

LET'S BUILD A BETTER FUTURE

 **SkyTwin**

ROLLER SHUTTER AND SCREEN IN ONE



SkyTwin is the first solution on the market combining an external roller shutter and a screen-type sunshade in a single product. This innovative integration results in a compact high-tech system that offers excellent thermal insulation year-round, leading to significant savings in heating and cooling costs.

The design of the roller shutter does not interfere with the construction of the window or the lintel, thus not affecting the energy balance of the building. The **SkyTwin** roller shutters blend in with the façade and become its integral part. At the same time, the front of the roller shutter box forms a base for any finishing material (e.g. plaster), turning the shutter box into an invisible part of the building facade.

By fitting the roller shutter with an independently operating SkyRoll ZIP screen system, it is possible to protect rooms from intense sunlight while maintaining a clear view of the outside. In addition, this product can also act as an insect screen, effectively protecting rooms from insects. The **SkyTwin** system is also available with a screen in the Classic version.



A modern alternative to the classic roller shutter





Multidimensional **comfort level**

Effective control of sunlight levels and access to natural daylight play a significant role in contemporary architecture. The absence of sunshades can result in an excessive **30-80%** increase in solar radiation entering the room, depending on the type of glazing used.

The sun rays can generate:

- excessive internal heat gain, resulting in fatigue and problems with concentration;
- contrasts appearing on monitor screens, leading to glare, which makes working or watching television very difficult.



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Due to the sunshade, as much as **80-90%** of the sun's rays remains in front of the glass. The rays are reflected and dispersed, protecting the rooms from overheating and glare.



The screens used in the **SkyTwin** system provide a perfect balance between light and shade, ensuring effective sun protection while maintaining a clear view of the outdoors. Materials from which the screen fabrics are made are very resistant to everyday use, deformation, tearing, as well as weather conditions (rain, UV radiation, wind, etc.). The multitude of colours and variety of fabrics make the screens an interesting architectural addition, which allows the object to fit in with the surrounding. Aluprof works exclusively with reputable suppliers of screen fabrics, i.e. Copaco and Serge Ferrari.

 **copaco**
screenweavers

Serge Ferrari
group



Saving by covering up



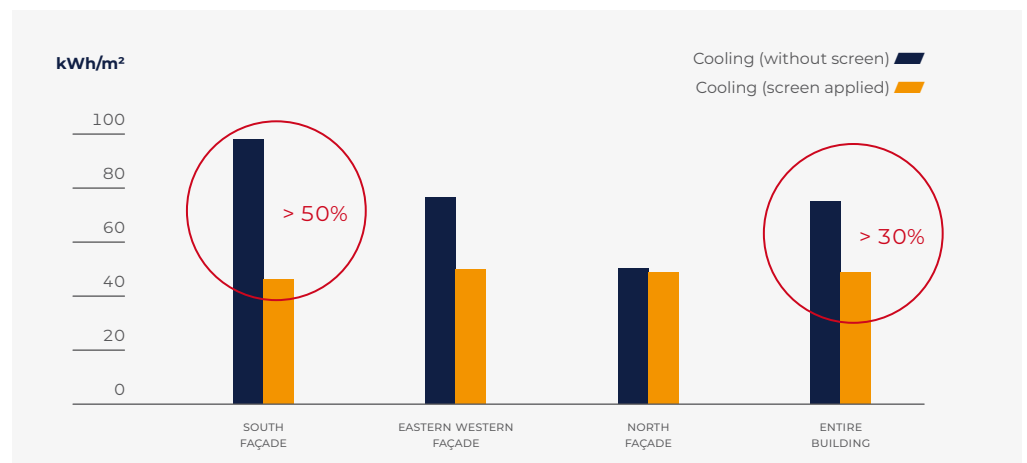
The **SkyTwin** system is undoubtedly a worthwhile long-term investment that enables precise control over the energy required for cooling our homes. In fact, by utilizing screens, we can reduce room temperatures by several degrees, creating comfortable working and living conditions. Furthermore, equipping roller shutters with sun sensors, especially for facades exposed to excessive sunlight, enhances the effectiveness of room protection against overheating. Ultimately, the adoption of passive sun protection ensures savings for both the household budget and the environment.

Simulation of the energy consumption

of a hospital building located in Berlin (Germany)



Due to the use of screens, the annual electricity requirement for air conditioning in rooms located on the south side was reduced by more than **50%**, and for the entire building by more than **30%**! For the investor, this means real savings in the operation of the facility throughout the year.



Source: Calculations made with the Soltissim software from Serge Ferrari, for a reference window D, glazing 40%, SkyRoll screen with Soltis 92 fabric, colour 92-2047 Anthracite



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Windows and doors can generate a loss in winter of to **25%** of heat! The older the windows, the greater the losses.

Excessive indoor heat gains are primarily associated with increased electricity consumption for ventilation and cooling, which translates into **the increased operating costs of buildings.**



How does the roller shutter works?

- the lowered roller shutter curtain provides additional thermal resistance ΔR , resulting from both the air layer between the air curtain and the window and the air curtain itself;
- this additional partition effectively restricts the flow of warm air from inside the building;
- the higher the ΔR value, the lower the heat transfer coefficient.

The automation of the roller shutters allows precise control of the heat exchange process, thereby reducing the load on the electricity grid in winter due to the intensive reheating of flats.





On a cold but sunny day, the weather-automation system can raise the external roller shutter curtain on the side of the building most intensively heated by the sun, allowing heat to accumulate inside the building. Furthermore, the use of natural energy guarantees savings for the budget.



An intelligent approach to saving

If there is no sunshine and the outside temperature drops, the roller shutters are automatically closed, allowing heat to accumulate inside the building. The increase in thermal insulation also guarantees additional savings in heating costs.



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Research commissioned by Aluprof shows that the **SkyTwin** system can reduce heat loss through windows by up to **35%!***

*The level of improvement in thermal comfort depends on the window's heat transfer coefficient U_w



One system many possibilities

Common box, 180x260 mm in size, made of bent aluminium sheet. This solution guarantees space and cost savings, as well as providing faster assembly time.

A system adapted for under plaster installation. A range of bracket sizes available, allowing finishing with any material.

Integrated screen system within the SkyRoll ZIP version, featuring a common two-part guide channel to ensure smooth, collision-free operation. ZIP technology guarantees optimal sealing and protection of the interior against insects. Additionally, the product offers the option of using the SkyRoll Classic screen version.

The system is equipped with two independently operating motors.

The roller shutter curtain can be made of:
- PT37 plastic profiles,
- aluminium profiles filled with polyurethane foam, PA37, PA39, PA40, PA43 and PA45,
- PE41 extruded profiles.

Colour scheme in line with Aluprof's range of external roller shutters and SkyRoll screens.

Components common to Aluprof's external roller shutter and SkyRoll screen systems, allowing for stock optimisation.



Maximum dimension of the roller shutter in **SkyTwin** system is 3300x2600 mm*

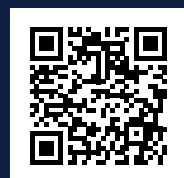
* Dimensions given in accordance with Aluprof's technology using PA 43 profile

RICH RANGE OF COLOURS



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See more information
on available colours:



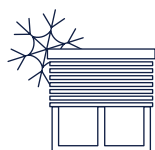
What are the benefits of SkyTwin?



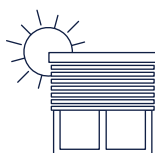
SAFETY – the roller shutter curtain discourages potential burglars, making you feel safe at home.



ACOUSTIC INSULATION – a roller shutter curtain reduces the external noise.



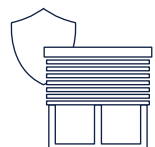
EXCELLENT THERMAL INSULATION – lowered roller shutter curtain reduces heat loss through windows in the winter season up to **26%**.



SUNSHADE – both the roller shutter curtain, as well as the technical fabric used in the screen, provide excellent protection against overheating in summer.



PRIVACY – the roller shutter curtain protects the interiors of our flats from undesirable gazes.



WINDOW PROTECTION – the roller shutter curtain effectively protects window joinery against harmful external factors such as wind, rain or direct sunlight.



HEALTHY SLEEP – the closed curtain of the roller shutter creates a comfortable darkness in the room, which allows for a healthy and restful sleep.



SAVINGS – the roller screen contributes to reducing expenditure on heating in winter and air conditioning in summer.



PROTECTION AGAINST INSECTS – the use of the ZiP version of the screen also provides a barrier that effectively protects the interior of the house from the presence of annoying insects.

