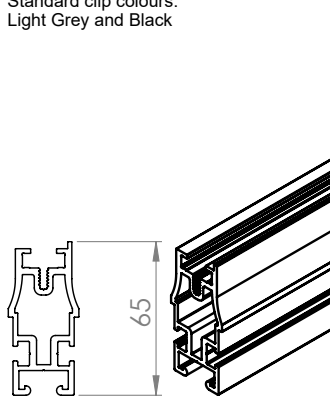


Technical Information		
	Internal	External
Maximum width (W)	Maximum 6000 mm	Maximum 6000 mm
Maximum drop (D)	Maximum 6000 mm	Maximum 6000 mm
Maximum area gearbox (rod & crank)	Maximum 16 m ²	Maximum 12 m ²
230 V tubular + gear 7:1	Maximum 18 m ²	Maximum 18 m ²
Minimum no. of rack arms	2200 mm = 2 pcs	1900 mm = 2 pcs
	2210 - 3600 mm = 3 pcs	1910 - 3200 mm = 3 pcs
	3610 - 5000 mm = 4 pcs	3210 - 4500 mm = 4 pcs
	5010 - 6000 mm = 5 pcs	4510 - 5800 mm = 5 pcs
		5810 - 6000 mm = 6 pcs
Rack arm distance (X)	1800 mm	1800 mm
Maximum slat side overhang (Y)	400 mm	400 mm
Support distance: (Z)		
ST. Rack Arm 35 mm	1500 mm	1500 mm
HD. Rack Arm 65 mm	2250 mm	2250 mm

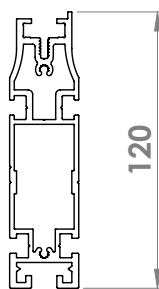


*Looking at the front of the system.
Viewed from the outside.

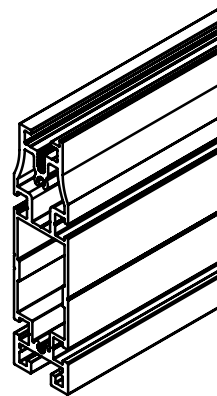
Standard clip colours:
Light Grey and Black



Rack Arm Extrusion
Standard 65mm



Rack Arm Extrusion
Heavy Duty 120mm



Motors

Motor Types

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

- RTS or hardwired
- Tubular or linear box motors
- Quiet motor option
- 120 or 230 volts (Aus) / 100 or 230 volts (US)
- Are compatible with home automation systems
- Are compatible with building management systems.

Optional Motor Features

- IP 44 - aluminium (Splash water protected).
- Aluminium-designed hood fitting for motors used on external applications.

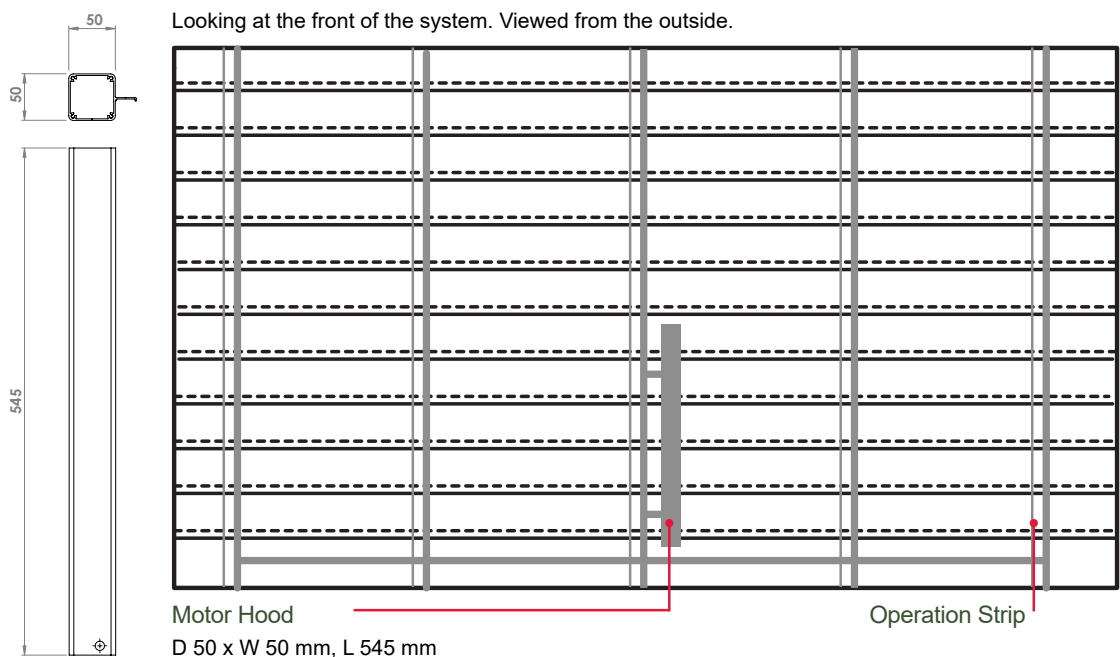
Motor Torque

- 10 Nm operates 15 sq. metre external rack arm.
- 13 Nm operates 20 sq. metre external rack arm.
- Higher torque range achievable with linear motor.

Motor Position

Horiso® Rack Arm Systems can be motor operated individually or in mechanically linked systems. The motors can only be positioned opposite the operation strip.

Depending on the shape of the glazed area and available space, there may be further motor position limitations*.



* Conditions apply. See your technical representative for details.

Control Options

The complete line of Horiso Rack Arm systems can be operated at various levels of sophistication. These include:



Manual crank handle operation

System using any slat size can be manually operated using a gearbox that is connected to the tilt shaft and turned by the detachable crank handle. Handle lengths can be specified to project requirements.



Small turning handle

System using any slat size can be manually operated using a gearbox that is connected to the turning handle.



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

Motorisation is the most efficient and effective way to control Rack Arm Systems. Systems can be opened and tilted at various degrees for light filtration or completely open at 90 degrees for maximum daylight by a press of a button. Various control options and levels of sophistication are available.



Automation control at varying degrees of customization



Automation control provides hands-free operation at various levels of sophistication set to a user's requirements.



The automation function operates at various customisable levels:

- Timer setting - opens at various angles at set times
- Sun tracking - louvres open at various angles throughout the day based on the sun's position
- 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

System Installation

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

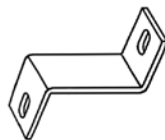
Horiso provides technical assistance and specialist engineering support to specifiers, engineers, builders and construction experts.

Application flexibility provides various installation methods, including:

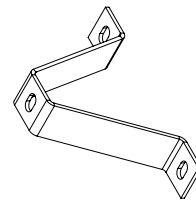
- External installation directly onto window mullions using standard Z brackets.
- External installation directly onto the building structure using standard Z or custom-made brackets.
- Internal installation within window framework using standard angle brackets or custom-made brackets.



Standard angle bracket
50 x 30 x 3 mm
lg=20mm



Standard Z bracket
30 x 55 x 30 x 3 mm
lg =20mm



Omega H-55 bracket
29 x 54x 31 x 54 x 29 x 3 mm
lg=20mm

Also available in 130mm on request

* Please consult your technical representative for details. Custom bracket fixings can be manufactured to suit a particular architectural design or construction material.





RA 75E system - private residence, Sydney

Guthrie Douglas - Tensioned Shading Systems

Motorised Systems
Installation on Shaped glazing
Smooth and Silent Operation
Various Draw Directions
Group Control of Blinds



Tensioned Shading Systems

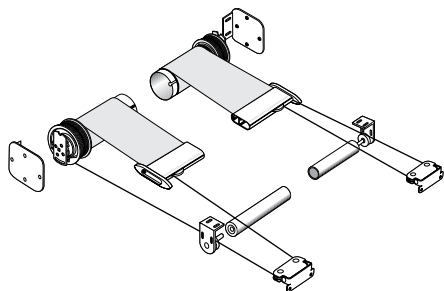
Horiso is a distributor of TESS™, technical shading systems by Guthrie Douglas, the global leader in motorised retractable shading systems for extraordinary spaces. Shading Tension Systems use a unique spring mechanism that constantly holds fabric flat, deploy in any direction and intelligently adapts to the surrounding environment.

Horiso collaborates with architects and design teams as early in the process as possible, to specify an interior or exterior shading system specific to your project, that will disappear into its surroundings when not in use, harnessing the power of light and shade as positive architectural features.

TESS 100

- Single barrel tension system
- Any angle, any direction
- Curves and angles
- Discreet design
- Reliable and robust

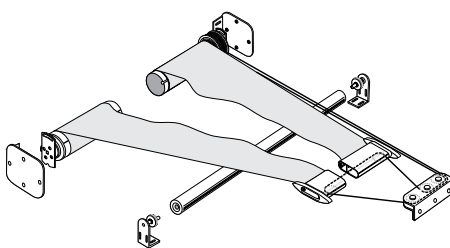
Fabric area	≤16 m²
Typical use	Internal, sloping, curved
Shape	Rectangular
Running direction	Any
Guides	None
Width	870 mm - 4000 mm
Draw	≤6500 mm
Brackets	Aluminium, stainless steel
Relieving rollers	Aluminium
Finish	RAL Powder coat
Installation options	Top, back



TESS 101

- Single barrel tension system
- Any angle, any direction
- Curves and angles
- 90 degree triangles and corners
- Reliable and robust

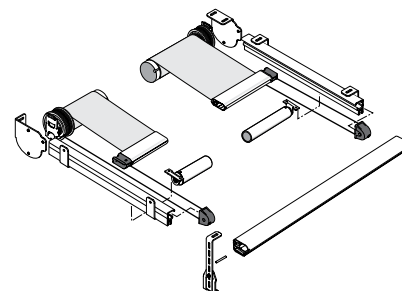
Fabric area	≤9 m²
Typical use	Flat, curved or sloped glazing
Shape	Right-angled triangle
Running direction	Any
Guides	None
Width	870 mm - 4000 mm
Draw	≤5000 mm
Brackets	Aluminium, stainless steel
Relieving rollers	Aluminium
Finish	RAL Powder coat
Installation options	Top, back



TESS 120

- Single barrel tension system
- Any angle, any direction
- Minimal load on building
- Guide rails for maximum stability
- Reliable and robust

Fabric area	≤16 m²
Typical use	Light structures, retrofit
Shape	Rectangular
Running direction	Any
Guides	Aluminium profile
Width	870 mm - 4000 mm
Draw	≤6500 mm
Brackets	Aluminium
Relieving rollers	Aluminium
Finish	RAL Powder coat
Installation options	Top, back, side

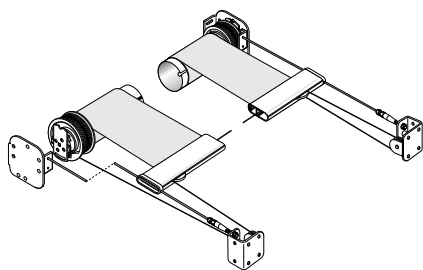


Tensioned Shading Systems

TESS 140

- Single barrel tension system
- Any angle, any direction
- Clean-cut design
- Discreet wire guides
- Reliable and robust

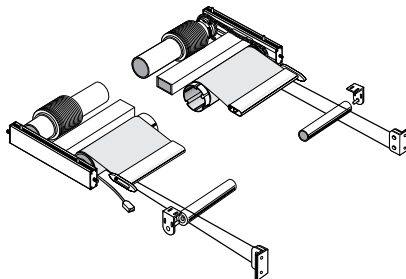
Fabric area	≤18m ²
Typical use	Atria, skylights, facades
Shape	Rectangular
Running direction	Any
Guides	5 mm steel wire
Width	870 mm - 4000 mm
Draw	≤6500 mm
Brackets	Aluminium
Finish	RAL Powder coat
Installation options	Top, back, side



TESS 200

- Twin-barrel tension mechanism
- Any angle, any direction
- Huge surfaces covered
- Curves and special shapes
- Reliable and robust

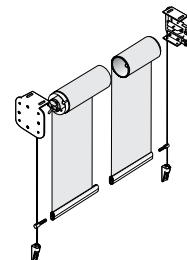
Fabric area	≤60 m ²
Typical use	Facades, atria
Shape	Rectangular, trapezoidal
Running direction	Any
Guides	None
Width	1300 mm - 4000 mm
Draw	≤18 000 mm
Brackets	Aluminium
Relieving rollers	Aluminium
Finish	RAL Powder coat
Installation options	Top, back, side



TESS 308 / 312

- Single barrel system
- Vertical drop
- Motorised drive
- For very tall and wide glazing
- Reliable and robust

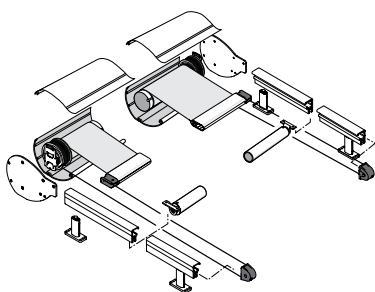
Fabric area	≤25 m ² (308) / ≤72 m ² (312)
Typical use	Facades, atria
Shape	Rectangular
Running direction	Vertical drop down
Guides	2.8 mm steel wire
Width	718 mm - 4200 mm (308) / 970 mm - 6000 mm (312)
Draw	≤6 000 mm (308) / ≤12 000 mm (312)
Brackets	Aluminium
Finish	RAL Powder coat
Installation options	Top, back, side



TESS 420

- CE marked wind class 3
- Single barrel tension system
- Any angle, any direction
- Minimal load on building
- Guide rails for maximum stability

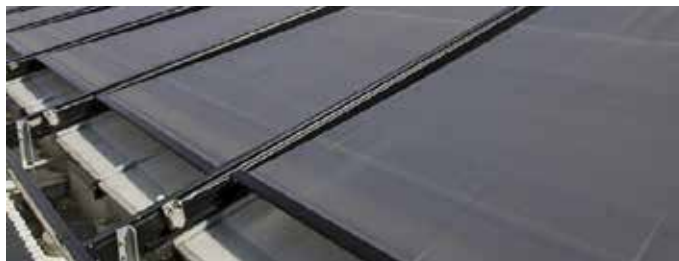
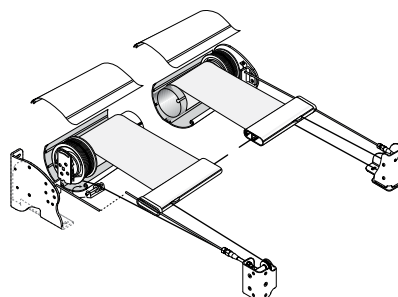
Fabric area	≤16 m ²
Typical use	Light structures, retrofit
Shape	Rectangular
Running direction	Any
Guides	Aluminium profile
Width	870 mm - 4000 mm
Draw	≤6500 mm
Brackets	Aluminium
Relieving rollers	Aluminium
Finish	RAL Powder coat
Installation options	Bottom



TESS 440

- CE marked wind class 3
- Single barrel tension system
- Any angle, any direction
- Discreet wire guides
- Reliable and robust

Fabric area	≤16 m ²
Typical use	Atria, Skylights, Facades
Shape	Rectangular
Running direction	Any
Guides	5mm stainless steel wire
Width	870 mm - 4000 mm
Draw	≤6500 mm
Brackets	Aluminium, stainless steel
Finish	RAL Powder coat
Installation options	Bottom, back

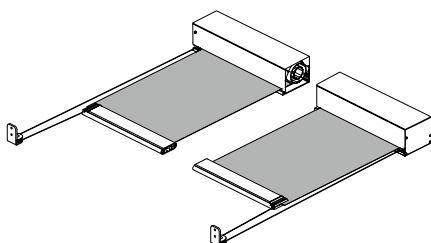


Tensioned Shading Systems

TESS 600

- Compact single barrel system
- Ultra-quiet motor
- Discrete design

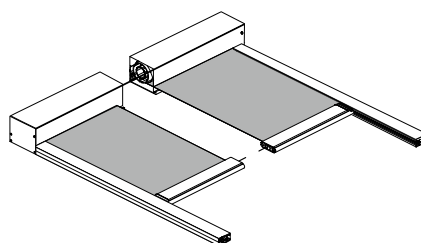
Fabric area	≤9 m² / ≤13 m²
Typical use	Flat or sloped glazing
Shape	Rectangular
Running direction	Any
Guides	None
Width	650 mm - 3000 mm
Draw	≤3000 mm / ≤4500 mm
Brackets	Aluminium
Finish	RAL Powder coat
Installation options	Top, back



TESS 660

- CE marked wind class 3
- Any angle, any direction
- Blackout capability
- Side-lock fabric retention
- Ultra-quiet motor
































































Fabric area	≤9 m² / ≤13 m²
Typical use	Skylights, blackout
Shape	Rectangular
Running direction	Any
Guides	Aluminium profile
Width	650 mm - 3000 mm
Draw	≤3000 mm / ≤4500 mm
Brackets	Aluminium
Finish	RAL Powder coat
Installation options	Face, reveal



Product Overview

TESS™ systems are distributed and installed through Horiso, giving you the freedom to choose from a wide range of fabrics and control systems.

Our in-house technical team can design special components for projects requiring bespoke solutions.

SERIES	SIZE	PRODUCT	INTERNAL	EXTERNAL	TYPE SHAPE	GUIDES	APPLICATION
TESS 600 Series Compact design for smaller windows and blackout	 $<13\text{m}^2$	TESS 640				ROD	
		TESS 660				SIDELOCK	
		TESS 600				—	
		TESS 601				—	
		TESS 602				—	
TESS 100 Series Versatile internal range without headbox for flat, curved or triangular glazing	 $<18\text{m}^2$	TESS 140				WIRE	
		TESS 120				RAIL	
		TESS 100				—	
		TESS 101				—	
		TESS 102				—	
TESS 400 Series Versatile external range with headbox for flat, curved or triangular glazing	 $<16\text{m}^2$	TESS 440				WIRE	
		TESS 420				RAIL	
		TESS 400				—	
		TESS 401				—	
		TESS 402				—	
TESS 200 Series Strong twin-barrel system for large applications	 $<60\text{m}^2$	TESS 200				—	
TESS 300 Series Robust drop down blinds for large applications	 $<72\text{m}^2$	TESS 308/312				WIRE	
TESS 500 Series Large horizontal pergola system	 $<100\text{m}^2$	TESS 512				WIRE	

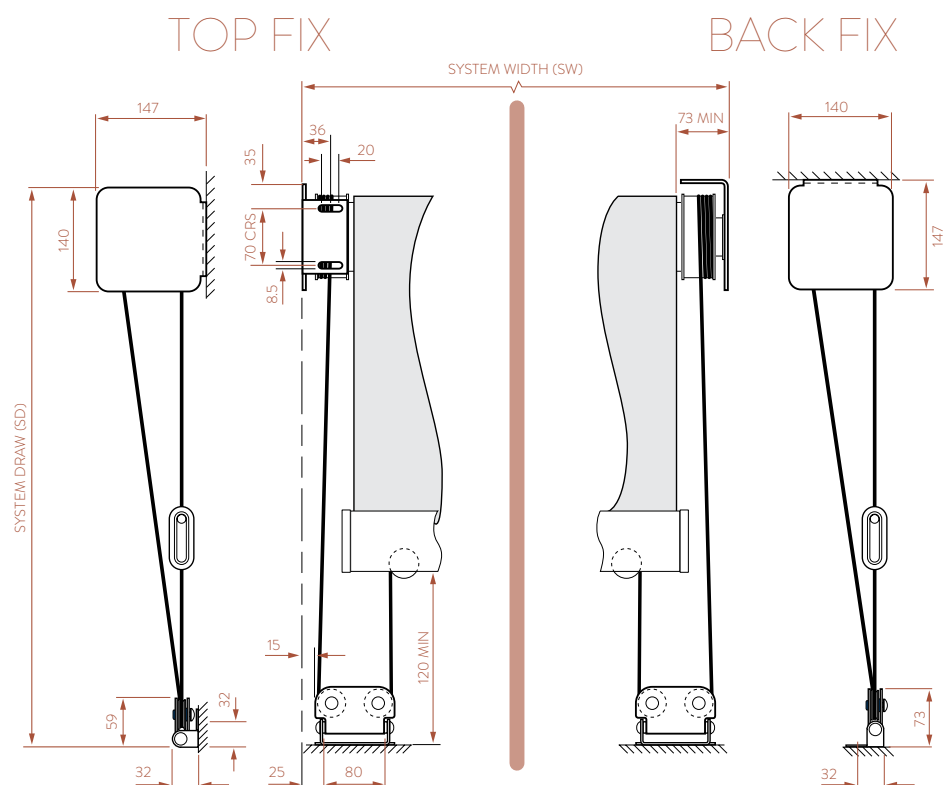
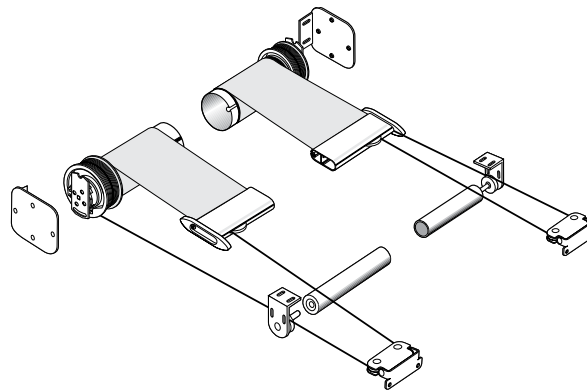
TESS™ 100

Versatility

Freedom to move around curves. Any angle, any direction, anywhere.

Curved glazing presents tough challenges for most blinds. The TESS 100 overcomes these challenges without compromising on style. Relieving rollers allow the blind to follow the direction of the curve whilst ultra-thin cables maintain fabric tension. Unlimited colour finishes and a wide range of fabrics make it suitable for any project. Our single barrel mechanism keeps the fabric constantly under tension and produces a smooth, quiet travel.

- Single barrel tension system
- Any angle, any direction
- Curves and angles
- Discrete design
- Reliable and robust



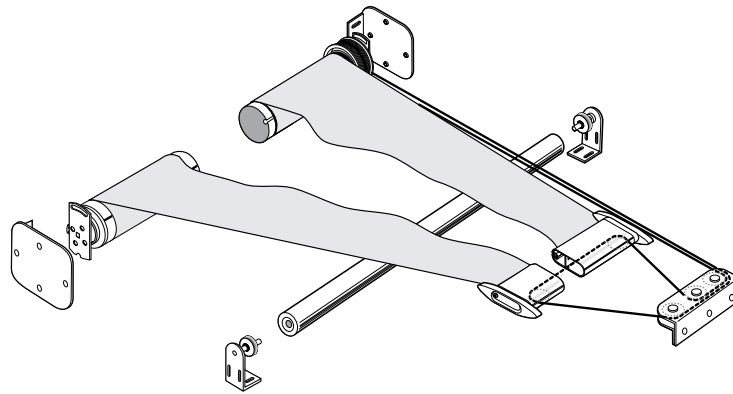
TESS™ 101

Versatility

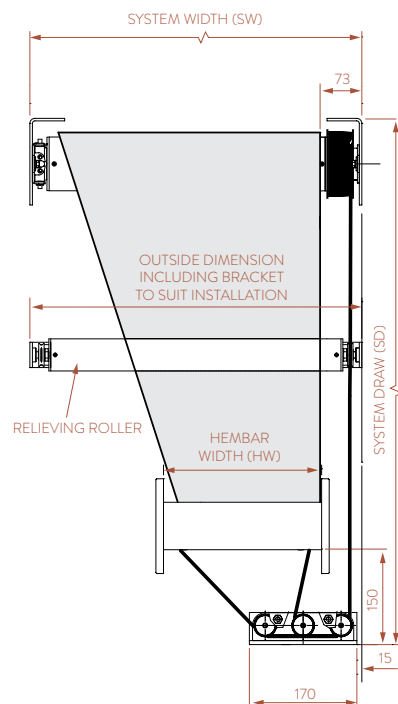
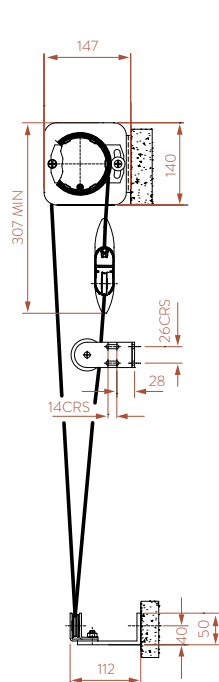
The tried and tested solution for triangular glazing, flat or curved.

Modern glazing design is anything but square. The TESS 101 covers corners and right-angled triangles and can even follow curves with the use of relieving rollers. Unlimited colour finishes and a wide range of fabrics make it suitable for any project. Our single barrel mechanism keeps the fabric constantly under tension and produces a smooth, quiet travel.

- Single barrel tension system
- Any angle, any direction
- 90° triangles and corners
- Angles and curves
- Reliable and robust

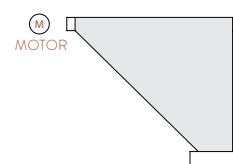


TOP FIX

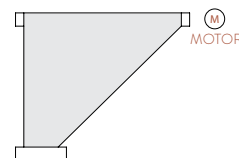


MOTOR POSITION

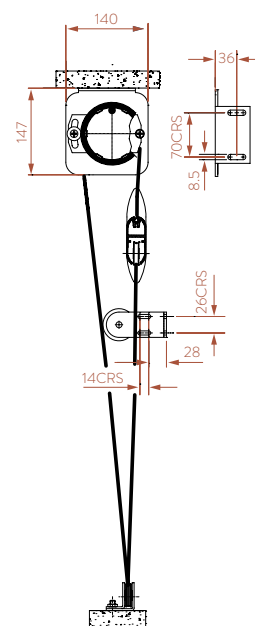
LEFT HAND



RIGHT HAND



BACK FIX



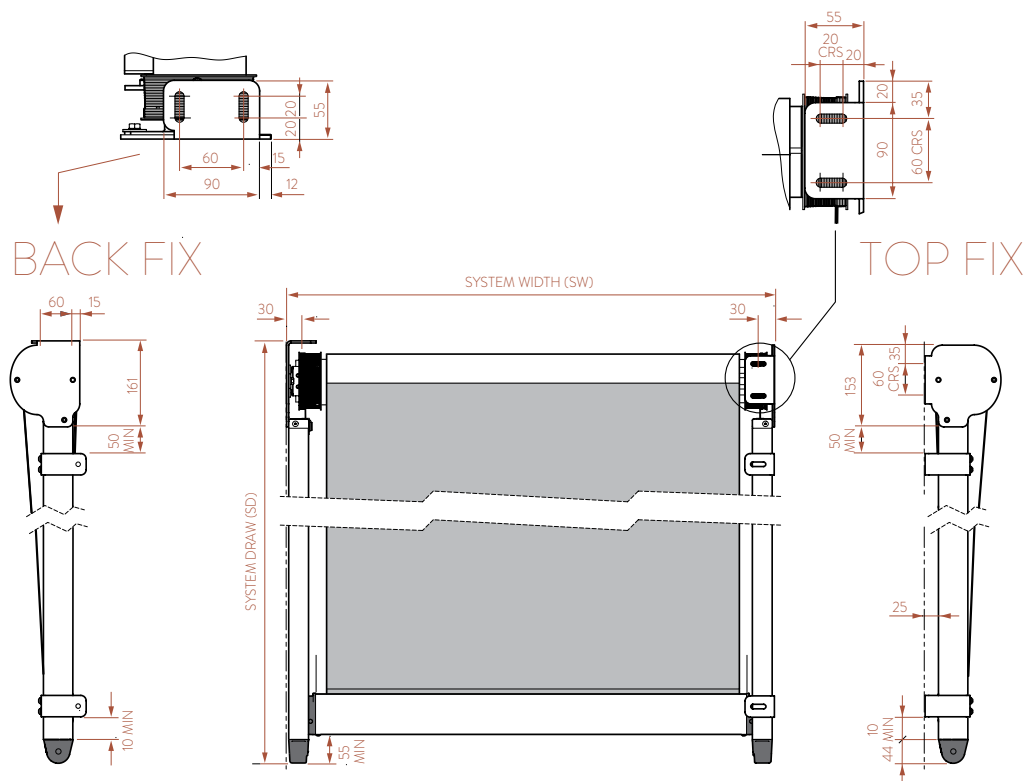
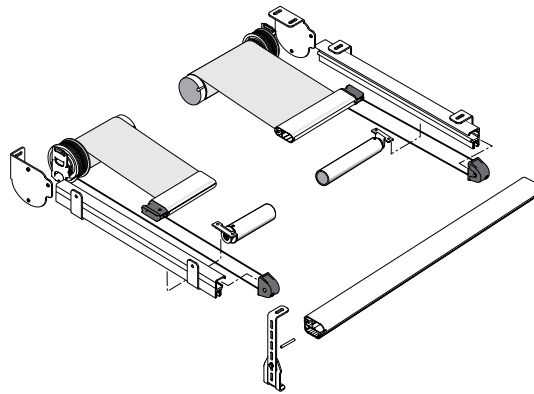
TESS™ 120

Versatility

Designed to minimise the load imposed on your structure. Any angle, any direction, anywhere.

Where tensioned fabric is required for lighter structures, the TESS 120 is the answer. The aluminium frame retains the tension force of the blind, and the weight of the system is distributed via multiple fixing points. Unlimited colour finishes and a wide range of fabrics make it suitable for any project. Our single barrel mechanism keeps the fabric constantly under tension and produces a smooth, quiet travel.

- Single barrel tension system
- Any angle, any direction
- Minimal load on building
- Guide rails for maximum stability
- Reliable and robust



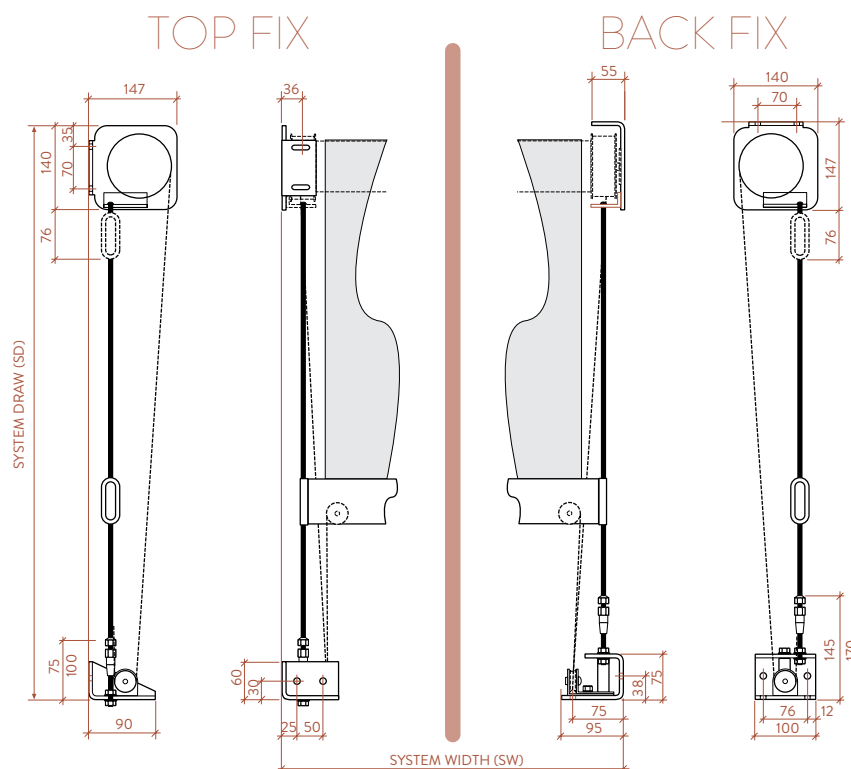
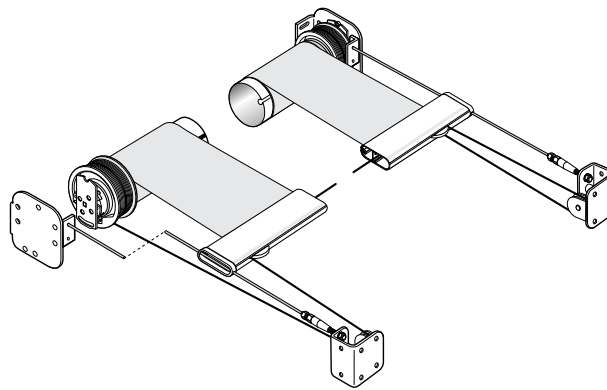
TESS™ 140

Versatility

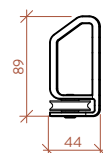
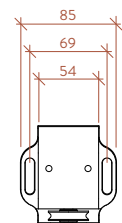
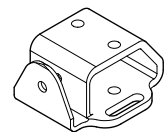
Clean-cut styling to blend in with your building design. Any angle, any direction, anywhere.

Sometimes great design is about what you can't see. The TESS 140 is designed to deliver reliability, discretely. Slim wire guides and flexible brackets make it easy to design into the glazing surround for near invisibility when retracted. Unlimited colour finishes and a wide range of fabrics make it suitable for any project. Our single barrel mechanism keeps the fabric constantly under tension and produces a smooth, quiet travel.

- Single barrel tension system
- Any angle, any direction
- Clean-cut design
- Discrete wire guides
- Reliable and robust



LOW PROFILE PULLEY OPTION



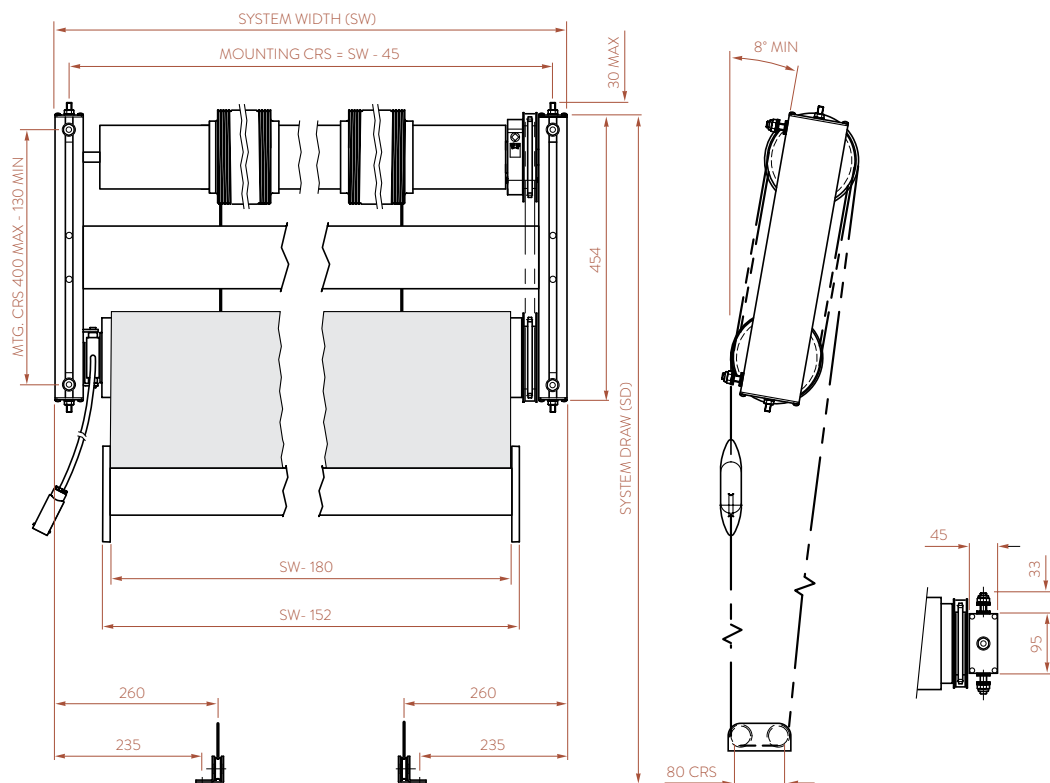
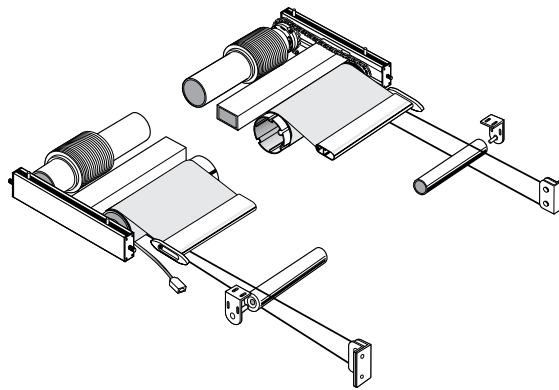
TESS™ 200

18m draw

The strength you need to cover huge spaces. Any angle, any direction, anywhere.

Strong and effective, the TESS 200 is the only blind in existence that can cover up to 60m² with a single mechanism and a single piece of fabric. Two barrels work together to deploy fabric and stabilise the blind using ultra-thin cables. A powerful motor and spring keep the fabric constantly under tension and produce a smooth travel.

- Twin-barrel tension mechanism
- Any angle, any direction
- Huge surfaces covered
- Curves and special shapes
- Reliable and robust



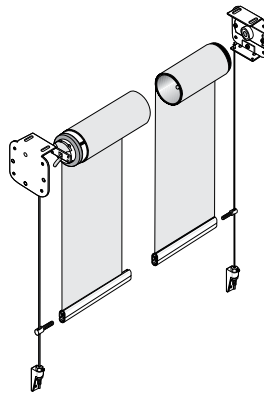
TESS™ 308/312

70m² + roller blind

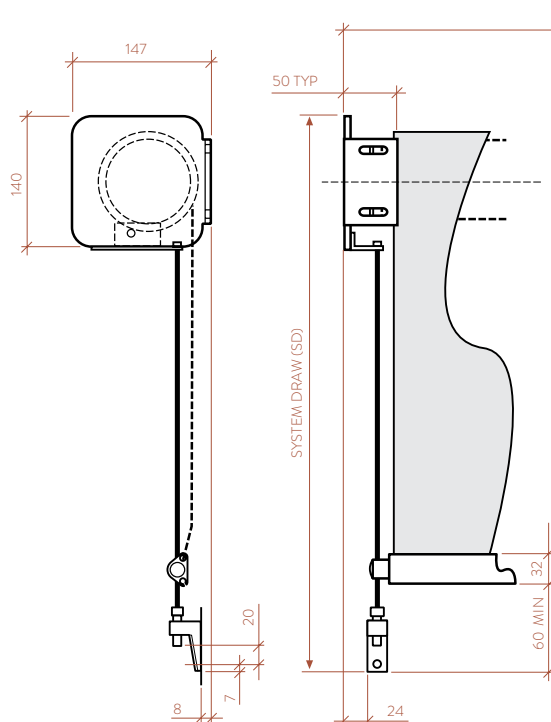
A vertical drop blind for large spaces, engineered for strength and stability.

Where standard gravity drop blinds are too small or too flimsy, the TESS 308 provides a reliable solution. The fabric is kept under light tension by a compact weighted hembar and stabilised with slim wire guides. Unlimited colour finishes and a wide range of fabrics make it suitable for any project.

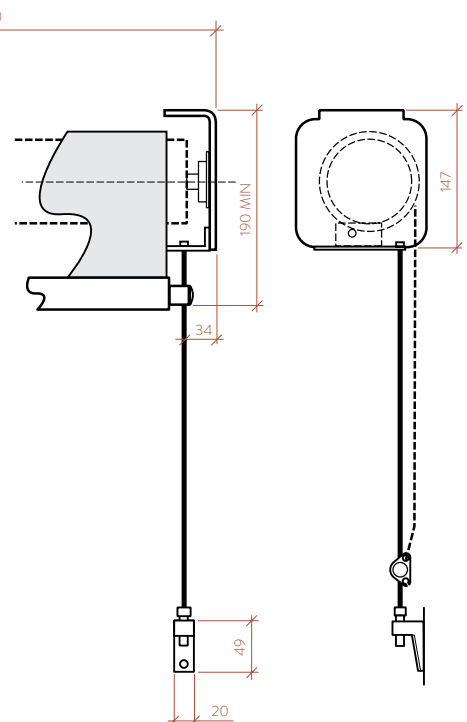
- Single barrel system
- Vertical drop
- Motorized drive
- For very tall and wide glazing
- Reliable and robust



BACK FIX



TOP FIX



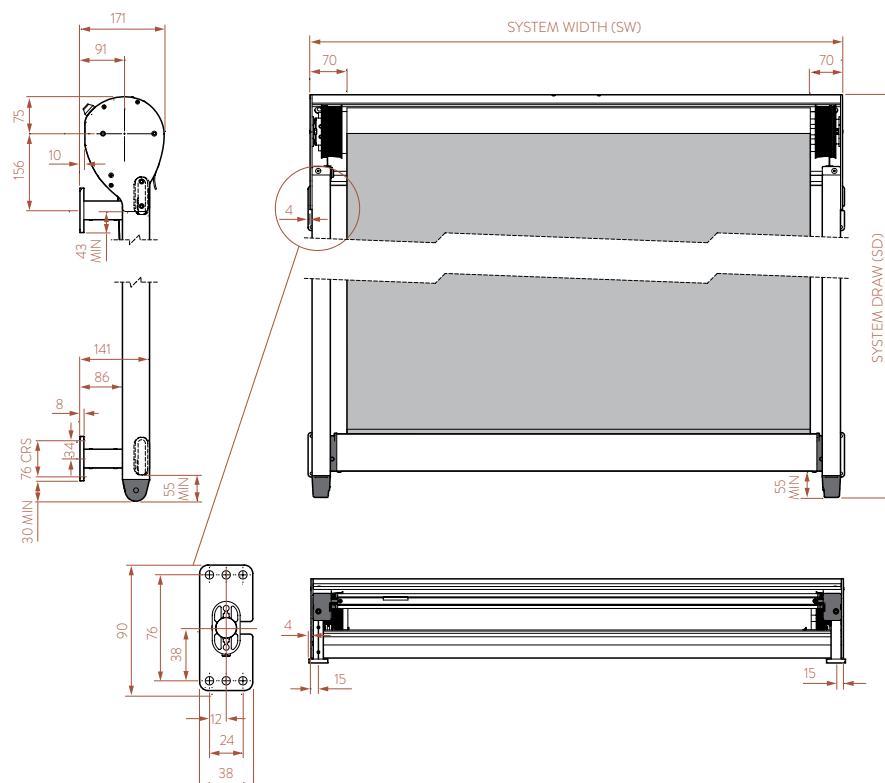
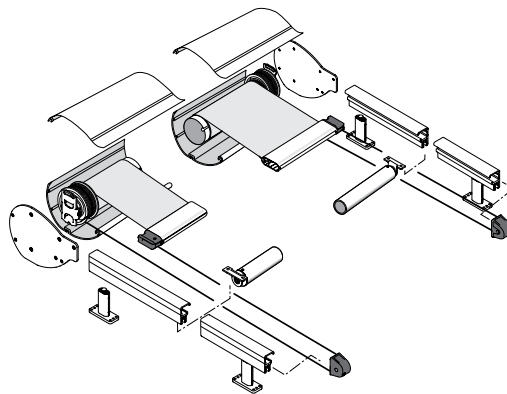
TESS™ 420

Durable outside

Designed to minimise the load imposed on your structure. Any angle, any direction, anywhere.

External systems need strength and weather resistance, but some light glass structures require minimal load. The TESS 420 retains the tension force of the blind within its aluminium frame, distributing system weight evenly through multiple fixing points. Unlimited colour finishes and a wide range of fabrics make it suitable for any project.

- CE marked wind class 3
- Single barrel tension system
- Any angle, any direction
- Minimal load on building
- Guide rails for maximum stability



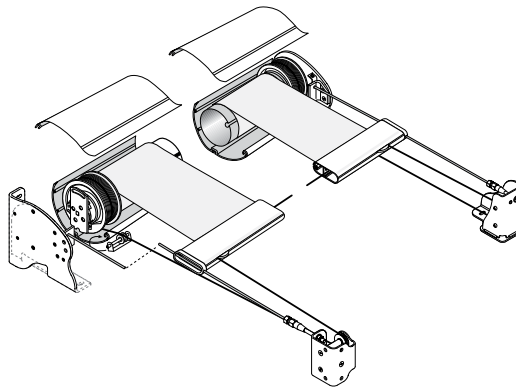
TESS™ 440

Durable outside

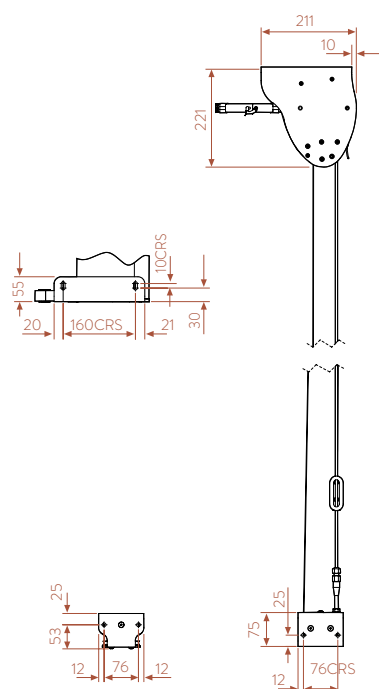
Clean-cut styling to blend in with your facade. Any angle, any direction, anywhere.

Sometimes great design is about what you can't see. The TESS 440 is designed to deliver reliability, discretely. Slim wire guides and a weather-resistant headbox make it easy to design into the facade for near invisibility when retracted. Unlimited colour finishes and a wide range of fabrics make it suitable for any project. Our single barrel mechanism keeps the fabric constantly under tension and produces a smooth, quiet travel.

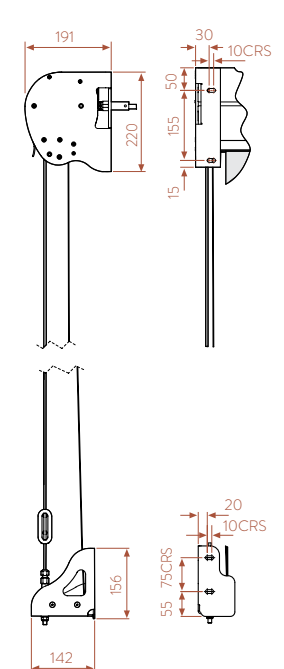
- CE marked wind class 3
- Single barrel tension system
- Any angle, any direction
- Discrete wire guides
- Reliable and robust



BACK FIX



BOTTOM FIX



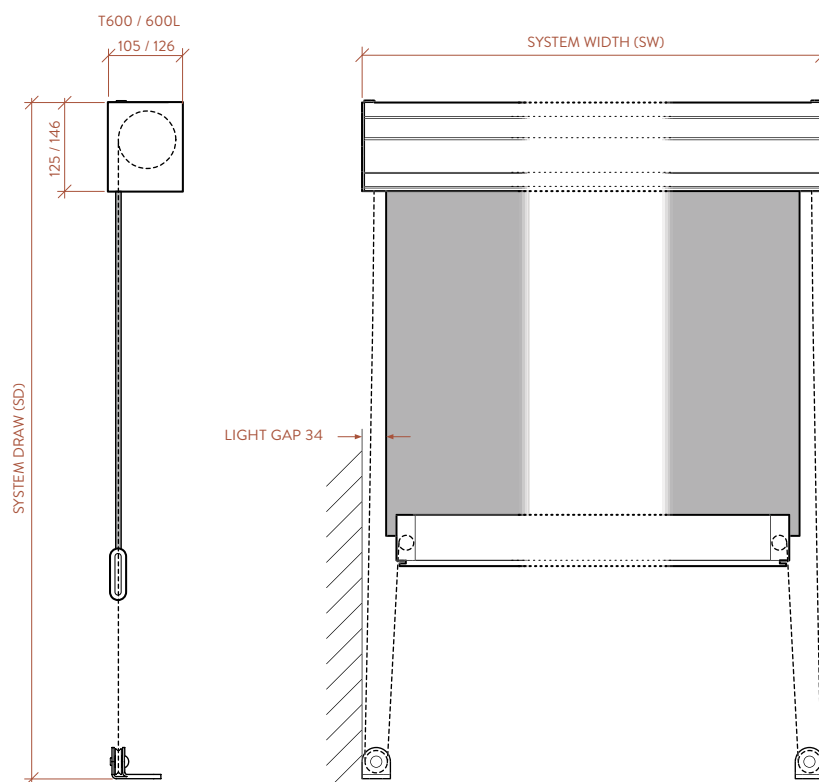
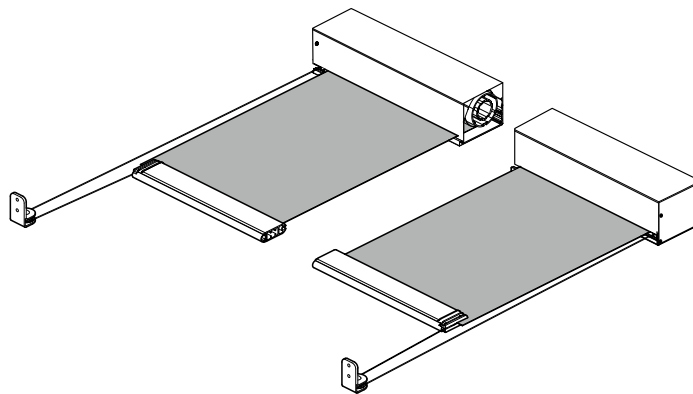
TESS™ 600

Tension + Zip

Stylish solution for smaller spaces. Flat or sloped.

The compact headbox makes it easy to design into the glazing surround for near invisibility when retracted. Unlimited colour finishes and a wide range of fabrics make it suitable for any project. Our single barrel mechanism keeps the fabric constantly under tension and produces a smooth, quiet travel.

- Compact single barrel system
- Ultra-quiet motor
- Discrete design



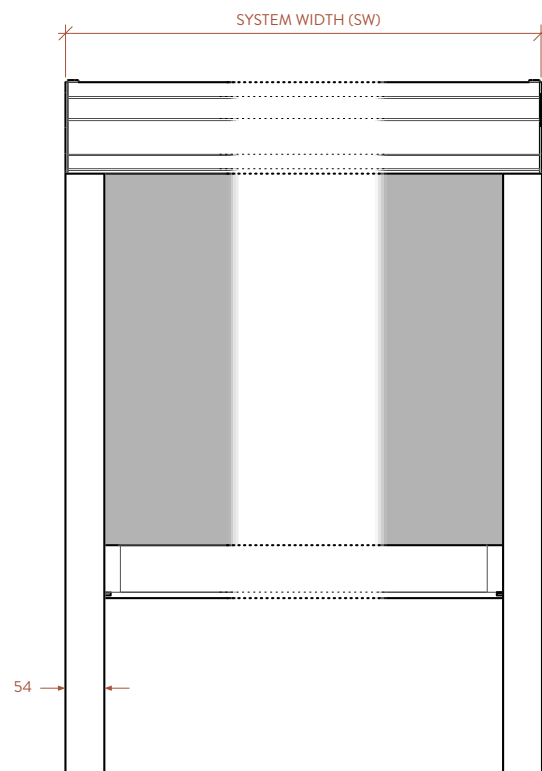
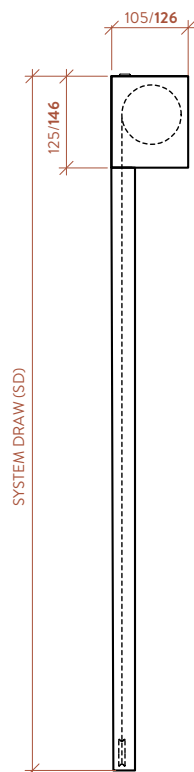
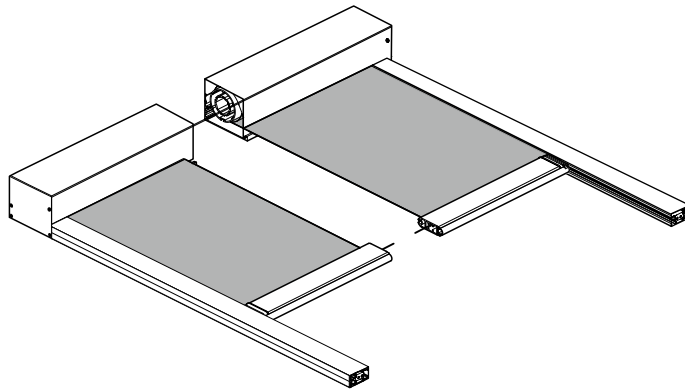
TESS™ 660

Tension + Zip

Designed to eliminate light gaps. Any angle, any direction, anywhere.

The only tensioned zip screen that will not let you down. The TESS 660 is engineered to deliver total reliability, discretely. Our SideLock mechanism stops the fabric from blowing out of its guides. Our single barrel drive mechanism keeps the fabric constantly under tension and produces a smooth, ultra-quiet travel with no risk of hem bar jamming. Blackout capability for the right environment at any time of day. Suitable for internal or external use, with unlimited colour finishes and a wide range of fabrics making it suitable for any project.

- CE marked wind class 3
- Any angle, any direction
- Blackout capability
- SideLock fabric retention
- Ultra-quiet motor



TESS™ Bespoke

1. Purpose/Function Analysis

- Glare
- Heat
- Energy
- Sustainability
- Wellbeing
- Privacy
- Aesthetic
- Acoustic
- External shade
- Credentials
- Other

2. Constraints Analysis

- Budget
- Space
- Delivery
- Timing & design stage
- Client Priorities
- Confidentiality

3. Hardware Selection

- Roller blinds
- Venetian blinds
- Other blinds
- Specialist systems
- Fixed shading systems

4. Fabric Analysis And Selection

- Openness
- Blackout
- Dim out
- Colour
- Material
- Performance
- View through
- Bespoke design
- Sourcing

5. Controls Analysis & Selection

- Modelling
- Sun tracking
- Shadow Modelling
- Heat gain management (Wm2)
- Weather protection
- Timed function
- Zoning
- Cable design & layout
- Controller positioning
- Power distribution
- Containment
- Integration with BMS
- Data control
- Network & language
- Open source vs Proprietary
- User interface

6. Design

- Building physics modelling
- Concept design
- Layout
- Mechanical engineering
- Electrical engineering
- Design for manufacture
- Design for installation and maintenance

7. Manufacture

- Sourcing/Material requirements
- Assembly & quality process
- Inspection
- Storage
- Delivery

8. Integration

- Glazing
- Facade system
- BMS
- HVAC
- Lighting
- Fit Out
- AV
- Alarms
- Other trades

9. Mock Up And Testing

- Building physics modelling
- Concept design
- Layout
- Mechanical engineering
- Electrical engineering
- Design for manufacture
- Design for installation and maintenance

10. Installation, Commissioning And Maintenance

- Installation timing
- Precision/ skills required
- Training
- Quality assurance
- Commissioning
- PPM schedule/maintenance strategy
- O&M/FM handover
- POA
- Repairs/ client response



horiso®



Contact Information

Horiso

22 - 24 Vincent Street

Marrickville NSW 2204 Australia

Phone

+61 2 8755 4500

Fax

+61 2 8755 4555

Email Us

info@horiso.com.au

project@horiso.com.au

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info@horiso.com.au
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