SOLAR PROTECTION SYSTEMS
FOR GLASS FACADES

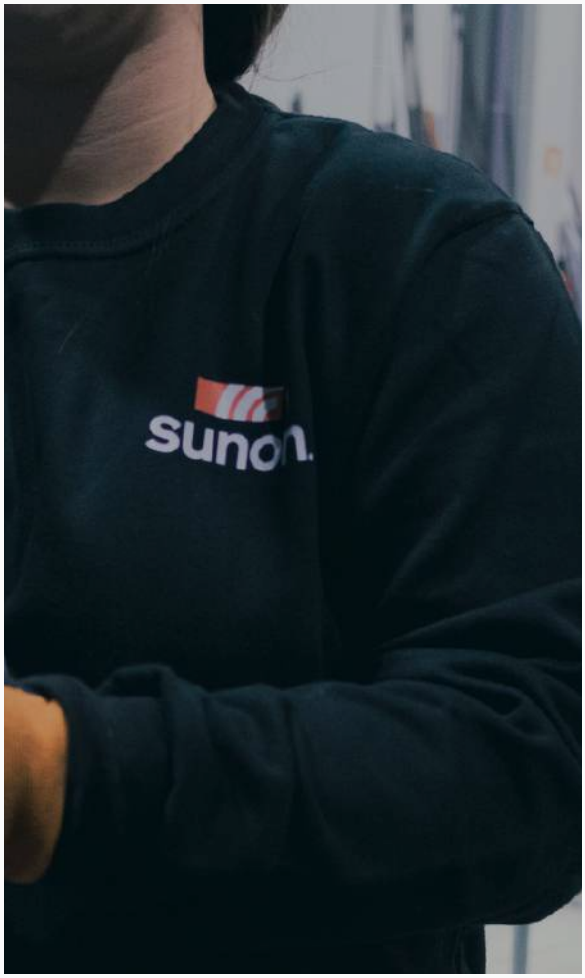
DYNAMIC FAÇADE

WWW.SUNONBLINDS.COM

ENGLISH

WHY SUNON BLINDS?

More than 25 years ago, Sunon was born, a company formed by experienced personnel focused on the sector, since January 1993, we stand out for the wide range of solutions that we can provide. Sunon has professional collaborators from various sectors, such as: architects, engineers, window manufacturers, curtain wall manufacturers, and builders who provide the right systems for the execution of the project; for this reason, the company is recognized as one of the best in the industry for the quality of their work. We ensure that in each project we eliminate any type of openings and gaps, in addition to providing a high design facade, comfortable, energy-saving, and environmentally friendly. We specialize in technical and adjustable shutter systems, with dynamic elements for residential sun protection, facades, security, and tunnel boxes, as well as motorization systems. Likewise, we also take care of product manufacturing, distribution and installation.



DYNAMIC FAÇADE

Sunon is present in all phases of the project. From advice to architects, to customized solutions for any type of renovation.

As a customer, through a virtual test, you can visualize the variety of options according to your project.

We will provide you with a technical and economic study where the total service will be provided, which includes: products, assembly, consulting and after-sales maintenance.

DYNAMIC FAÇADE

Glass is one of the most important materials in modern architecture. Glass seduces with its transparency and achieves elegant architectural solutions with a modern and light line, although its use as a façade envelope is extremely delicate in several senses and depending on orientation or geographical area can present very high energy costs and little comfort for users.

Sunon has designed several exterior solar protection systems, ideal for improving energy savings, and where the user can have dynamic elements that adapt at all times to the weather outside and get the best performance of all types of glass facades or curtain walls already in place.

The different possibilities and models that we offer require a technical and energy study, which can even determine the initial savings in the choice of more expensive special glass and the reduction of power in air conditioning machines in new projects.

Sunon Dynamic Façade is the result of combining optimal external solar protection systems for glazed façades, which, by means of sensors and an intelligent control system, adapt to the constant changes in temperature and luminosity according to the time of day or season of the year.

This management is programmed according to occupant needs and building typology and can be interrelated with protocols and parameters of the other climate and lighting installations. The efficiency, and experience after monitoring several buildings

Installed throughout Spain with Sunon Dynamic Façade systems managed with the Animeo control system are the best proof and support for the following presentation.

PICTURE:

GM200 STRUCTURAL SYSTEM

DESIGNED TO COVER LARGE AREAS

Self-supporting system that allows the creation of a double façade where all the mechanisms that allow folding, orientation or total closure are metallic.

The 2.2mm thick extruded aluminium structural mullions and their geometry, allows the internal chamber of the profile to house reinforcements or joints, which makes it possible to reach heights of up to 7400mm without intermediate anchors and coupled structures.

to reach heights of up to 7400mm without intermediate anchorages and coupled structures above façades of 30m in height and 500m2 in surface area. On large facades, where adjustable brackets and anchors are used, the possibility of optional fixing of lifelines has been taken into account and strict mechanical resistance and wind load tests have been carried out.

Once the structure has been built, the roller shutter guides are installed in the external housing provided, making the assembly even more robust. Sunon integrates the folding shutter model GM200 for its aerodynamic design of slats, enveloping type of support, maximum resistance in the stainless steel clip fixing and the high quality of its mechanisms, recognised throughout Europe and No. 1 in Switzerland. Depending on modulation and cubic capacity, we have the option of using profiled slats or extruded slats. In singular façades or office areas, we have the Structural GM100 inverted system, where the whole blind is deployed from bottom to top, so the user can screen a part of the window to avoid reflections in the interior, and at the top, allowing the full entry of natural light.

VENTAJAS ESTRUCTURAL GM200

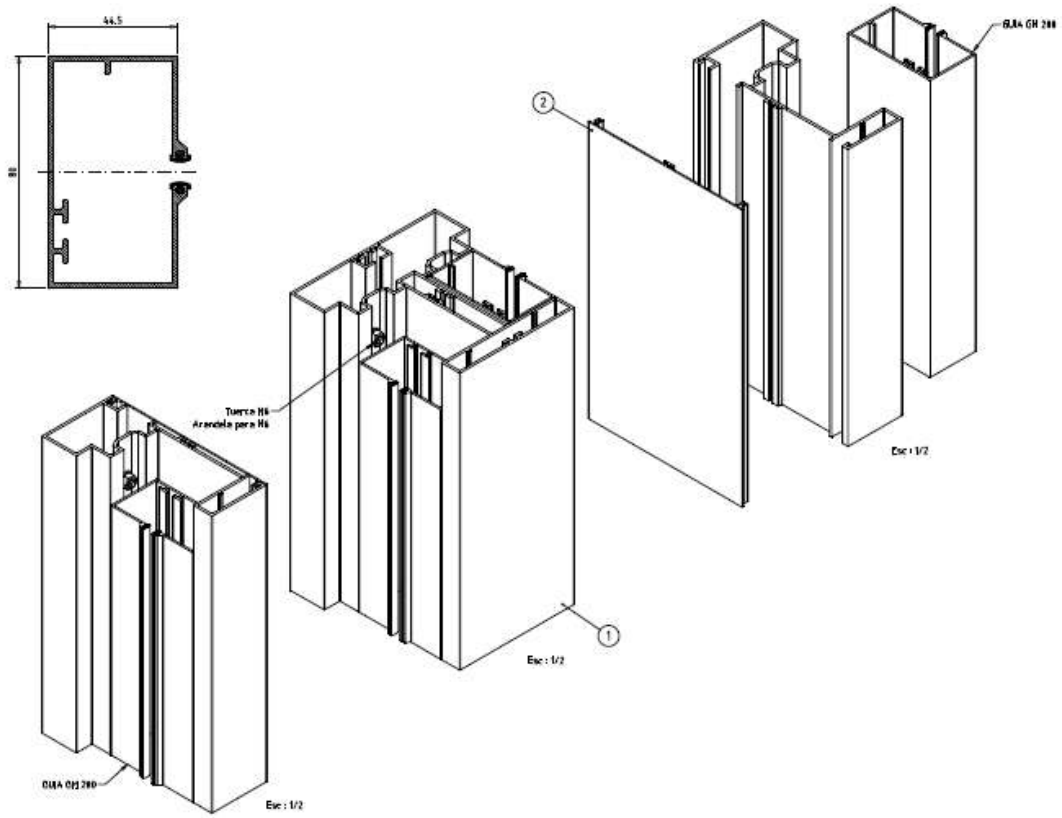
Unlike other facades such as lattices, Brisolei or visors, where there is only sometimes the possibility of orienting the louvers a few degrees and the entire facade always remains occupied, prohibiting, for example in winter, the full use of solar radiation or a clear and complete view of the outside.

Windows or glass envelopes are the bridge between inside/outside and this communication or relationship can be problematic or can have a favourable energy performance and transmit maximum comfort. The solutions we propose are ideal for providing your facades with dynamic envelopes that adapt to the climate, acoustics and facilitate natural ventilation of all types of buildings and enclosures.

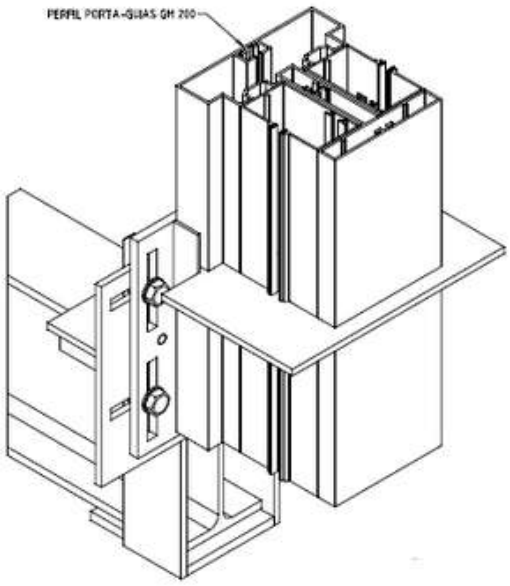
PICTURE:

GM200 STRUCTURAL SYSTEM

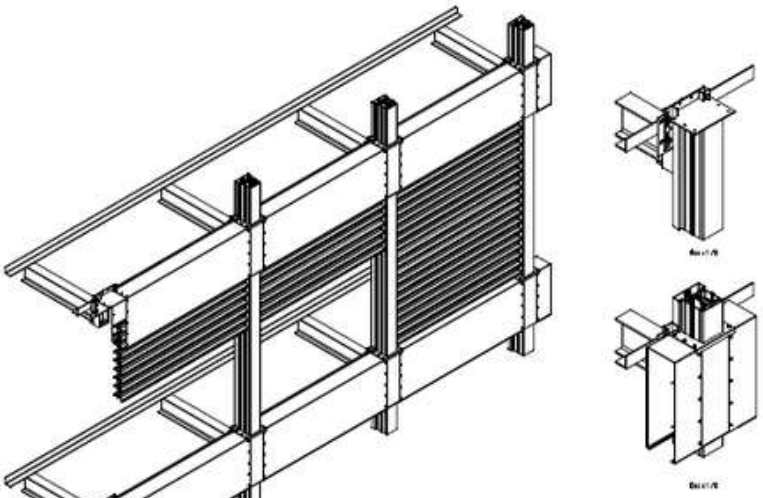
Perfil porta-guías



Soporte regulable perfil



Cajón y chapas persianas guía GM200



VENETIAN BLIND KR80S FAÇADE WITH AISI 316 CABLES

Very adaptable and easy to integrate, its lightweight system is not a visual obstacle that changes the initial design and appearance of the façade.

Thanks to its 4mm AISI 316 cable guide system fixed with different types of adjustable tensioners, we can cover large openings of more than 15m2 with a single blind.

Unlike other external venetian blind systems guided by simple 1.5mm cables and unregulated tensioners, KR80S guarantees great resistance to the weather and wind, while its light and modern aesthetics, without any type of structure or uprights, opens up and inspires multiple architectural possibilities.

Its 70-100mm adjustable slats with deformable shape and alloy, and the simplicity of its folding and adjustment mechanisms, allow us to cover glazed surfaces of up to 6300mm in height and the only premise is that the bases where the different tensioners must be anchored must be firm and resistant to the necessary tensioning.

PICTURE:

THE USE OF THE SUN

OBJECTIVES, BENEFITS AND CONCLUSIONS OF THE ENERGY STUDY:

The monitoring and control of several buildings already completed has provided us with information and confirmed data that allow us to state with complete certainty and with a personalised study, very important performances in heat reduction, greenhouse effect, reducing the consumption of air conditioning with averages of 60%.

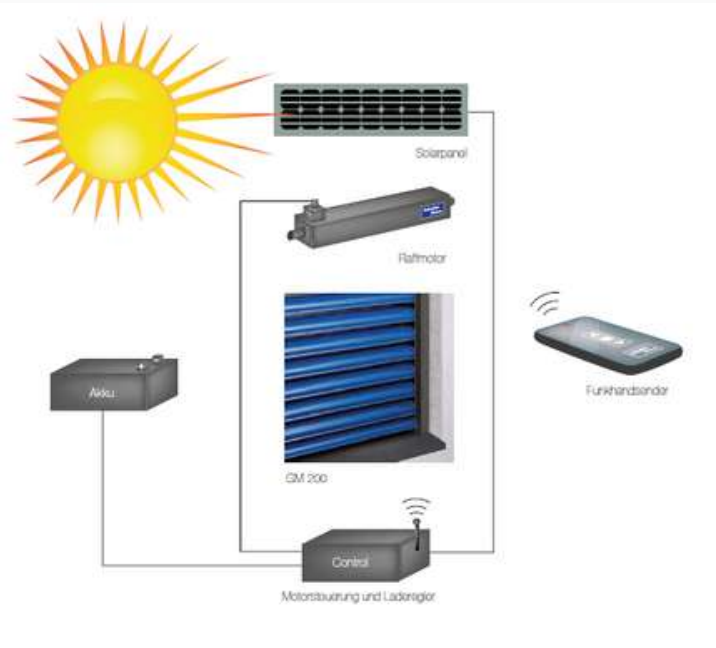
In cold periods after sunset, these same blinds act as a closing and enclosure of the façade, helping to keep the interior temperature from dissipating. The sum of these energy savings can exceed €50 per m2 of glazed façade per m2 of glazed façade, which means that these types of installations pay for themselves in approximately 3 to 5 years.

These systems and solutions provide our clients, apart from energy savings, with other important virtues such as being able to regulate and transport natural light at will, improve natural ventilation and avoid prying eyes and reflections on computer screens.

The installation of the different types of blinds that Sunon offers have important advantages over textile systems due to the simple fact that as they are metallic elements, mainly made of aluminium and stainless steel, they have a longer life and technically allow us to guide and fix them at intermediate points instead of only guiding them laterally as occurs in textile systems, providing the installations with great resistance to wind or other inclemencies, apart from emphasising that the regulation of light and visibility is incomparably superior to any type of fabric and the orientation of their slats facilitates cleaning.

Aesthetically, both from the outside and from the inside, we achieve a building full of life and dynamic, adaptable to the energy and lighting needs of each façade individually and to the comfort and quality of life of its users.

PROCESS:



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ADJUSTABLE SLAT BLINDS

		GM 200	GM 100	MV 90	VR 70/VR 90	VR 70 LO/VR 90 LO	VR 90 Triángulo	VR 90 resistente al viento	KR 60/KR 80	EC 70/EC 100	RE 50
Protección	Protección solar	■	■	■	■	■	■	■	■	■	■
	Protección contra inclemencias ambientales	■	■	■	■	■	■	■	■	□	■
	Protección visual	■	■	■	■	■	■	■	■	■	■
	Protección acústica	■	■	□	□	□	□	□	□	□	□
	Protección contra ladrones e intrusos	■	■	■							
	Atenuación gradual de la luz				■		■	■			
Confort	Aislamiento / calentamiento de interiores	■	■	■	■	□	■	■	■	□	□
	Aislamiento / pérdidas de calor	■	■	■	■	□	■	■	□	□	□
	Diseño con colores variados	■	■	■	■	■	■	■	■	■	■
	Accionamiento por motor, como opción	■	■	■	■	■	■	■	■	■	■
	Accionamiento solar	■	■	■	■	■	□	□	■	■	■
	Regulación individualizada de la luz	■	■	■	■	■	■	■	■	■	■
	Construcción robusta y maciza	■	■	□	□	□	□	□	□	□	□
	Resistencia al viento	■	■	■	□	□	■	■	□	□	□
	Resistencia a la intemperie	■	■	■	■	■	■	■	■	■	■
Conservación	Mantenimiento fácil	■	■	■	■	■	■	■	■	■	■
	Larga vida útil	■	■	■	■	■	■	■	■	■	■
	Servicio garantizado	■	■	■	■	■	■	■	■	■	■
Tipos de edificios	Vivienda unifamiliar	■	■	■	■	■	■	■	■	□	■
	Vivienda unifamiliar	■	■	■	■	■	■	■	■	□	■
	Edificio industrial o comercial	■	■	■	■	■	■	■	■	■	■
	Edificio público	■	■	■	■	■	■	■	■	■	■
Tipo de obra	Obra nueva	■	■	■	■	■	■	■	■	■	■
	Reforma	■	■	■	■	■	■	■	■	■	■

■ sí □ condicionado

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SUMMARY OF INTERESTING FACTORS TO TAKE INTO ACCOUNT

- Due to its motorisation system that can be coupled up to four blinds or 35m2 with a single motor, we can economise on the overall cost and outperform textile systems in terms of budget and performance.

- The motorisation of our systems is very simple to automate and achieve the best eco-efficient performance for each façade, depending on the outside or desired temperature, Lux ideal for work or reading areas. With the possibility of interconnecting with the best home automation systems such as KNX, and other open protocol, so that the blinds interact according to the parameters of temperature or amount of light, previously established.

- The exterior solar shading systems are between 7 and 9 times more efficient than interior solar shading systems.

- The high quality of our systems and materials, together with the intelligence of the Animeo control and management system, ensure the durability and safety of retraction in the event of windstorms or frost.

PICTURES:

ENERGY STUDY CONCLUSIONS AND RESULTS

Estudio parcial aulas polivalente

	Ratio edificio kWh/m² y año	Edificio Sup. en m²	Consumo kWh y año	Precio €/kWh	Contrato eléctrico	Factura energía € por año	Ratio €/m²
Oficinas actual	235	162	38.023	0,15	Baja T.	5.703 €	35,3 €
Oficinas propuesta	155,1	162	25.126	0,15	Baja T.	3.769 €	23,3 €

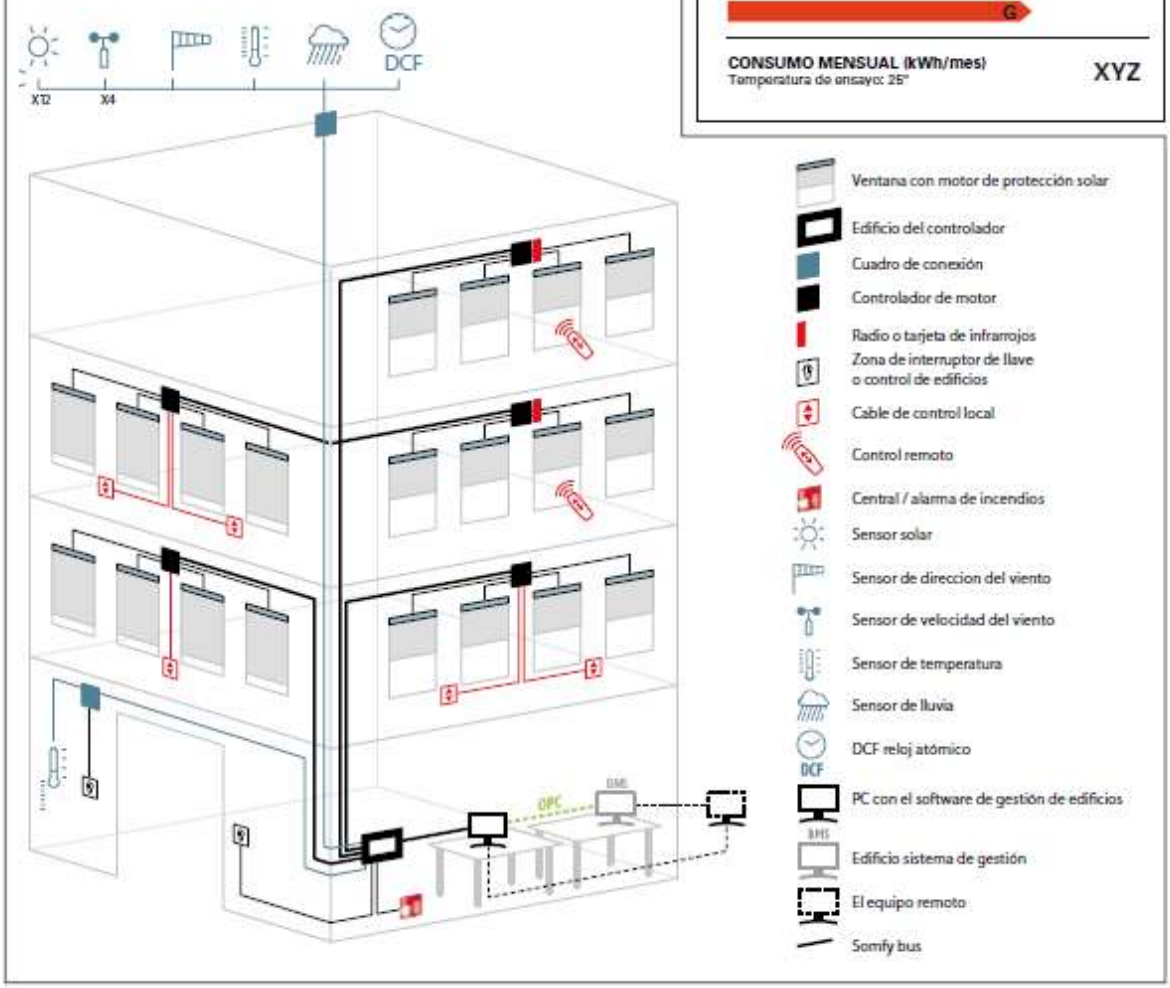
Ahorro aulas polivalentes	1.934,52 €

Estudio global Edifico en Cantabria

	Ratio edificio kWh/m² y año	Edificio Sup. en m²	Consumo kWh y año	Precio €/kWh	Contrato eléctrico	Factura energía € por año	Ratio €/m²
Oficinas actual	187	2.927	547.349	0,15	Baja T.	82.102 €	28,1 €
Oficinas propuesta	123	2.927	361.250	0,15	Baja T.	54.188 €	18,5 €

Ahorro en edificio completo	27.914,80 €

Edificio Oracle en Málaga con tres fachadas orientadas a Sud, con un total de 510 m2 de superficie acristalada.



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