



# SIKA AT WORK

KARLATORNET,  
GÖTEBORG, SWEDEN

BUILDING TRUST







View from the top of Karlatornet, 246m.



# KARLATORNET, GÖTEBORG

## A PART OF KARLASTADEN

### - A NEIGHBORHOOD THAT STANDS OUT.

Karlstaden, the new district on Lindholmen. A mixed city with as many opportunities as people. This is where a new city center is created, which lives 24-7, all year round. A total of eight blocks with about 2 000 homes, hotels, offices, carefully selected stores, restaurants, culture and service. The location is optimal, beautifully located right on the Göta river. The area is connected with the rest of the city center by frequent bus lines and ferry across the river. To travel between Lindholmen and Stenpiren on the mainland takes no more than 6 minutes.

#### KARLATORNET

**Karlatornet is the tallest building in the Nordic region with its 246 meters.**

The architects behind the design of Karlatornet are the American architectural firm Skidmore, Owings and Merrill, with buildings such as Burj Khalifa in Dubai and Freedom Tower in the US on the track record.

The idea for Karlatornet was born in 2004 at the construction group Serneke. Serneke saw the potential in the area, which was relatively untapped despite the central location.

There are carefully designed homes where floor-to-ceiling windows take advantage of the views from each room. Karlatornet offers both living-city rights and property rights in different sizes.

Here you will find accommodation high above the ordinary with access to hotel services, gym, entrance with staffed reception, several common facilities and a terrace on the fifteenth floor.

#### THIS IS KARLATORNET

- 246 meters, the tallest building in the Nordic region.
- 74 floors with 611 apartments of ~34,000 m<sup>2</sup>
- The apartments have floor-to-ceiling windows that take advantage of the views from each room.
- About 33 000m<sup>2</sup> glass facade
- At the top of the house are penthouse apartments in 3 floors of about 400m<sup>2</sup> with conservatory, roof terrace and hot tub.
- In order to stand firm, the building's digging piles extend down to the bedrock about 70 meters below the ground.
- The lifts in Karlatornet will reach a speed of about 30 km/h, which is about 5 times as fast as a normal lift.



## THE CLIENT'S REQUIREMENTS AND THE NEEDS OF YUANDA

Sealing of facade elements on skyscrapers is crucial to prevent water ingress and maintain the integrity of the building. When mounting the 33 000 m<sup>2</sup> glass facade, it is important that it is correct from the start. Through extensive preliminary studies and tests in our lab in Spånga, we have ensured the right material and workmanship for each application.

When using EPDM cloth and high-quality sealants, an effective and long-lasting sealing solution is achieved. The EPDM cloth's flexibility and resistance to weather and UV radiation make it ideal for sealing transitions and connections between facade elements. Together with carefully selected sealants, a durable barrier is created that protects the skyscraper against weather influences and contributes to its long-term sustainability. This not only provides reliable protection for the structure and inhabitants of the building, but also an aesthetically pleasing appearance.

Sealing around the façade elements has been made with Sika's EPDM cloth, SikaMembran® Universal, sealed with SikaBond TF Plus. The SikaMembran® system is a high-performance system consisting of various EPDM membranes that provide steam control layers and waterproof barriers for curtain walls. They are suitable for most climatic conditions in combination with suitable adhesive.

As a weather protection, Sikasil® WS-605 S is a durable, tough, neutral-curing silicone joint compound with high motion absorption and excellent adhesion. It is especially suited for weather sealing on glass facades, curtain wall facades and windows.

## PASSIVE FIRE PROTECTION

When installing the facade and associated building elements, it is important, especially in skyscrapers, that the fire cells are kept intact. For this to be successful, all linear joints and penetrations need to be fire-protected.

Passive fire protection in skyscrapers focuses not primarily on putting out fires, but on preventing their spread. The goal is to limit the fire to specific fire cells in order to minimize damage and primarily give people in other parts of the skyscraper the opportunity to evacuate unharmed.

By using effective fire protection systems and structured fire walls, demarcated areas are created, which is crucial to enable safe evacuation.

Sikasil FS-665 SL is a fire-rated, self-levelling, silicone joint compound. It is mainly used for floor joints and where fire rated sealing products are required.

The choice of materials plays a central role in ensuring passive fire protection and creating a safe environment in skyscrapers. Sika's products are rigorously tested and have the required certifications.



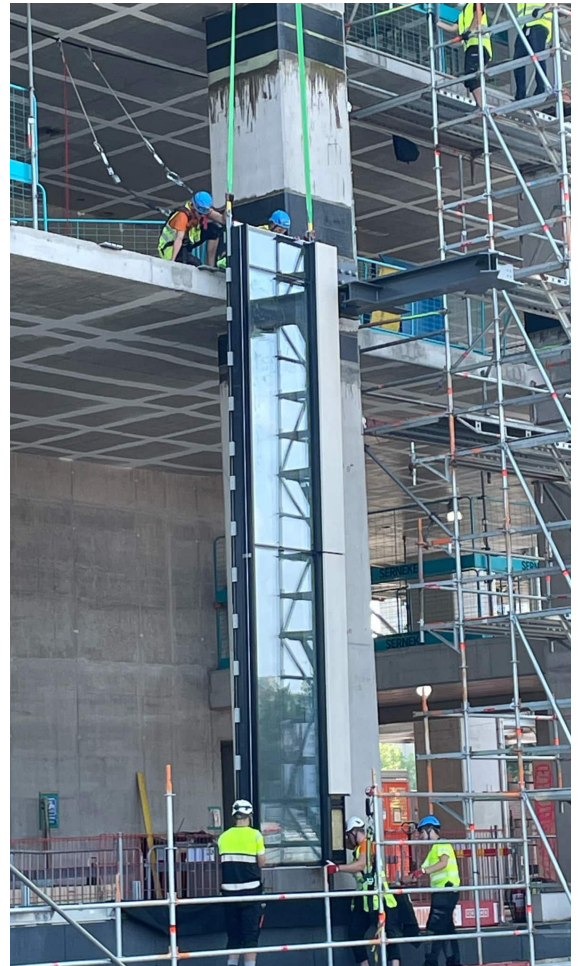
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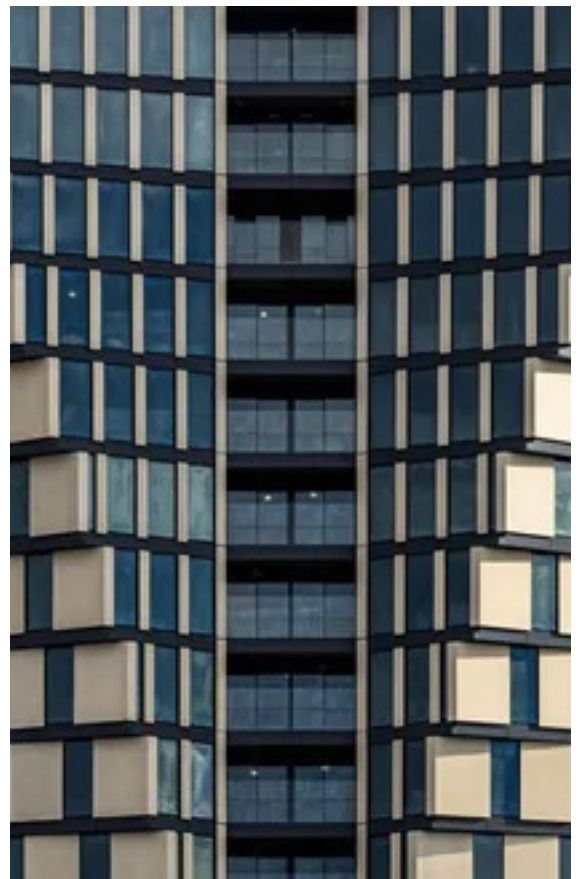
## SIKA PRODUCTS USED IN THE ASSEMBLY AND SEALING OF THE GLASS FACADE

Product	Quantity
SikaMembran Universal <i>Vapor/waterproofing membrane for facades.</i>	9,55 km
SikaBond® TF Plus N, 600ml <i>Elastic, 1-component adhesive for SikaMembran® system.</i>	14 540 pcs
Sikasil®-670 Fire, 600ml <i>Neutral curing fire protection silicone.</i>	8 700 pcs
Sikasil® FS-665 SL, 25/kg <i>self-levelling fire rated joint compound.</i>	2 875 kg
Sikasil® WS-605 S, 600ml <i>High performance non-bleeding silicone sealant for weather sealing.</i>	1003 pcs
Sikasil® SG-20, 300ml <i>1-component, high strength structural glazing silicone.</i>	1360 pcs

Read more about our products at [www.sika.se](http://www.sika.se)



Installation of the first façade element on the Karlatornet. With a height of about 7.40m, this unit is one of the largest and is installed on the ground floor.  
Foto:Yuanda



# YUANDA EUROPE

## THE WORLD'S LEADING SPECIALIST IN SKYSCRAPER FACADES

### PROFESSIONALS IN FACADES

Yuanda started operations in Europe in 2010 and has its head office in Basel, Switzerland. There are engineers and designers with extensive knowledge of how a facade project is carried out in the best way. In addition to the office in Basel, Yuanda has local support offices in the counties where they run projects, including in Sweden.

Installing the facade on high-rise buildings is a big challenge. You fight against the wind and the weather, especially in autumn and winter. The logistics when assembling large facade elements do not allow for mistakes. Almost all the building elements of this size are produced on the other side of the world and careful planning is required to sync the schedules. All this is Yuanda's strength as they specialize in this.



*"The challenges of a project like this are many. Our experience together With Sika as a supplier, the customer can feel confident that we deliver."*

– Jonas Eriksson - Project manager  
Yuanda Europe

### EXPERIENCE

Our unique blend of technical experience and project experience combined with one of the world's largest and most modern manufacturing facilities offers CE-certified and cost-effective facade opportunities to the European markets

yuanda  
EUROPE





### COOPERATION IN THIS PROJECT WITH YUANDA

In the search for products for sealing between the facade and the joists, as well as between the facade and other building parts, Sika was able to present a range that included the EPDM cloths, adhesives, silicones and joining for passive fire protection that was needed.

The collaboration started early and continued continuously to ensure that personnel were trained in Sika's products, that support was available throughout the entire process and that deliveries were synchronized with deliveries of phase elements to ensure that assembly work would flow without unnecessary stops.

Constant presence from Sika, both at the start-up of and during the continuous installation of the facade system, was a matter of course.



### SUCCESSFUL END RESULT

Since the glass façade has such a prominent role both on the outside, as a stylish façade, and on the inside, with floor-to-ceiling windows, there was no room for shortcuts.

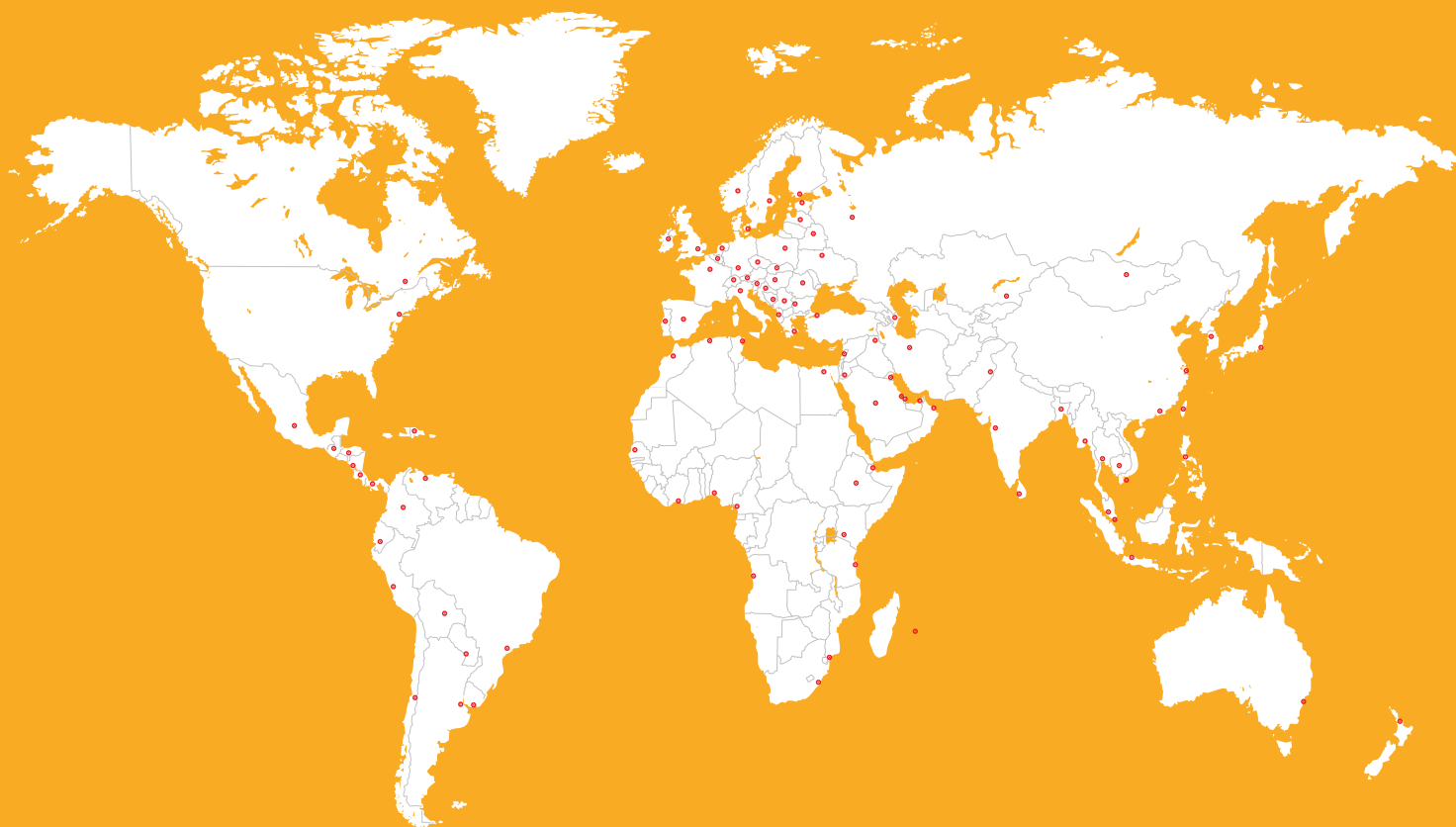
With a world-leading supplier of glass facades and a world-leading supplier of materials for gluing and joining, you ensure a successful and visible end result.



### KONTAKT

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# GLOBAL BUT LOCAL PARTNERSHIP



Sika Sverige AB, which is part of the global group Sika AG, is a leading supplier of specialty chemical products. Sika delivers solutions, systems and products to the construction industry and manufacturing industries and is a leader in materials used to attach, attach, cushion, strengthen and protect load-bearing structures. Sika's product range consists of high-quality concrete-to-feed agents, special mills, adhesives & joints, damping and reinforcing materials, systems for structural reinforcement, industrial flooring, as well as roof and waterproofing systems.

Our latest terms and conditions of sale apply.  
Please always read the Technical Data Sheet before using our products.



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