

Greenrich

by



GRORICH HORIVERT pvt. ltd.



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Company Overview

Journey Begins for success : Year 1991

A company established in Bangalore to harmonize and complement your office and living space with Functional, Elegant and Innovative shading and soft shelter products all the while saving precious energy

- Ⓢ **Products – Indoor & Outdoor Shading & Fabric Shelters**
- Ⓢ **Brands – Sunraina & Horivert**
- Ⓢ **Location – Bangalore (North-West)**
- Ⓢ **Area of Operation – All major cities in India through channel partners in Chennai, Delhi, Hyderabad, Kochi, Kolkata and Mumbai.**
- Ⓢ **No. Of Employees – *Direct : 50 & *Indirect through sub-contract and outsourcing : 200 (+)**
- Ⓢ **Annual Turnover – 80 – 100 million INR**
- Ⓢ **We have the expertise in planning, manufacturing and production of functional and inexpensive Shading and Shelter products matching to client requirements.**

Our Energy Efficient Products

Grorich has a product portfolio, catering to your Outdoor and Indoor requirements.



SUNRAINA - Outdoor protection from Sun, Rain & Heat. Proficiency in Shelters and Protection

Awnings

- a) Fixed
- b) Retractable
- c) Casette

Canopies & Umbrellas

- a) Café Umbrellas
- b) Car Park

Tensile Membrane Structures

Awnings, Canopies & Umbrellas

- The benefits of awnings and canopies go far beyond aesthetic appeal. They offer energy saving benefits as well as protect outdoor furniture, floors and carpets from fading caused by harsh Sun Rays. Solar radiation through glass is responsible for approximately 20 per cent of the load on air-conditioners.



**Modular Tensile Umbrella
Astra Zeneca
Bangalore**

**Casette Awning
Open View**



**Casette Awning
Closed View**

- * Studies by the American Society of Heating & Airconditioning Engineers show that a fabric awning reduces heat gain from 55 to 77 per cent depending upon the direction of the window and time of the day.
- * Awnings prevent the solar radiation from penetrating through the glass and substantially increase energy saved when compared to film and tinted glass alternatives.
- * Patio, deck or terrace would be shaded from hot sun rays as well as provide out door protection during a rainy day for your entire family.



Modular Tensile Structure Mantri Splendor Bangalore

Tensile Membrane Structure

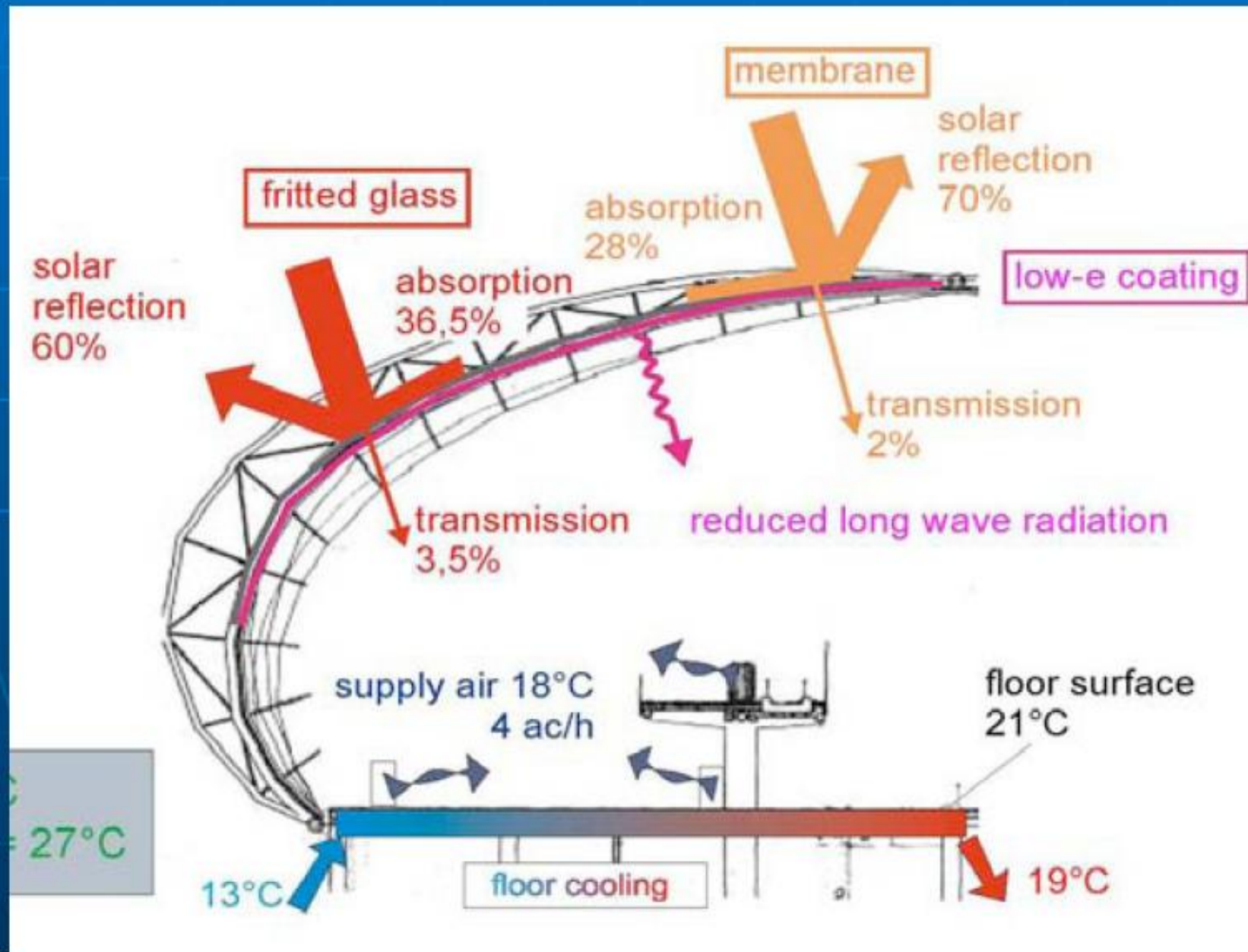
Fabric membrane reduces radiant heat gain thus keeping interior temperatures cooler in warmer environments and saving energy.

- Functionally, the highly efficient insulation system provides significantly reduced costs in mechanical and lighting systems which translate into long-term operational cost reductions.

Comparison of the thermal properties of different roof constructions.

	Concrete Heavyweight, dry	Single glazing Toughened glass	Coated membrane
Thickness (mm)	300	10	0.8
Surface density ($\text{kg}\cdot\text{m}^{-2}$)	720	25	1.72
Specific heat ($\text{kJ}\cdot\text{kg}^{-1}\cdot\text{K}^{-1}$)	0.84	0.72	1.2 ^a
Heat capacity ($\text{kJ}\cdot\text{m}^{-2}\cdot\text{K}^{-1}$)	604	18	2a
Core conductivity ($\text{W}\cdot\text{m}^{-1}\cdot\text{K}^{-1}$)	1.3	1	0.19 ^b
Core thermal resistance ($\text{m}^2\cdot\text{K}\cdot\text{W}^{-1}$)	0.23	0.01	0.0042
Total thermal resistance ($\text{m}^2\cdot\text{K}\cdot\text{W}^{-1}$)	0.37 ^c	0.15 ^c	0.14 ^d
Core resistance as % of total thermal resistance	62%	7%	3%

Light & Heat Management



This illustration shows how a fabric membrane can reflect, absorb, and transmit solar light.

Water Management

Shape combinations can allow water collection & drainage through support columns. Rainwater can be collected at column tips and removed through down spouts within the columns

Water deflectors can be attached along fabric edges.



**Tensile Membrane Structure
Swimming Pool Cover
(Exterior View)
Mantri Elegance
Bangalore**



**Tensile Membrane Structure
Swimming Pool Cover
(Interior View)
Mantri Elegance
Bangalore**

Sustainability

- *Energy savings through natural light transmission.
- *Material Conservation via minimum mass design
- *Lower fuel consumption for shipment
- *Light color screens reflects heat & glare reducing A/C demand.
- *Re-location, recycle-ability and re-use is possible.



**Tensile Membrane
Interior View
Ub City Food court
Bangalore**

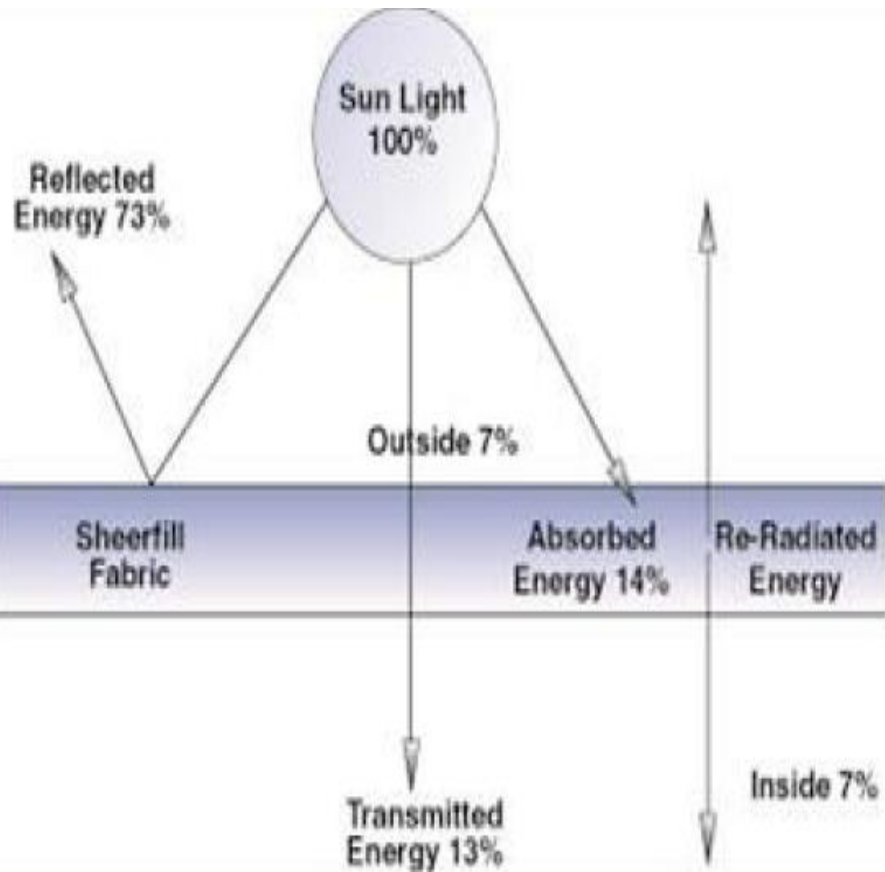


**Tensile Membrane
Exterior View
Ub City Food court
Bangalore**

Light Reflectivity

Fabric can reflect exterior light and heat away from the building and transmit light into the building. Light colors are more(75%) reflective.

Fabric can also help recycle interior light by reflecting light internally



Passive Systems & Screening

- Exterior fabrics can reduce glare & heat before it reaches the glazing/fazade & can reduce A/C costs. Some screens are seasonally adjustable.



**Tensile
Membrane
Structure**

**UB City
Foodcourt
Bangalore**

Project Images



**Automated
Tensile
Structure**

**L&T Toll Plaza
Vadodara-Bharuch**



Tensile Membrane Delhi Toll Plaza



Project Images



Tensile Structure
SAP
Bangalore



Project Images



**Tensile Structure
Timken
Bangalore**





HORIVERT - Proficiency in Shading solutions. Highest in Quality, Latest in Technology, Contemporary Styles & Design colour & Material Ranges, Highly affordable & Minimum Maintenance. We have different types of blinds, which are available and delivered according to customer requirements or choice.

- * Vertical & Wave Vertical Blinds
- * Venetian Blinds
- * Roller Blinds
- * Roman Blinds
- * Panel Blinds
- * Pleated Blinds
- * Skylight & Roof Blinds
- * Inter-glass Blinds (Sandwich Blinds) –
 - a)Honeycomb
 - b)Roller
 - c)Venetian
- * External Venetian Blinds



- In the most general sense blinds are inherently green products .Window treatments are an excellent way to save energy. They provide insulation during the cold winter months as well as repel the heat during the summer. Different styles will provide better energy savings. The benefits of deflecting the sun’s heat during the summer months include:

- *Reduced energy consumption.

- *Lower Energy bills.

- *Less fading of your interior furnishings.

- *More consistent and comfortable inside temperature.



**Automated Roller Blinds
(Closed View)
GMR MD's Residence
Bangalore**



**Automated Roller Blinds
(Open View)
GMR MD's Residence
Bangalore**

Roller Blinds provide excellent noise & light isolation.



These blinds allow you to keep your view while blocking the glare and much of the harmful UV rays.



Roller Blinds
Prestige Falcon House
Bangalore



Blinds are used both as protection from excess sunlight, which cuts down the sharp sun rays and allows only sufficient sunlight to pass through.



**Color Patio Screen
Chalet Hotel
Hyderabad**

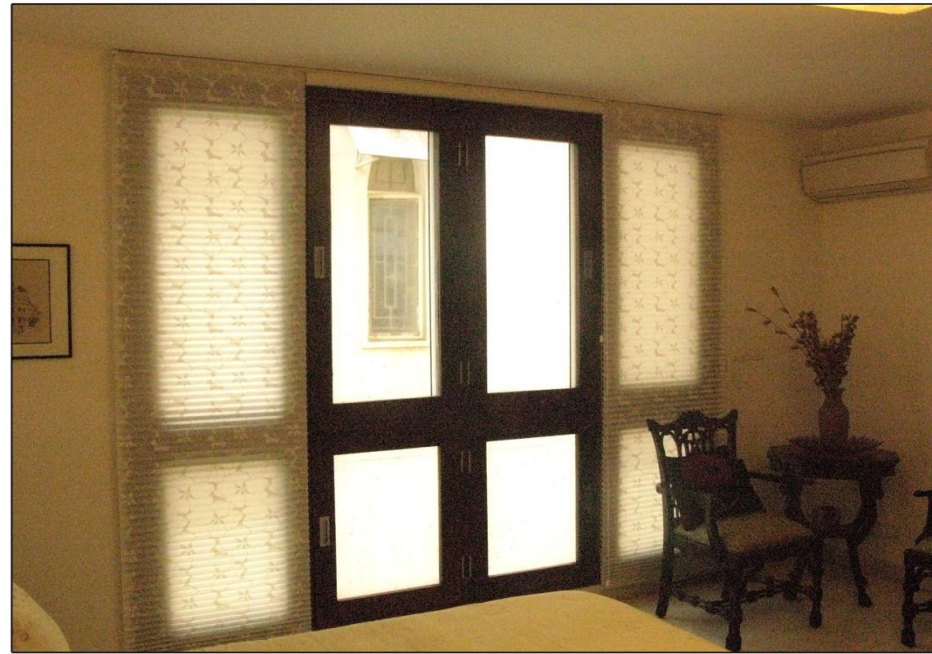


**Transparent Patio Screen
Brigade Metropolis
Whitefield
Bangalore**

Project Images



**Designer Pleated Blinds
(Closed View)
Residential Project
Indiranagar
Bangalore**



**Designer Pleated Blinds
(Open View)
Residential Project
Indiranagar
Bangalore**



Project Images



Pleated Blinds
Residential Project
Indranagar
Bangalore



Panel Blinds
(Closed View)
Residential Project
Bangalore



Panel Blinds
(Open View)
Residential Project
Bangalore

Inter-glass Blinds

Motorised and manual insulated glass blinds suitable for office partitions, hotels - dividing bath & bed rooms or even for regular windows. Dust & noise free with cool and comfort as it controls temperature.



16 mm Venetian Interglass Blinds
Hilton Hotel
Delhi





The metal between the glass system provides fingertip sun control and privacy with virtually no maintenance.



25 mm Venetian Interglass Blinds
Brigade Sheraton
Bangalore





They are functional as well as great insulation from the heat and cold of outside.

Interglass Honeycomb Blinds

Chief Minister Akhilesh Yadav's House

Lucknow

Honeycomb Blinds

3D View



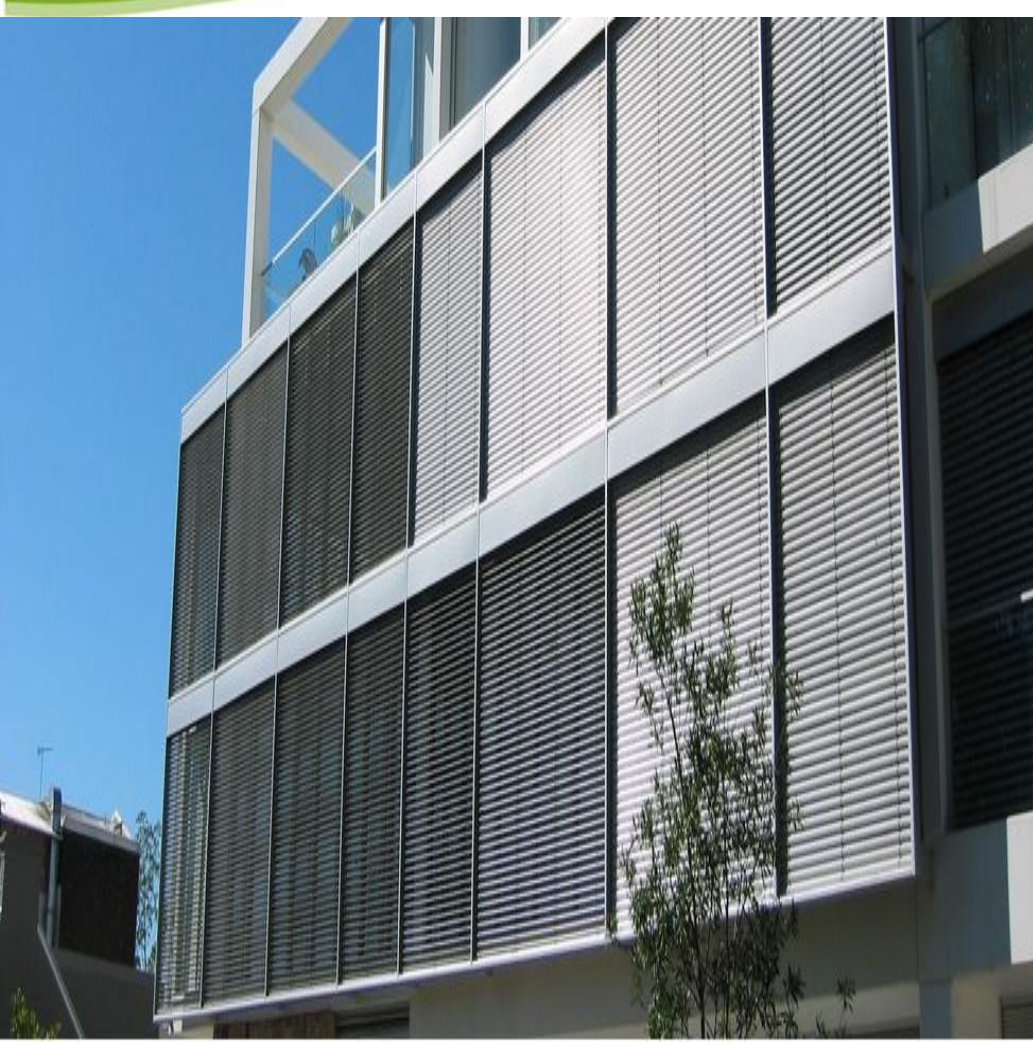
Project Images



Interglass Roller Blinds For JW Marriot Dubai



External Venetian Blinds



Features -

- * Fully motorised and automated control for raising, lowering and tilting of blades.
- * External Venetian Blind system components including head-rail, blades and bottom rail, have been engineered to withstand wind loads up to 77kph.
- * PVC free coated Guide wires, lift tapes and ladder cord are designed to reduce vibration due to wind.
- * Wind-sensing controls tilt and retract blinds when needed.
- * Blades have a polyester coil coating and stove enamelled finish.
- * Perforated blades allow various degrees of openness to maintain exterior views even when blinds are fully closed.





Benefits -

- * Control of natural light, including deflecting and reflecting light onto ceilings and distributing light further into rooms.
- * Privacy can be easily controlled.
- * Glare from the sun is controlled, reducing eye irritation and improving computer screen visibility.
- * Up to 93% reduction in heat gain entering the building; will reduce air conditioning energy consumption.
- * External systems can be positioned as needed for optimal solar control and retracted when not required.
- * Blades can be automatically tilted to optimise shading at varying sun angles, managing thermal gain and glare, while also utilising the natural daylight.



Louvre/Vergola Roof Shadings





Vergola

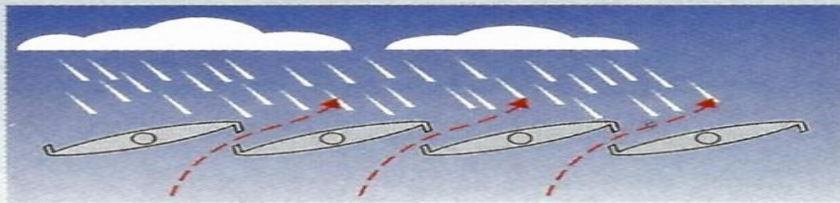
Air Flow Control and Energy Efficiency

The aerofoil louvre shape allows air flow and ventilation in wet and dry weather. Lets in cooling breezes and allows warm air to escape. Vergola assists in reducing heating and cooling costs by shielding exterior walls and windows. The superior double skinned louvres also provide both thermal insulation and sound reduction.

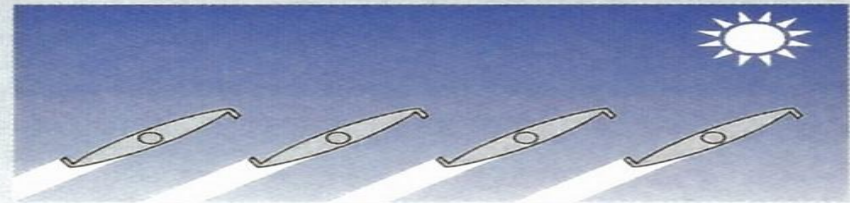
The Vergola adjustable louvre roofing system can be positioned as shown, or any point in between.



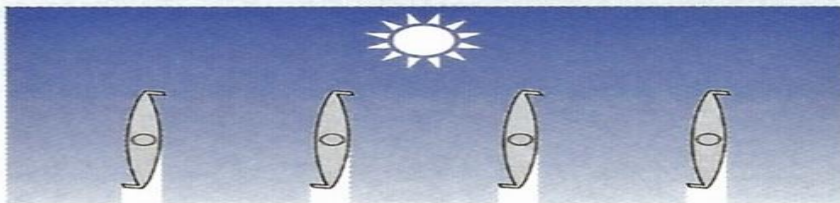
Closed for heavy rain



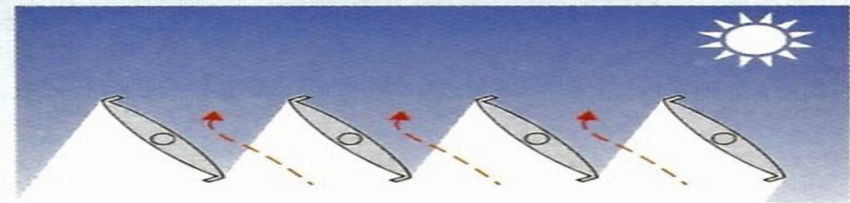
Ventilation with rain proofing



All available sun



Maximum overhead sun



Maximum shade with ventilation



Velum Shadings



Velum Outdoor Roof Shading



Velum Indoor Skylight Shading

A MOVABLE SYSTEM FOR ENERGY CONTROL AND COMFORT

Facing tracks on both sides of the skylight direct wheeled carriers that guide horizontal support bars contained in spaced welded pockets.

When fully extended, the shade is flat. When retracted the durable skylight material stacks as even pleats.

Protection – Delivering optimum protection against sun, wind and rain. The Grorich Velum system has been designed and engineered to withstand wind speeds of up to 60km/hr. Velum Outdoor Roof Shading has a maximum width of 4meters , and projection of 5 metres in one continuous waterproof membrane.

Functionality – Simply press the remote (switch operation also available) to extend or retract the Grorich Velum system to your desired position. Unlike conventional roofing or louvered roofs, the Grorich velum will not confine your area or add additional uncomfortable greenhouse type heat during the warmer months of the year.

Technology – Manufactured utilising Ferrari Preconstraint Fabric Membrane the result is an outstanding dimensional stability and mechanical strength. The anti-wicking Capillary Resistant Coating treatment guarantees resistance to harsh UV rays, and simplifies maintenance requirements.

Quality – Designed and engineered to last, The Grorich Velum Retractable Roof Systems are European in design and made in India. Our unique manufacturing processes have been developed through our incessant innovation and quality culture, which permeates every aspect of our business, from design through to installation.



Fabric Tension System (FTS)



Fabric Tension System

provides solutions for shading large areas, either horizontally or on a gradient. The FTS is an ideal solution for curved, horizontal or sloped glass panels and even vertical ones where the fabric needs to be constantly under tension. Applications include greenhouses, skylights, domes as well as terraces in restaurants, hotels and shopping centres.

Our Clients



Our Architect Partner



DESIGN ASSOCIATES PVT. LTD.
Architects, Interior Designers



Our Architect Partner



JMC Projects (India) Ltd.

RajConsultants

EDIFICE



SUNDARAM ARCHITECTS PVT. LTD.



dwp interics



ADRIANSE GROUP



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