

Intelli-shade | January 2022

Dear Valued Customers and Somfy Friends,

Hoping you and your loved ones are doing well and are in healthy spirit to start 2022. Taking this chance, we wish you a new year full of success and blessings. Happy New Year! On behalf of Somfy Asia Pacific Projects team, I am pleased to launch the first edition of our quarterly newsletter 'Intelli-Shade', an exclusive newsletter for Projects business community.

- Make you more comfortable in making a choice from the array of products we offer.
- Share some project experiences through case studies of projects which we have done in APAC with support from some of you on the respective projects.

We hope that you find this meaningful for you and we will continue to communicate with you on these topics in the subsequent issues.

We are always open to feedback for improvisation, so please feel free to share your thoughts, comments or feedback to us. Thanking you once again and wishing you the best of luck at all times.

Best Regards,

Vishal ARORA

*Business Development Manager-Asia Pacific,
Commercial Project Solutions and Services*

Over the years, Somfy has grown phenomenally with your support, and we now have our presence direct and through authorised partners in almost all countries relevant for our business. We have also acquired excellence in many areas in the group, including in projects vertical, because of years of experience behind.

This extensive and rich projects experience allow us to assist you in every stage of project from solution designing, to tender specification development, to construction and post installation stages in almost all countries of the world.

Therefore with the intention to share meaningful content with our community these series of newsletter will provide you with:

- Information and insights through knowledge sharing to know and learn more about us.
- Share knowledge that we have acquired in the specialised field of automated window coverings.



About Somfy

Somfy is consolidating its global leadership year after year

In year 2020 despite a challenging economic environment, Somfy has shown strong resilience at global level, demonstrating the soundness of our business model.

The health crisis has acted as an accelerator in terms of the need to improve living environments. Housing has become a safe investment — our homes are havens we want to improve and in which we want to feel good.

In 2021, we maintained our commitments to creating more sustainable, connected solutions. These efforts were reflected in our results.

These extremely positive figures reflect, above all, the commitment of Somfy employees who strive to continually improve the everyday lives of millions of people around the world.

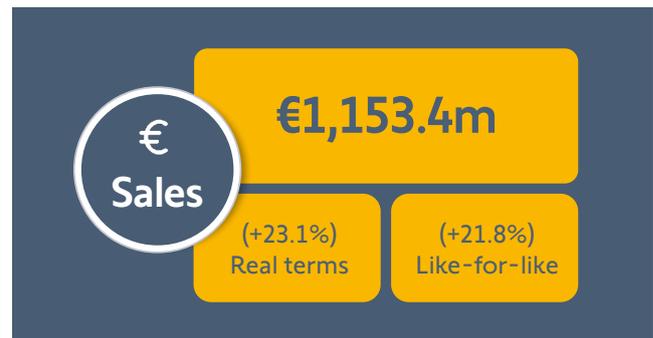


Figure 1
First nine months of 2021



Figure 2
Sales in € millions



Figure 3
Somfy 2020 Annual Report. Financial Statement.

Knowledge

A holistic approach to façade design

In today's world we face the challenge of tackling climate change in everything we do. Building the cities of tomorrow, it's imperative that we design responsibly, aiming to meet both present and future needs without compromising access to natural resources in the future. The façade of a building has always played an important role in high performance building design. The façade often not only expresses a bold statement reflective of the philosophies of those inside the building, but also contributes to the aesthetics of the building and its surroundings.

As a collective whole, we have become more environmentally conscious, and the spaces in which we exist ought to reflect that. This includes the façade design, given the role it plays in managing heat exchange between the building envelope and the exterior environment.

Its prompted industries, architects, and engineers to go back to the drawing board and reconsider holistically how the façade can contribute sustainably to the lifetime of the building whilst simultaneously enhancing the human experience.



Figure 1
High Performance Building design objectives

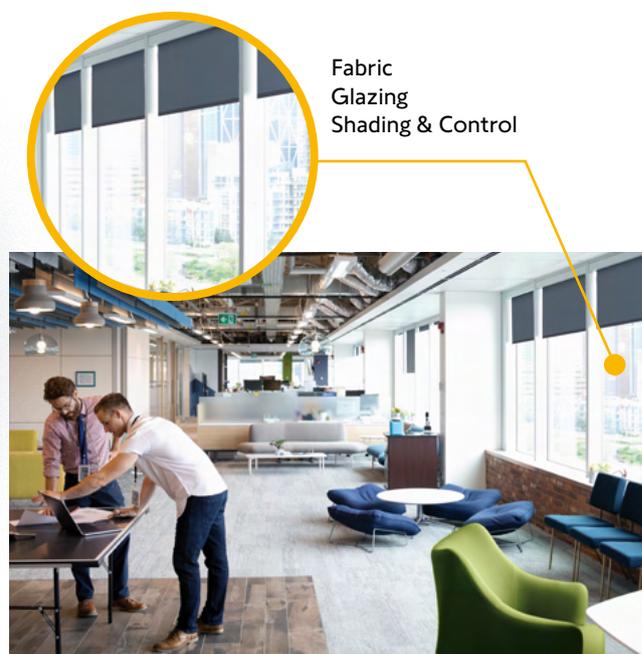


Figure 2
Modern workspaces with solar shading systems to improve wellbeing

A holistic design approach to a façade involves considering the three main components – glazing, fabrics, and shading control.

Considering just glazing alone, the choice of glazing type is made based on three performance values – SGHC, U and VLT. The solar heat gain coefficient value and U value refer to direct and indirect heat that penetrates through to the indoors respectively, whilst the visible light transmittance refers to the degree to which one can see through the glazing. Given the high air-conditioning

loads in most office buildings, hospitals and educational spaces, the ideal case is that VLT is prioritised to remain high whilst keeping both SHGC and U low. In buildings with high window-to-wall ratios, these requirements are crucial in preventing unwanted heat exchange throughout the building's lifetime.

The glazing industry has responded to this in different ways, some offering triple glazing over double glazing.

Depending on the gap size and cavity gases used, triple glazing offers an improved performance of approximately between 30 - 40%, at an added cost of about 10-15% on double glazing. With that said, any increase in physical material also means an increase in carbon footprint and embodied carbon.

An alternative solution is also electrochromic glazing which allows for a dynamic tint level of the glazing, though the uptake is slow given the high costs and longer switching times currently offered.

With every façade there is a shading solution which uses performance fabrics. Performance fabrics are also measured by similar performance values including SHGC and VLT.

An automated shading system helps maintain indoor temperature by considering the elevation and azimuth angle in real time and adjusting the blinds accordingly to maximise daylight access whilst minimising heat penetration thorough to the indoors.

The latest innovation in fabrics include metallised fabrics, which allow for an improved SHGC value without compromising on the VLT. Blind fabric manufacturers have addressed eco-friendly design by entirely removing PVC from the end product, thereby cutting out the hazardous toxins released at a PVC blinds end-of-life process.

Together, most glazing and fabric choices can achieve permanent, static performance values. However, for a truly optimised façade, one must consider the benefits that come with intelligent, automated shading that tracks the sun's movement and responds accordingly in real time.

With the continued adoption and of interior automated shading devices in buildings, this solution is quickly becoming recognised as a building service much like a buildings artificial lighting system and HVAC system.

This consistent, real time response results in dynamic performance values, benefiting both the occupant and building owner in various ways. This strategy results in the contribution towards LEED and WELL standards under different parameters.

...one must consider the benefits that come with intelligent, automated shading that tracks the sun's movement...

For the occupant, this means more access to natural daylight which in turn improves thermal comfort. The domino effect of this is occupants being up to 18% more productive, as surveyed by the World Green Building Council.

An increased access to external views also promotes wellbeing, improving mental function by up to 25%. In further studies, occupants with greater access to natural daylight reported experiencing better sleep quality and longer sleep duration.

These benefits all translate to a higher productivity of the occupants in the building.

Given that in any company, the largest and greatest resource is its own employees, the benefits derived from this will be long term and reflected in improved operations and employee performance.

For the building owner there are multiple benefits to recognising how automated shading, a building service in its own right, further supports both the artificial lighting system and the HVAC system of a building.

The shading system prevents heat from penetrating through, thereby helping reduce the load of the HVAC system whose priority is indoor temperature control. It also supports the artificial lighting system, reducing its need to be on by maximising the use of freely available natural daylight.

The end result is less use of other building elements and a greater energy efficiency rating overall.

Product

Motor selection is easier than you think, here's how to do it!

With a wide range of motors available, selecting the right motor for a project based on carrier product and project segment becomes very important. We can assist you to make this choice simpler and make you more comfortable with the right choice of Somfy's Tubular motors for your different projects.

The main criteria for selecting the right motor for blinds is based on carrier products, operation noise level (from silent motors to regular motors), and ceiling height (double height or single height).

1. Selection Criteria

The carrier product such as Roller blind, Roman blind... etc, weight of the blind, and the size of head rail varies. It affects the motor torque which is the weight carrying capacity, diameter, and speed that can be selected.

Typical torque ranges, motor diameter and speed recommended for different carrier products that cover the majority of sizes are given below:

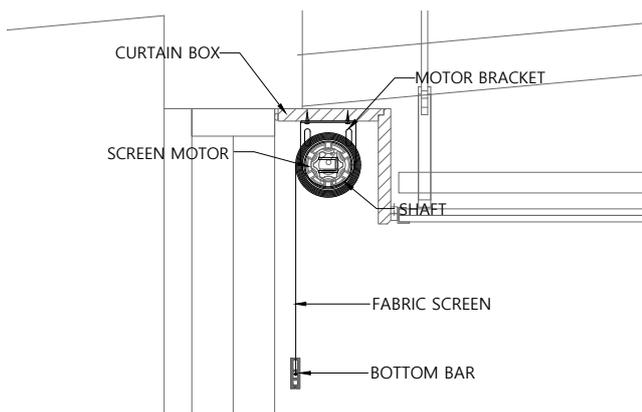
Carrier Product	Torque	Motor Diameter	Speed
Roller	3Nm/6Nm	40mm/50mm	28rpm/30rpm
Roman	6Nm	40mm/50mm	28rpm/30rpm
Venetian-Wooden	6Nm/9Nm	30mm/40mm	18rpm/20rpm
Venetian-Aluminium	3Nm	30mm/40mm	18rpm/20rpm

2. Typical Mounting Detail

Typical Pelmet Size

Basically, it depends on shaft diameter by window height. Wire type roll screen requires more space for wire installation. In that case, the shaft is thicker than normal type, hence a bigger pelmet is needed with thick shaft for tall windows.

Normal type	150(W) x 150(H)mm
Wire type	200(W) x 150(H)mm



3. Noise Level

Most of Somfy motors for internal blind is below 50dBA. It is almost lower than the noise of a quiet office. Sonesse motor, which is the most famous of Somfy product, is as quiet as library or a quiet house at 42dBA of noise level. Somfy also has Ultra Quiet motor which is very silent by far reaching as low as 38dBA.

Ultra Quiet Motor	under 38 dBA
Sonesse Motor	under 42 dBA
Most of Somfy Motors	under 50 dBA



Case Study

Project Name:

Kb Square (Kb Bank Hq)

Location: **Seoul, South Korea**

Builder: **Samsung C&T**

Architect: **Samoo Architects**

Completion Date: **October, 2020**

Occupancy Type: **Single Occupant**

No. Of Floors: **25**

End Product:

Motorized Roller Screen

Motor Qty: **1,705**

Motor Type:

**Sonesse Ultra 506 Rs485
(Encoder Based Motor)**

Control System: **Animeo Knx Rs485**

Control Solution:

Sun Tracking, Perfectalignment

Project Requirements

- To make a smart building, internal roller shades to be integrated with other building control system.
- Motorised roller blinds that can be concealed in the customised box.
- Reduce glare and achieve perfect alignment to facilitate the better work environment.
- Utilising daylight to minimise the use of artificial light.

Somfy Solution

Animeo KNX with digitally addressable shades motor satisfied all the requirements of the client. In order to manage the blind system, Somfy used a complete KNX-network compatible automation system. It enabled intelligent management of the blinds according to sun movement while communicating via the KNX network with other building systems such as air-conditioning, heating and lighting to optimise the buildings' overall performance.

Sonesse ULTRA motors has very high calibre of moving silently, it subtly eliminates glare yet providing sufficient daylight. Perfect alignment of the shades preserves outside view with great ambiance contributing to pleasant work place & well-being of occupants.

