



LIGHTS OUT

WITH 12 HOURS OF SUNLIGHT A DAY, TEMPERATURES THAT CLIMB TO 35°C WITH AMAZING REGULARITY AND A MODERN CITY BUILT OF GLASS, STEEL AND CONCRETE, WHAT'S AN ARCHITECT TO DO?

Back in the late 1970s, it was very apparent that shade and natural ventilation were not going to be part of the new wave of skyscrapers shimmering on Singapore's horizon. Buildings were equipped with the finest air conditioning on the market, but even air straight from the Arctic would melt on contact with afternoon sun streaming in through glass windows.

By 1981, the Singapore Government took the eco-friendly stance (unusual for the time) requiring that all commercial buildings upgrade their thermal envelope performances to reduce energy consumption due to air conditioning.

Yes, floor to ceiling glass windows aren't ideal for the tropics. Yes, the amount of energy consumed by air conditioning systems is staggering. But style is style, and it was up to the industry to find ways to cope with government directives to take the heat off and make interior spaces livable.

Maria Tan, architect and principal of Maps Design Studio says no one wants to sacrifice a stunning view (especially if your office is on a high floor) and natural light, despite the drawbacks. "These sorts of glass openings mean there has to be not only heat control, but privacy as well."

Obviously, traditional solutions such as curtains and drapes won't do, especially with floor to ceiling glass walls. And since human comfort is an essential part of good design, someone had to come up with an answer, and in Singapore's case, that answer came in the form of Rollite Rollscreens.

Rollite Rollscreens took the idea of fibreglass screens and made it better. Fibreglass has long been recognised as an efficient and economical method to reduce heat and glare. But the next step was to integrate the roller screen into modern architectural design, and what that meant was a compact and reliable roller assembly which allows the fabric screen to be rolled up and out of sight.

But even as architects came up with

ever more daring designs for buildings — think curved glass walls, skylights and cantilevered storeys — the demand for solutions to heat and glare increased. Clients initially wanted to save money on air conditioning, but by 2005, the pressure for green solutions increased as well.

For May Sim of Sunscreen Singapore, Rollite Rollscreens manufacturer, the company's attitude was simple: You have the ideas, no matter how impossible they sound. We'll find the solutions.

What that translated into was a lot of research into fabrics, tension and ways of installing screens in (formerly) impossible places. Glass ceilings and roofs require a horizontal installation, and Sunscreen (Singapore) found a way to do it. Curved glass was another problem they surmounted, as well as windows, such as the ones at the SMU campus, which slanted inwards and outwards.

Of course, just installing a system isn't enough; it has to wear well too. For example, the horizontal screens, known as a skylight system, cannot sag. They have

to remain stretched and taut, even if the fabric stretches to seven metres or even longer. And because they are high up, there has to be a motorised control. With the help of SIMTech, A*Star, Rollite Rollscreens was able to successfully overcome these challenges.

Beginning in 1981, the company took on major projects like the Bank of China, Bank of East Asia, the then-Compass Rose restaurant with its breathtaking views and the Economic Development Board offices. In the 1990s, MobileOne, Shell Eastern Petroleum, Swiss Bank, The Heeren and UOB Plaza I and II came on board. The new century saw technological breakthroughs in the form of the internal roller screen and applications in new iconic buildings such as Biopolis, DBS Tower One, Maybank, SGX Tower I and II and SMU. And in the past four years, projects such as Citibank@Changi, Horticulture Park, the ION Observation Deck, Robert Bosch (SEA) Pte Ltd and Standard Chartered Bank turned to Rollite Rollscreens for the ultimate in protection from heat and glare.

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Of course, office buildings aren't the only places where large expanses of glass are being used to great effect. High end condominiums, home to many famous names, have the same need for privacy, protection from heat and glare and preserving what in many cases is a multi-million dollar view. For example, bungalows at Sentosa Cove, with their stunning waterscapes, needed screens that not only met these criteria, but looked chic and stylish and able to fit in with the costly designer furnishings their owners wanted. In the area of Kuala Lumpur, a very exclusive development (so exclusive we can't name it) had the entire condominium outfitted with Rollite Rollscreens – and what's more, used it as a selling point.



OPPOSITE: Rollite Rollscreens helps to reduce glare and keeps a home cool

TOP: OneKIL by SCDA Architects

LEFT: Rollite Rollscreens used in Horticulture Park



Rollite Rollscreens requires a relatively significant investment at the outset: installation of them in an entire bungalow can run anywhere from around \$50,000 and up, while a sophisticated motorised skylight system can easily cost \$100,000. But those who have chosen Rollite Rollscreens look at them as a long-term investment, not just in terms of energy savings but in human comfort as well. In an office, that translates into higher productivity and employee satisfaction. In a home, comfort is a non-negotiable requirement.

Again, Rollite Rollscreens turned to new fabrics and technologies to answer the needs of the architects, designers and homeowners, who did not want a "one size fits all" solution. So they introduced to the market a range of options, all of which offer superb protection from heat and sun, a range of fashion-friendly

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colours and energy savings. Imported, high tech fabrics were brought in, such as the Fiberglass Phifer Sheerweave, a USA Greenguard certified screen material, or the Verosol Silverscreen, a metal-back fabric that helps reduce costs in several ways as it is a highly heat-reflective, transparent fabric that will stand up to wear and tear. The Enviroscreen offers true sustainable solar control without stinting on either comfort or good looks, and is formaldehyde and PVC-free. Recently, the company introduced Phifer Sheerweave with Microban, which provides all of the environmental protection anyone could want, including protection from the microbes that inhabit

today's sealed interiors.

Rollite Rollscreens motorised are engineered and manufactured in Germany to the strictest specifications and tested again by Rollite Rollscreens quality managers.

The impact of Rollite Rollscreens on your interior comfort and energy cost-savings is further enhanced by the kind of window treatments a building has. Which is why a consultation with Rollite Rollscreens is the first step to finding the best solution for your interior needs.

Durability and reliability aside, Rollite Rollscreens offer a range of visual effects, from colours that reflect the latest trends in interior design to the quality of light and the degree of privacy a client desires. And with a roll call of prestigious commercial and private clients – too many to list here – you can be assured that Rollite Rollscreens will do everything they promise and more: provide you with an eco-friendly solution to high energy bills, maintain the optimum comfort level in a home or office, create private spaces without losing those million dollar views, return on your initial investment and above all, beauty to the spaces where you spend your life.

TOP: Allia Villas Soori Bali
by SCDA Architects

RIGHT: Bosch Building
uses Rollite Rollscreen

