

#16
Architectural Magazine
by Reynaers Aluminium

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Istanbul

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LAS PALMERAS
Contemporary
serenity

THOMAS CARR COLLEGE
Dynamic architecture

"The building expresses the aspirations of the school's future"

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REYNAERS
aluminium

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CONNECTING CONTRASTS

Istanbul is the commercial and industrial metropolis in Turkey and a gateway to Asia and the Middle East. It's an attractive and vibrant city, full of contrast in colour, contrast between old and new, and between east and west.

The ability of Turkey and the Turkish people to bridge these contrasts has contributed to the prosperity and the charisma of the city and the country. But there are some challenges as indicated by one of the most celebrated architects in Turkey: Nevzat Sayin. Sayin designed the striking Lapishan business centre (see page 18 in this issue). This project is a good example of 'contrast in colour' as stated by Albertas Jerusevicius, Regional Director of Reynaers Aluminium Turkey, 'Lapishan is a very successful project in which we effectively applied our expertise and experience. With its bright red façade, Lapishan literally gives color to the Kartal District.'

Istanbul is home to our largest investment in the Asian region. Reynaers wants to connect varied designs and different markets and therefore decided to build a full fledge production and service centre in Cerkezkoy, Istanbul. This way we can contribute even more to the realisation of projects and to the success of our partners.

Once more, Report magazine will take you around the amazing world of architecture and as a bonus to Istanbul!

Martine Reynaers



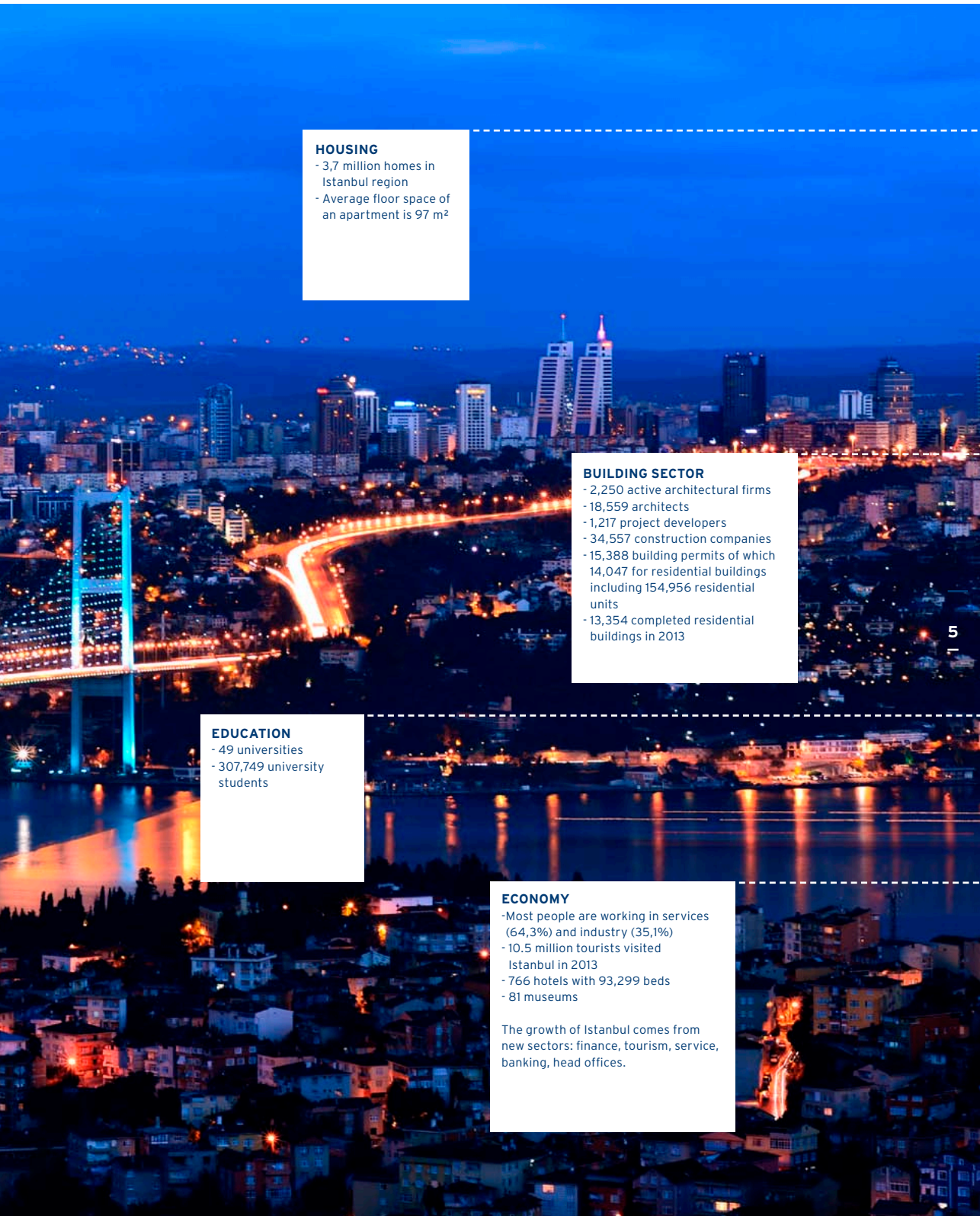
ISTANBUL (TR)



LOCATION

DEMOGRAPHY

- 14.2 million inhabitants (18.5% of the Turkish population)
- The area is 5,343 km²
- 2,650 inhabitants per km²
- 39 districts



HOUSING
- 3,7 million homes in Istanbul region
- Average floor space of an apartment is 97 m²

BUILDING SECTOR
- 2,250 active architectural firms
- 18,559 architects
- 1,217 project developers
- 34,557 construction companies
- 15,388 building permits of which 14,047 for residential buildings including 154,956 residential units
- 13,354 completed residential buildings in 2013

EDUCATION
- 49 universities
- 307,749 university students

ECONOMY
- Most people are working in services (64,3%) and industry (35,1%)
- 10.5 million tourists visited Istanbul in 2013
- 766 hotels with 93,299 beds
- 81 museums

The growth of Istanbul comes from new sectors: finance, tourism, service, banking, head offices.



Ortaköy Mosque and the first Bosphorus bridge

BRIDGE BETWEEN TWO CONTINENTS

Istanbul like many other historic cities in Europe has been an important civilization hub for over 8,000 years. It has always been perceived as half European and half Asian by many Europeans, which is both the result of a geographic feature and the multiple cultural layers embedded within the population and history of the city.

Text **Omer Kanipek** Photography **Dreamstime**

Long after Greek settlers established Byzantium on the European side of the Bosphorus, the Roman emperor Constantine was attracted to this location. Constantinople became the capital of the Byzanline Empire. The Great Palace of Constantinople and the glorious Saint Sophia church were the heart of the city. Located between the boundary of Europe and Asia, Constantinople served as the bridge between two continents and became a commercial, cultural, and diplomatic center for centuries. In the 14th century, Constantinople began turning into a multicultural metropolis after the conquest by Ottoman Turks. It was tolerant to many different religions.

The decline of the Ottoman Empire brought even more cultural and ethnical diversity into Istanbul. Since the 19th century Western style architecture influenced the building typology. Baroque and



Typical Ottoman style houses



Baroque style streets

French Empire Style, and a new branch of Art Nouveau flourished in Istanbul, followed by Art Deco examples.

At the end of the 19th century the city started to expand to both the east and west thanks to the increasing ferry connections. New architectural experiments with late Art Deco and Bauhaus continued in villa sized houses in the suburbs as well as apartment blocks in the expanding Pera region where new neighbourhoods were formed.

ACCELERATION

Ataturk, as the founder of the modern Turkish Republic, decided to move the capital to Ankara in order to create a physical and mental distance from the imperial Ottoman era. However, Ataturk was not totally ignorant to Istanbul as he invited famous urban planner Henri Proust to make the masterplan of Istanbul. Proust's principle was effective to preserve the silhouette of the historic Peninsula as well as the creation of Taksim Square and Gezi Park.

In the fifties the population started to increase steadily due to the government policies fostering immigration from rural areas to the cities. The construction of the first Bosporus Bridge and the intercity highway extending from East to West accelerated the city's growth at the beginning of 1970's. The building typology changed from small shacks to one or two stories high, concrete framed apartment blocks.

VALUABLE SPACES

In the 1980's the population increased to over five million, almost doubling in a five year period. By the 1990's industrial areas started to be pushed to the perimeters to allocate valuable space for residential and service sector functions. The axis from Taksim Square to Maslak is filled with office towers. The construction of the second Bosporus Bridge and a new highway to the north triggered the expansion of Istanbul to the northern forests and water reservoirs.

In 2000, when the population reached over 11 million citizens, the 'urban transformation' starts: industrial buildings are replaced with large-scale shopping malls and high-rise residences.
Up to today, the population still continues to increase in Istanbul nourishing the demand to build more and more residential units, pushing the construction and property development business to be the major industry of the country. ■

WIDELY DISPERSED ARCHITECTURE

Thanks to its long history, Istanbul has become one of the largest and most crowded cities in Europe, containing numerous beautiful examples of architecture from different eras.

Text **Omer Kanipak** Photography **Orhan Kolukisa (Yercekim Photos)**

Most of the historic buildings are located within the walls of the old 'Historic Peninsula' dating back to the Byzantine period, but many new buildings, built after 1950, are also to be found here. Their construction continued until the awareness of the importance of preserving historic monuments began to increase from 1980 onwards. The city grew rapidly after 1970, further to the east and west with the construction of the motorway and the Bosporus Bridge, with a third bridge under construction in the far north of the city. It would be difficult for a lover of architecture to see all the city's inspiring buildings in a couple of days. However, the core of the city includes most of the buildings particularly worth a visit. The axis extending from Taksim Square to Levent features the more recently completed office buildings. Buildings such as residential developments and university campuses constructed over the past decade are dispersed around the outskirts of the city. ■


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1. **Hagia Sophia**, 537. Architects: Isidore of Miletus, Anthemius of Tralles
2. **Süleymaniye Mosque**, 1558. Architect: Mimar Sinan
3. **Botter Apartment building**, 1900. Architect: Raimondo Tommaso D'Aronco
4. **Florya Summer House**, 1930. Architect: Seyfi Arkan
5. **Levent garden city district**, 1947. Architects: Kemal Ahmet Aru, Rebii Gorbon
6. **Zeyrek Social Security offices**, 1962. Architect: Sedad Hakki Eldem
7. **IMC – Istanbul Drapers' Bazaar**, 1967. Architects: Doğan Tekeli, Sami Sisa, Metin Hepgüler
8. **AKM – Ataturk Cultural Centre**, 1969. Architects: Feridun Kip, Rüknettin Güney, Hayati Tabanlioğlu
9. **Tercüman building**, 1974. Architects: Günay Çilingiroğlu, Muhlis Tunca
10. **National Highways Headquarters**, 1980. Architects: Mehmet Konuralp, Salih Sağlamer
11. **National Reinsurance Headquarters**, 1992. Architects: Şandor Hadi, Sevinç Hadi
12. **Levent Kanyon**, 2006. Architects: The Jerde Partnership, Tabanlioglu Mimarlik
13. **Ipera25**, 2010. Architect: Ahmet Alataş
14. **Naval Museum**, 2013. Architects: Ertuğ Uçar, Mehmet Kütükçüoğlu (Teğet)
15. **Piri Reis Maritime University**, 2014. Architects: Aydan Volkan, Selim Cengiç (Kreatif Mimarlik)


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VIBRANT CITIES WITHIN A CITY

Nevzat Sayın, one of the most celebrated architects in Turkey, talks about the attractive and vibrant city of Istanbul and the flip side of the coin: the impact of the growth of the construction industry.

Text **Omer Kanipak** Photography **Cemal Emden**



Istanbul is an attractive city. What do you think is the most prominent feature of Istanbul?

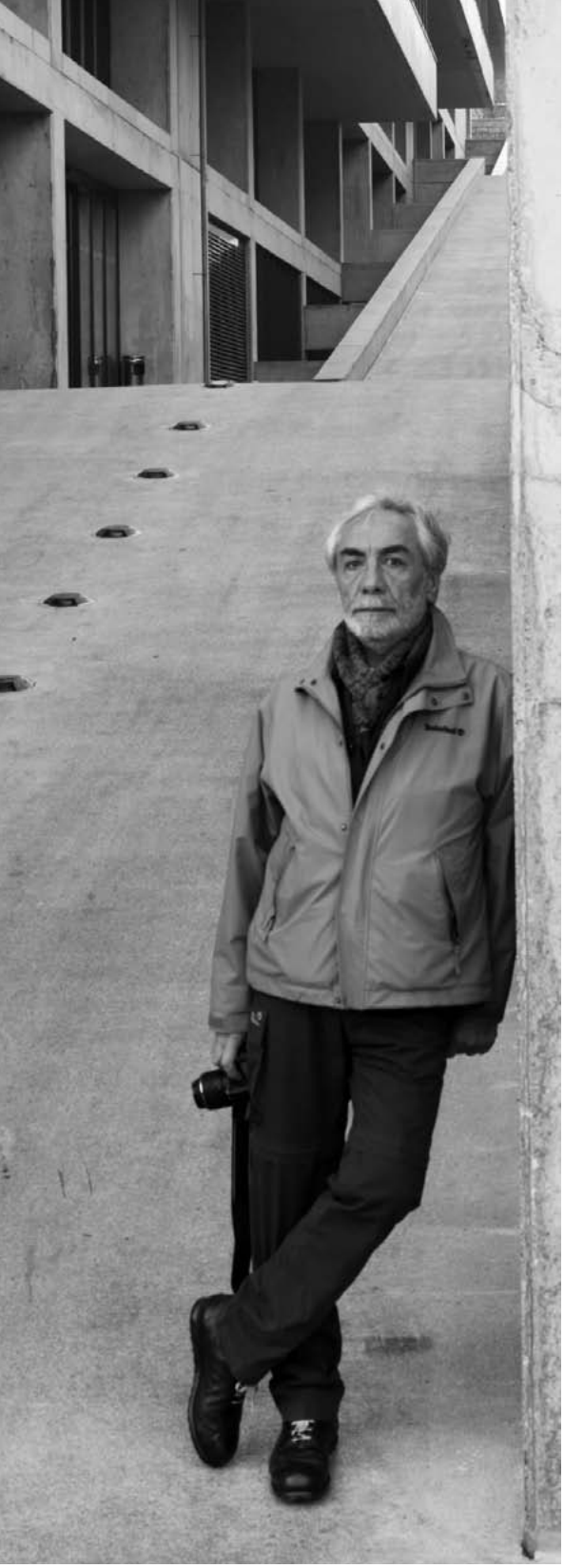
'For me it is always the Bosporus; this natural North-South axis gives Istanbul great attraction. The city started to develop on the small historical peninsula, but has grown on two sides, in the eastern and western directions. In contrast with many other historic cities in Europe, the geographical conditions meant that it did not develop around a central core with a circular pattern. The linear development of Istanbul caused many smaller centres to be formed, dispersed within the city, making it very attractive. Each of these centres has its own characteristic zones and neighbourhoods. In fact, Istanbul is a city built up from many different smaller cities, giving it incredible vibrancy.'

Turkey has pursued a policy over the last decade aimed at nurturing the construction industry. What do you think about the current urban transformations taking place in Istanbul?

'Every city transforms itself; it's inevitable. In Istanbul, however, the situation turned into a state-organised speculative construction movement, and I don't think it is benefiting Istanbul. The economy is based on property development, meaning constructing buildings with as much floor space as possible to sell or rent, with no regard for building regulations and laws. It will be very hard to change this trend in the short term and we as architects will have a hard time coping with this. The focus is on making money rather than creating a better physical environment and consequently a better social environment. The tendency towards the accumulation of capital by individuals and companies is neither properly managed nor regulated by the state.'

Many architecture schools have opened recently in Turkey. You are one of the practising architects who also teaches. What are your hopes for all these young people wanting to become architects?

'If this young generation of architects embraces and internalises the knowledge as quickly and fully as they are able to access it, then I think the

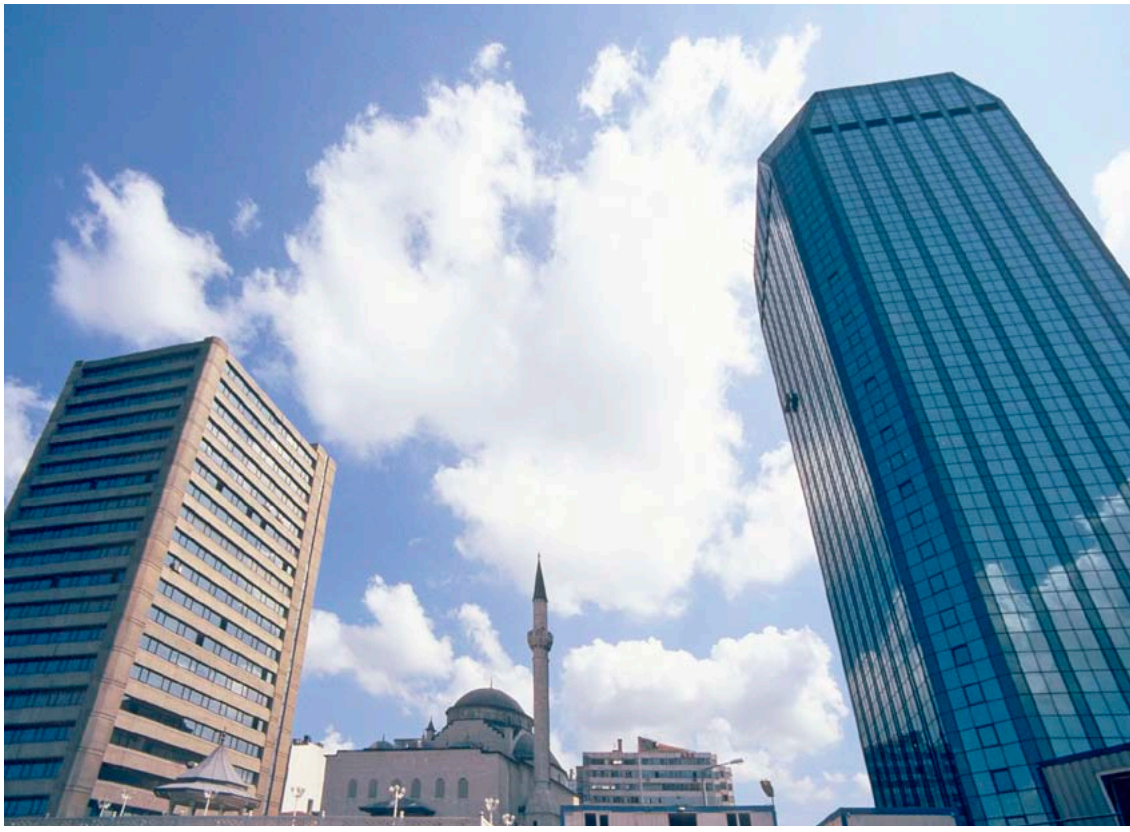


"ISTANBUL IS A CITY BUILT UP FROM MANY DIFFERENT SMALLER CITIES, GIVING IT INCREDIBLE VIBRANCY"

development in architectural education and training will make the desired contribution to the practice of the profession. Architectural training addresses both doing and thinking. Buildings that are in harmony with their surroundings can only exist if people devote their educational careers to curiosity and the excitement of discovery.'

The level of environmental sensitivity and awareness has been increasing in this country in recent years, not only in the big cities but also in rural areas. How do you think this will affect the transformation of Istanbul in the future?

'Our sensitivity is the reason for the environment's constant insistence: "You no longer have the right to be inconsiderate". Every new thing we do, and every new decision, should meet this requirement. The built environment consumes a large share of our resources, and the increasing sensitivity to the limitation of energy usage and the promotion of recycling is promising for the quality of urban life. I strongly believe in the morality and dynamism of young people, who form a large proportion of the population. Together we can try to stop the destruction and disappearance of green areas, and even create new green spaces. I am hopeful that they will change things. They can make efforts to preserve the vibrancy of the streets.' ■



TURKISH MANHATTAN

In 1850, when the French novelist Gustave Flaubert predicted that Istanbul would be the capital of the world in a century's time, he wasn't that far off the mark. Since 1970, Istanbul has grown from a historic walled city of two million into a teeming megalopolis of more than fourteen million. From the head office of Reynaers Turkey in Istanbul, Regional Director Albertas Jerusevicius now gazes out on a cityscape of endless cranes, rather than over the minarets that used to dominate the skyline.



Albertas Jerusevicius
Regional Director
Reynaers Turkey

Text **Viveka van de Vliet** Photography **Dreamstime**

The view from the Reynaers' office speaks volumes about the number of construction projects currently under way in this rapidly growing city. "Turkey has a construction economy, and Istanbul is its driving force", explains Jerusevicius. "In early years, we had one city centre. Now they are everywhere. The European side had many commercial buildings, while the Asian side was mainly residential. Istanbul has since transformed into a mixed cityscape, with a 'New Manhattan' in the historic centre."

Within Turkey, Reynaers works primarily on projects in the seaside resort of Antalya, in the capital Ankara, and in the largest city, Istanbul. "In Istanbul alone, we're currently working on five major projects", says Jerusevicius.

EXCELLENT OPPORTUNITIES

The economy is running at full throttle and urban renewal has provided an entirely new infrastructure. Keeping up with the growth is no simple task. Naturally, hospitals, schools, university campuses, shopping centres, and houses must still be built. Residences in existing neighbourhoods have hardly been renovated, because they were not built properly to withstand earthquakes. "The building of taller, new apartments with sturdier construction, as well as commercial buildings, represents interesting opportunities", says the regional director. "We can effectively apply our expertise and experience for technically complex projects, particularly when it comes to durable aluminium façades."

Ask Jerusevicius about his vision for the future of the city and, after a bit of initial diplomacy, his vision emerges. "Of course construction is a must, and there are excellent opportunities for creative young architects with the freedom to draft the most stunning designs. But the government also pours millions of dollars into mega-construction projects such as a third airport, a third Bosphorus bridge, luxury hotels, and colossal department stores. The face and character of the city have changed dramatically."

Istanbul is a unique and colourful city, but for me the historical context is also very important, something which is also in the interest of economic growth, he says. "Istanbul is, after all, one of the world's top tourist destinations. Visitors don't come to see skyscraper-spiked skylines, they want to admire the historical and cultural riches of the old city, its parks, and the Bosphorus." ■

THE HIDDEN TREASURES OF ARCHITECT NEVZAT SAYIN

1 **Kuzguncuk** is the neighborhood that I live in and where my office is located. Not quite hidden for many people but it is still one of the most inspiring and serene settlements next to the Bosporus.

2 Actually all the creeks that spill into Bosporus are fantastic places of Istanbul. Unfortunately most of them are spoiled by buildings around, but still they keep their exquisite atmosphere thanks to the topography. Especially the **Kagithane region** at the tip of Golden Horn is stimulating.

3 **Santral Istanbul** is an old electric production plant left unused for many years. It was almost thirty years ago I first visited this extraordinary place when part of it was still in operation. I was lucky to design the Bilgi University campus buildings here after many years.

4 The small fishing village **Karaburun** on the north coast of Istanbul is still unspoiled and full of peace. A bit distant to the center but worth the experience.


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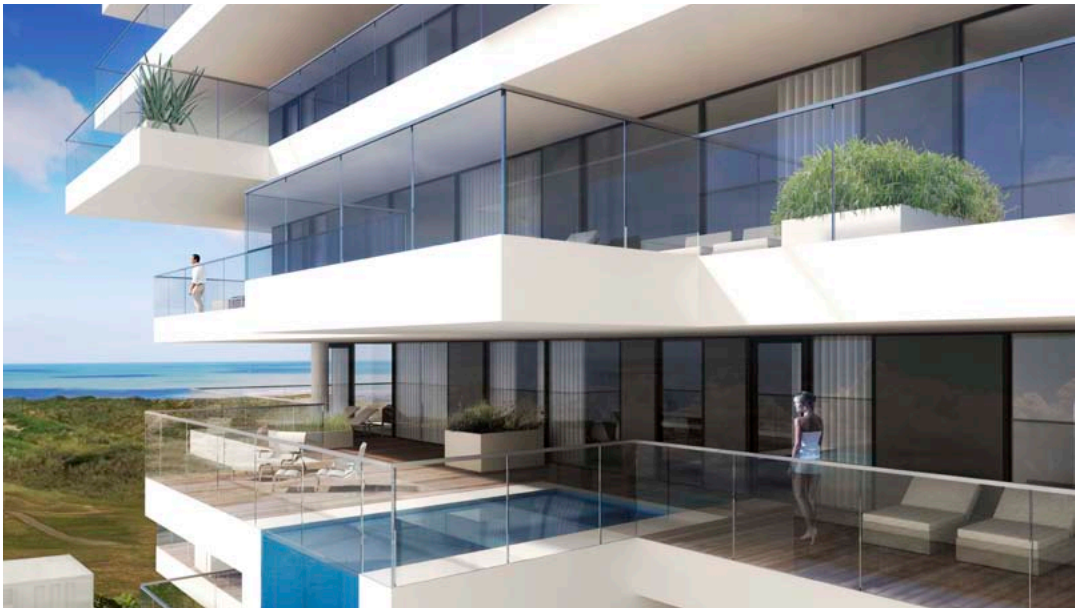




LUXURY BESIDE THE THAMES

LONDON (GB) - Living doesn't get any better than this: the modern complex of One Tower Bridge is located in the heart of London, next to the iconic Tower Bridge and opposite the Tower of London. The building offers five-star luxury living with spa and gym facilities, and much more. Most of the apartments and penthouses have balconies or terraces, some of which offer a phenomenal view of the River Thames. The complex consists of nine apartment blocks. Reynaers provided the aluminium systems for blocks 1-2-4-6-9. In block 2 and 4, no less than 300 CP 130 sliding doors were installed.

ONE TOWER BRIDGE
Architect: **Squire and Partners, London**
Planning consultant: **Barton Willmore, London**
Structural Engineer: **Meinhardt, London**
Consulting Engineer: **Hoare Lea, London**
Main contractor: **Berkeley Homes Limited, London**
Investor: **Berkeley Homes, London Borough of Southwark**
Fabricator: **M Price Limited, London, Scheldebouw, Middelburg**
Reynaers systems: **CS 77, CS 86-HI, CP 155, CP 130, CW 50-SC**
Expected completion date: **Winter 2016**



AN IMPRESSIVE VIEW



OSTEND (BE) - Like many European port cities, the Belgian coastal city of Ostend wanted to transform its old ports into a revitalised city district. This development project by Versluys Bouwgroep and CFE immo which needs to accommodate space for living, working, and relaxing, covers an area of twelve hectares. Conix Architects was responsible for the design of the first iconic building, the apartment complex Baelskaai 12. Each of the 49 apartments has an outdoor living space of at least twenty square metres and an impressive view of the dunes and the North Sea. The view of the building's façade is also worthwhile: swimming pools have been integrated into the balconies of the eleventh and fourteenth floor.

BAELSKAAI 12 (OOSTEROEVER)
Architect: **Conix Architects, Antwerp**
Main contractors: **MBG-Van Wellen, Wilrijk and Versluys Bouwgroep, Ostend**
Fabricator: **Allaert Aluminium, Harelbeke**
Reynaers systems: **CP 130-LS, CS 77-HI, CW 50**
Expected completion date: **summer 2016**



BRILLIANT COMPLEX

ST. PETERSBURG (RU) - The white residential complex Leontievsky Mys is one of the most remarkable apartment complexes in St Petersburg's luxury housing sector. The location is exceptional for many reasons: the complex is situated on the very tip of Petrogradsky Island, and is surrounded on three sides by the river.

The Nobel-prize winning Russian economist Wassily Leontief once called this landmark home (1906-1925), and the project has been carefully designed to function as a unique spot for future geniuses. For instance, considerable attention has been paid to amenities for children: the complex features an enclosed area with several playgrounds, a private nursery school, and a children's art centre. However, adults can also indulge themselves in luxury: a private marina and yacht club are under development, as well as sophisticated plant-lined terraces. The numerous windows and balconies of the buildings are fully equipped with the customised Reynaers window and door system CS 86-HI. Striking furniture from the brand YOO inspired by Starck, which is under the creative direction of master designer Philippe Starck, has been selected to furnish both the interior and exterior of the complex.



LEONTIEVSKY MYS
Architect: **YOO inspired by Starck, London**
Local architect: **Studio 17 Creative and residence Vyacheslav Gedueva, St. Petersburg**
Main contractor: **Ltd Test, St. Petersburg**
Investor: **Ltd Leontievsky Mys, St. Petersburg**
Fabricator: **Ltd. NordFasad, St. Petersburg**
Reynaers systems: **CW 50, CW 50-HI, bespoke solution based on CS 86-HI, CS 86-HI/HV**
Expected completion date: **spring 2015**



IMPOSING GLASS FAÇADES

SOFIA (BG) - The 112-metre tall multifunctional Millennium Centre consists of three towers that include a hotel, apartments, offices, and commercial spaces. 40,000 square metres of glass façades made up of geometric forms are the most striking feature of this 130,000-square-metre building.

MILLENNIUM CENTRE
Main architect: **Borislav Bogdanov, Sofia**
Architect: **Ivaylo Slavchev, Sofia**
Façade consultant: **Velimir Zlatarev, Sofia**
Main contractor: **Nikmi Jsc, Sofia**
Fabricator: **Nikmi Jsc, Sofia**
Reynaers systems: **bespoke element façade solution**
Expected completion date: **winter 2017**

BALANCED DYNAMICS

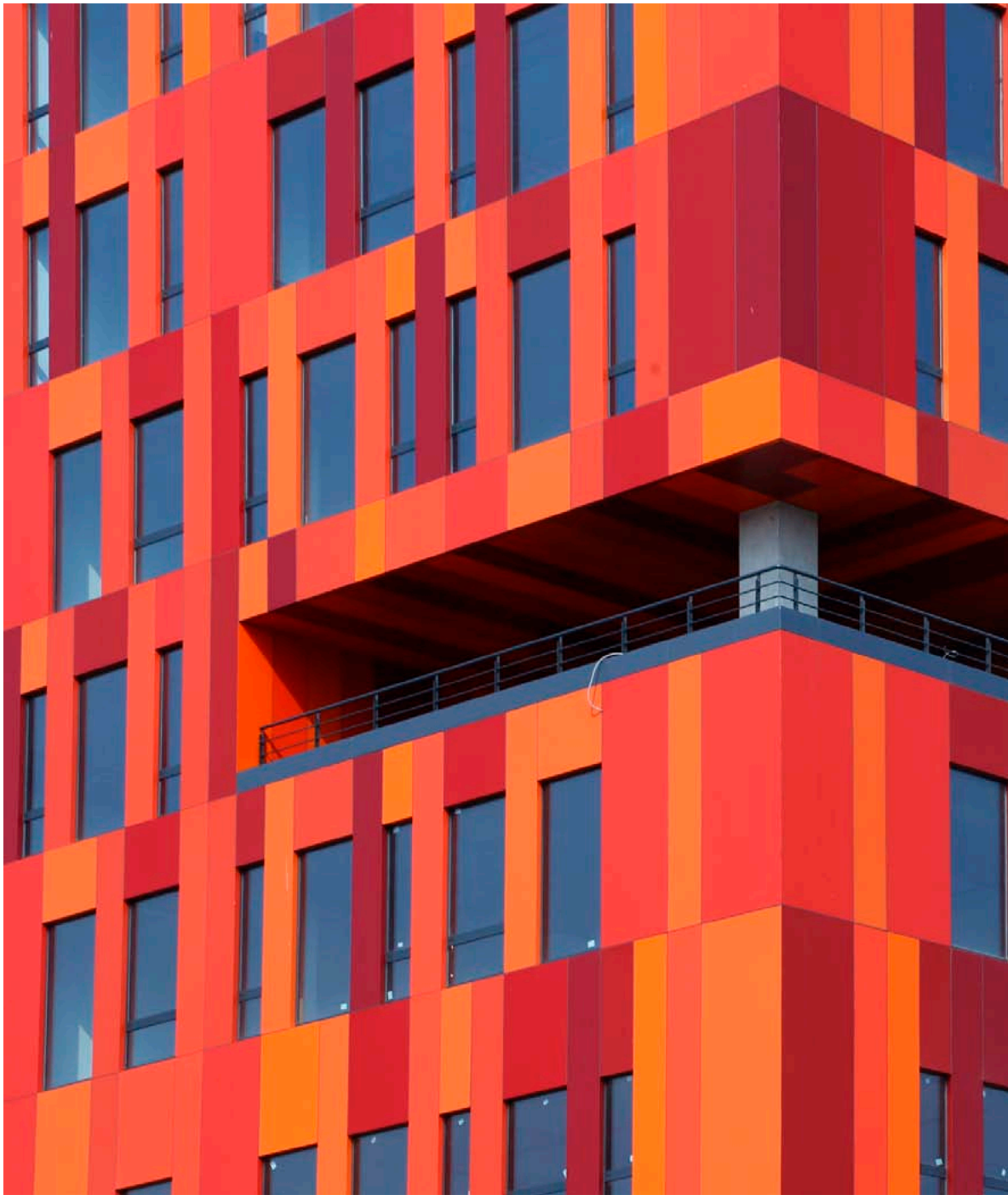
TEHRAN (IR) - Dynamic and fluid structures form an important guiding principle in the work of Fluid Motion Architects, based in the city of Tehran. Commissioned by Mellat Bank, the 33-storey tower comprises a stack of rectangular volumes, all of which follow a slight upward curve. A distinctive balance has been created by the slight shifting of the glass blocks in relation to each other, giving the office building a rather striking appearance.

JAM TOWER
Architect: **Fluid Motion Architects – Mr. Daneshmir, Tehran**
Main contractors: **Bonyan Marsoos co., Tehran**
Investor: **Mellat Bank**
Fabricators: **Kashaneh co., Parsamood co., Tehran**
Reynaers systems: **CW 60, CS 68, Ventalis**
Expected completion date: **Summer 2015**



PROJECT

LAPISHAN



ISTANBUL, TURKEY – Architect: **Nevzat Sayın** Fabricator: **BSM Aluminium**



RED SOLID MASS

"They built it in one day!", was what Evrim Karayel, general manager of Gürallar Yapı construction company, heard from passers-by when the cladding's protective sheets were removed from the Lapishan business centre to reveal its bright red colour. Located in the Kartal district of Istanbul, the striking building comprises 160 individual offices in varying sizes distributed across eight floors.

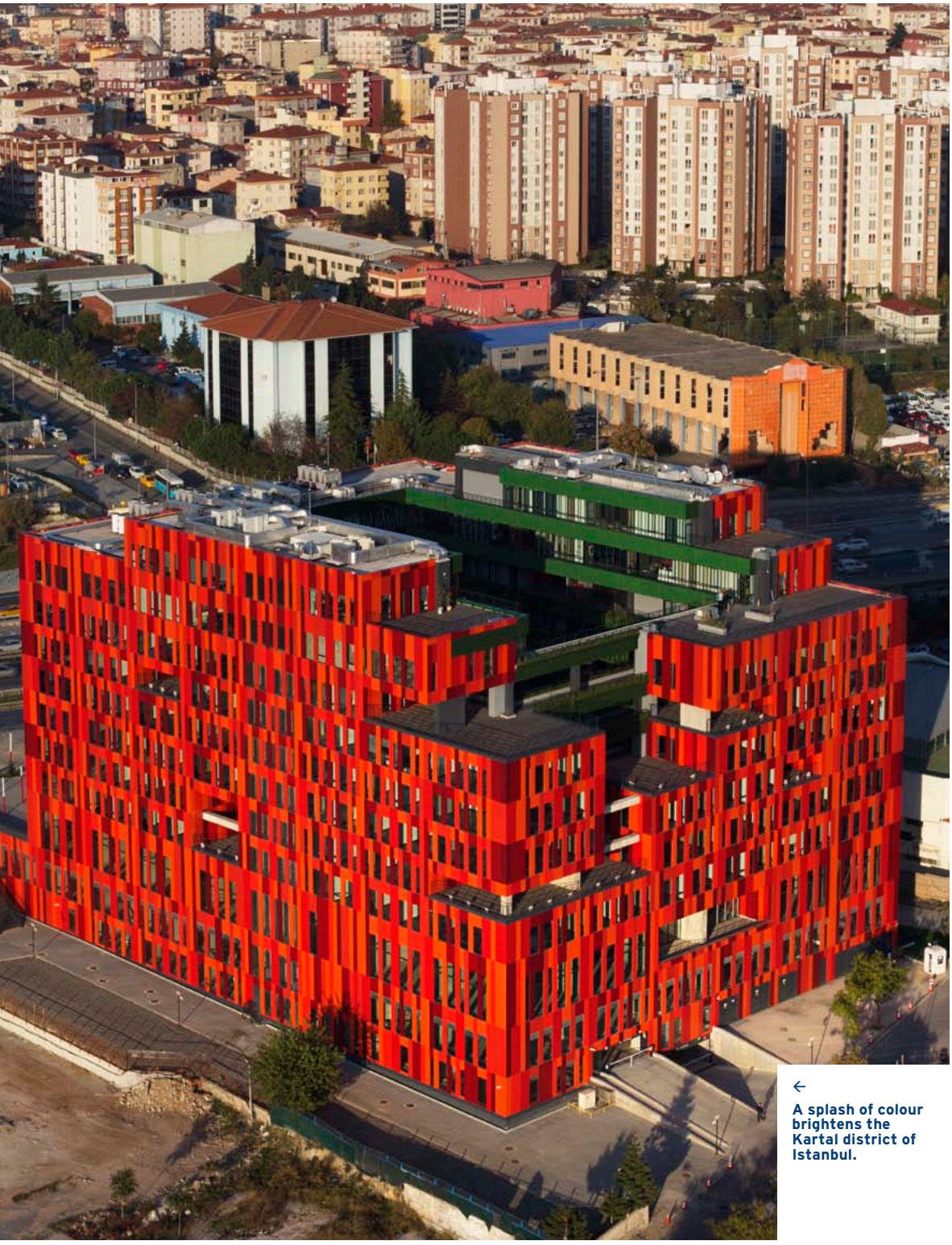
Text **Omer Kanipak** Photography **Gürkan Akay, Nihan Pakize Karayel**

Quite surprisingly, the intention of the Gürallar Yapı construction company was not for it to be an office building at all. Initially, architect Nevzat Sayın was selected from six architectural companies to design a 21-storey high-rise residential block. However, a couple of months later, the strategy of the development had been shifted from residences to office spaces, which was found to be more suitable for the location. After the function had been altered, the number and size of the different individual units were carefully calculated in order to satisfy the potential customers as well as the landowners who will rent their spaces. Lapishan is the first commercial building project of construction company Gürallar Yapi.

Sayın was given a quite complex puzzle to solve, which involved having to fit variously sized individual office spaces and shops, as well as some social spaces, into a high-rise building with a footprint of almost 850 square metres. "We as architects know that if you have a small building footprint, the core of the high-rise building takes the most valuable part out of it. It is not clever to make a high-rise with a footprint smaller than 1000-2000 square metres", says Sayın.

He convinced the client to make a lower building which would use the entire lot but still be eye-catching. The formula was quite simple: In order to make an iconic tower that would be visible from a distance among other high-rise buildings nearby, a large rectangular prism was proposed that would be visible to drivers on the motorway for a longer period.





←

A splash of colour brightens the Kartal district of Istanbul.



→
The façade was designed to avoid traffic noise

OPEN-AIR CORRIDORS

This large rectangular mass sits on an area with a footprint of 3,500 square metres where 2,100 square metres are covered and the rest are left as an open courtyard. With this strategy, the vertical circulation core of the intended high-rise building remains the same size but serves a much larger floor area, resulting in a more efficient building. The open-air corridors surrounding the courtyard's inner façade also reduce the energy requirements for heating, ventilation, air conditioning, and lighting, and enable office users to go outside directly from their offices. The efficiency of the building has also been increased by the articulation of mass where southern parts are lower to increase daylight reaching the northern side and the courtyard.

Gürallar Yapi decided to team up with Reynaers and used the CS 86-HI windows and doors system and CW 50 structural clamped system for the façades. The façade on the motorway side was designed to have the fewest possible openings to avoid the traffic noise. The modular planning approach, of which a 57-square metre office unit is the basic element, creates a great benefit for clients who can be allocated different sized individual units inside the solid mass.

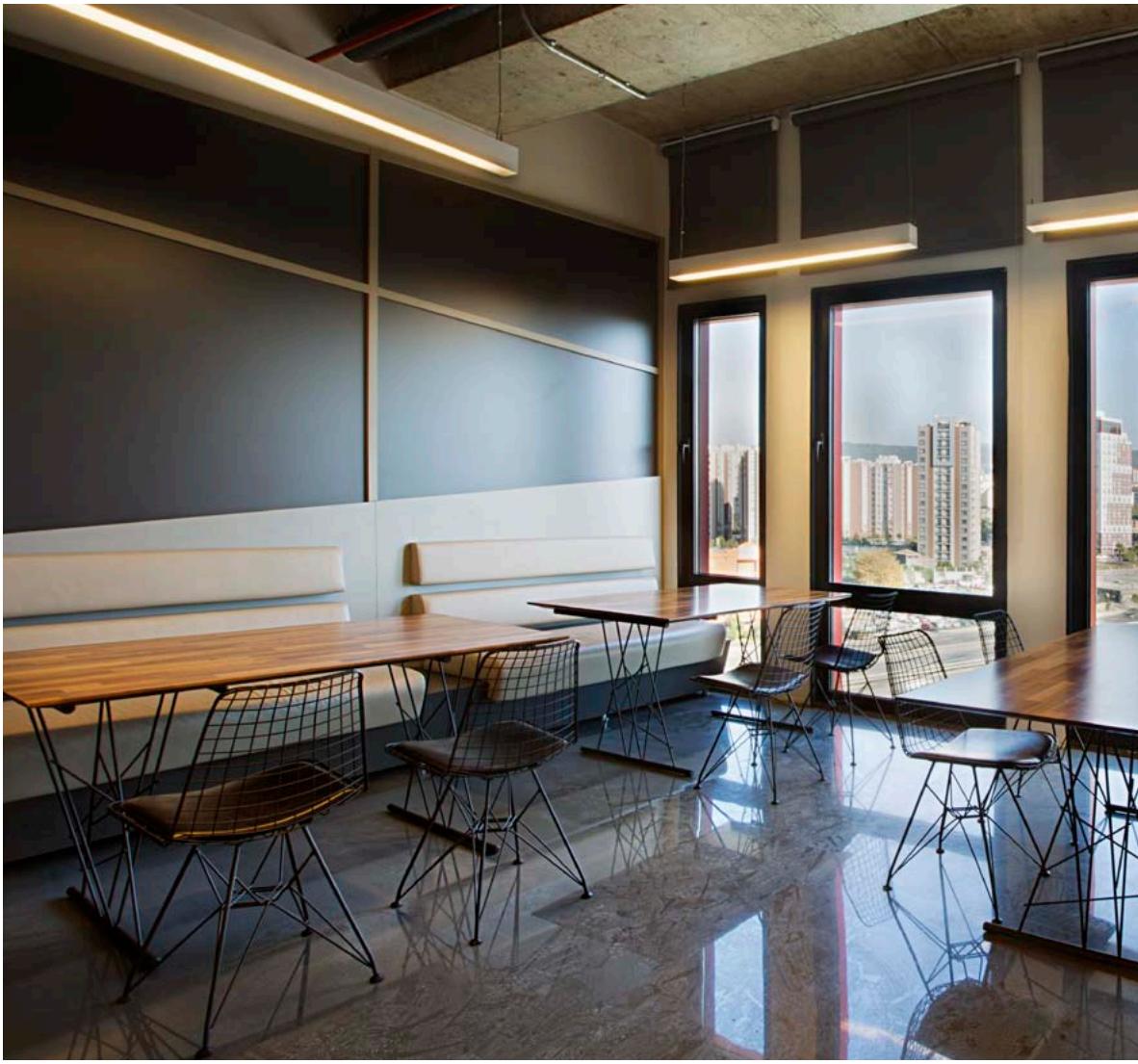


NSMH



Architect Nevzat Sayın was born in 1954, finished high-school and studied architecture in Izmir. His presence in Izmir and the surrounding area during his education gave him a love for and understanding of the Aegean culture. He worked with Cengiz Bektas for four years, which he recalls as 'education after school'. Sayın is also active as a studio instructor in various schools of architecture in Turkey. Currently he is teaching at Istanbul Bilgi University Faculty of Architecture, of which he is one of the founders. His motto is: "Future comes from the past."

www.nsmh.com



“WE AS ARCHITECTS KNOW THAT IF YOU HAVE A SMALL BUILDING FOOTPRINT, THE CORE OF THE HIGH-RISE BUILDING TAKES THE MOST VALUABLE PART OUT OF IT”



GÜRALLAR YAPI A.S.



Evrim Karayel was born in 1978 and educated as a civil engineer with an MBA. He has worked as a senior and project manager on the completion of real estate projects, particularly in different regions of Russia and in Moldova. Since 2010, he has been the general manager of Gürallar Yapı Co. Evrim Karayel has broad experience in the subjects of developing real estate projects, managing development and construction processes. "It is important to invest in projects where we could create spaces in which people will be more happy, productive and successful", he believes.

www.gurallaryapi.com

HISTORICAL TYPOLOGY

"Lapishan is actually the contemporary interpretation of the old historic office blocks ('han' in Turkish) in Anatolia and in Istanbul", says Sayın. Small craft workshops workshops around a corridor surrounding a courtyard are still seen in historic parts of the city. Karayel adds: "We used the technology of contemporary architecture to turn a very convenient and accepted building typology into a contemporary business centre." The ground floor and courtyard are designed to be open to the public and are also very accessible by

"WE ALWAYS GET CONSULTANCY ADVICE WHEN COLOUR BECOMES A MAJOR ISSUE IN DESIGN"

the metro and mass transit hubs nearby. The ground floor shops and sports centre serve both the public and the people working in the building.

The colour was a key element in the design of the building once the tower idea had been put aside. Sayın remarks, "We always get consultancy advice when colour becomes a major issue in design and in this case we worked with Sibel Ertez Ural from Bilkent University. She delivered the perfectly balanced tones and composition of the red panels."

As a result, even though the original intention was to sell all the units, the construction company was so pleased with the building that they decided to move their headquarters to the top two floors of Lapishan. They are not the only ones who think it's a successful building: Lapisan is winner of the 2013-2014 International Property Award in the category 'Best International Office Development'. ■

LAPISHAN
Architect: **Nevzat Sayın - NSMH, Istanbul**
Investor/General contractor: **Gürallar Yapı A.S., Istanbul**
Fabricator: **BSM Aluminium, Istanbul**
Reynaers systems: **CW 50-SC, CS 68-HV**





PROJECT

CASA LAS PALMERAS



SOTOGRANDE (CÁDIZ), SPAIN – Architect: **Valentín de Madariaga** Fabricator: **Grupo Moncada**



CONTEMPORARY SERENITY

Designed by architect Valentín de Madariaga for his northern European client, Casa Las Palmeras effortlessly combines traditional elements with a sleek, modern aspect. The street-side façade is as solid and intriguing as the Moorish homes of 'Al-Andalus' (historical territory in southern Spain, when it was part of the Islamic empire), while the construction and geometry radiate a contemporary serenity and openness similar to the ambience of a 21st-century monastery.

Text **Sander Laudy** Photography **Claudio Curia**

"Some time ago, an English client of mine at the time introduced me to feng shui, a Chinese art form which I try to apply to the Spanish landscape," explains Valentín de Madariaga. "For me, feng shui is about the relationship between the environment and sunlight, and the creation of peace and harmony."

Foremost in the design of Casa Las Palmeras was the plot of land. De Madariaga explains: "The terrain determined where to position the six different columns, what their proportions would be, and where to put the garden elements."

"The palms alongside the swimming pool make swimming lengths even more enjoyable, and the bamboo around the garden's edges creates an intimate setting."

Like the architect, the resident of Casa Las Palmeras is an avid contemporary art lover. The 'backbone' of the residence, which threads together the structure and its various functions, is a long corridor that is used to display the owner's personal art collection in varying formations. Indirect daylight illuminates the paintings along this corridor, which proceeds from the gymnasium to the dining and living areas, and then extends to the service areas and bedrooms of the parents and children. In total, the residence comprises 1,200 square metres. The various rooms are all oriented toward the covered terraces, which form a connection to the lawn.

SMOOTH TRANSITION

People in this region spend a great deal of their time outdoors. The outdoor areas which flank the garden and the shaded galleries may be even more important than the functional interior spaces. A smooth transition from interior to exterior is created, with no less than 18 full glass Hi-Finity sliding doors providing a razor-thin separation between the two. The gymnasium's sliding doors that were specifically designed for this project, together with partner Grupo Moncada, are imposing. As De Madariaga recounts: "It was an enormous challenge to position them during construction. Luckily, we were quickly able to replace one of the four glass elements, which was broken by a strong gust of wind. Reynaers equipped these elements with a motorised mechanism to open and close them, because they're incredibly heavy!"

"These specially designed doors are 5.9 metres high and weigh 285 kilograms. We produced and positioned the replacement vent within a week and a half", says fabricator José Miguel Moncada of Grupo Moncada.



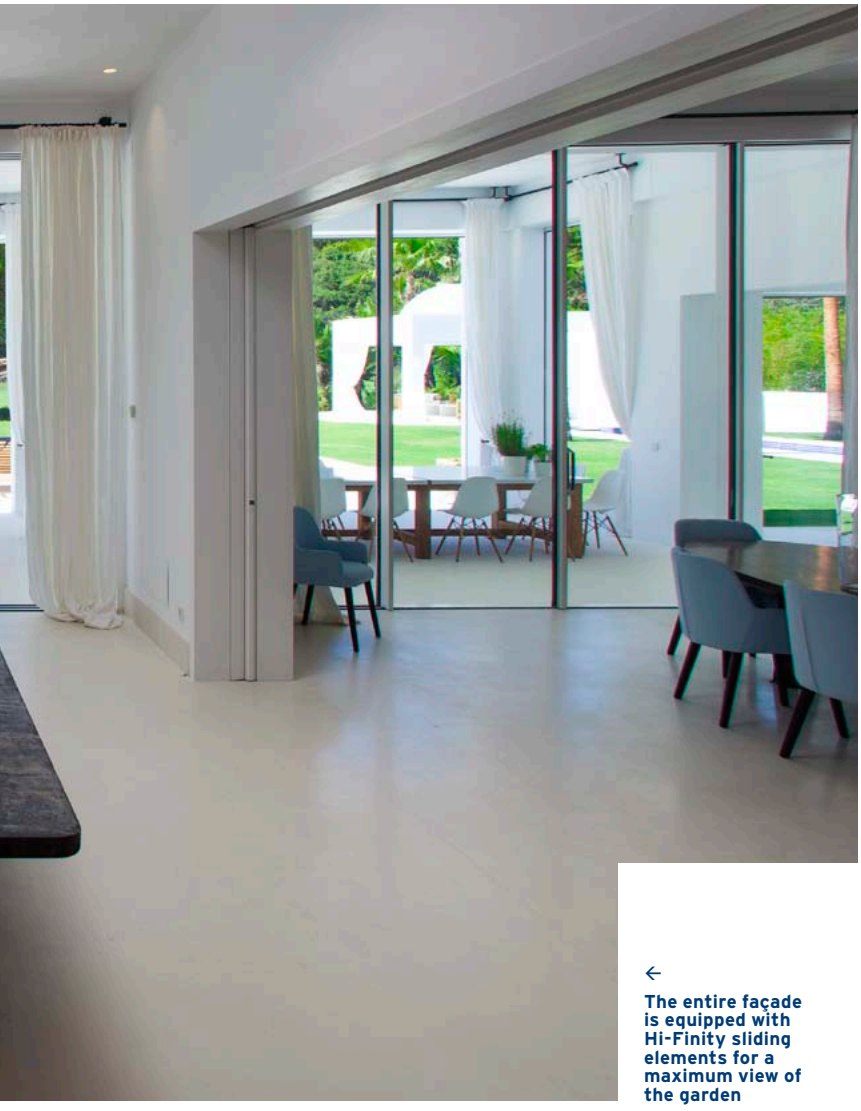
↑
A smooth transition from interior to exterior is created with full glass Hi-Finity sliding doors



"LARGE HI-FINITY SLIDING DOORS PROVIDE NO MORE THAN A RAZOR-THIN SEPARATION BETWEEN INTERIOR AND EXTERIOR "

'"In any event, the pace of construction forced us to finish in record time; the entire project was completed in nine months."

The Hi-Finity sliding elements positioned by Grupo Moncada play a fundamental role in relation to the environment. That is why the tracks were set deeply into the floor at specific points, with the top and side profiles integrated into the walls. The only thing that remains visible is the meeting section of the minimalistic Hi-Finity profiles .



← **The entire façade is equipped with Hi-Finity sliding elements for a maximum view of the garden**

Viewed from the outside, the glass acts like mirrors reflecting the surroundings. Framed by the residence's white profiles, the blurry image of the terraces and the vegetation almost creates a new modern painting: the latest asset in the owner's collection. ■

CASA LAS PALMERAS
Architects: **Valentín de Madariaga, Seville**
Fabricator: **Grupo Moncada, San Roque (Cádiz)**
Reynaers systems: **Hi-Finity, CS 77, CP 68**

GRUPO MONCADA



José Miguel Moncada was born in 1970 in San Roque and leads Grupo Moncada, the family-run business established by his father nearly sixty years ago. José Miguel Moncada is an electrical engineer who also holds a master's degree in business administration. He expanded the business from its initial focus on wooden doors and window frames into a versatile supplier for the construction sector. The experienced team is continuously introducing new technologies in their factory, which is equipped with state-of-the-art machinery. Today they produce furniture along with complex curtain walls and aluminium window frames, the latter exclusively in partnership with Reynaers. "Experience and incorporation of innovative products are key to the success of our projects", he says.

www.grupomoncada.com



→

The outdoor areas which flank the garden may be even more important than the interior spaces



PROJECT SOLUTION



System:
Hi-Finity bespoke solution

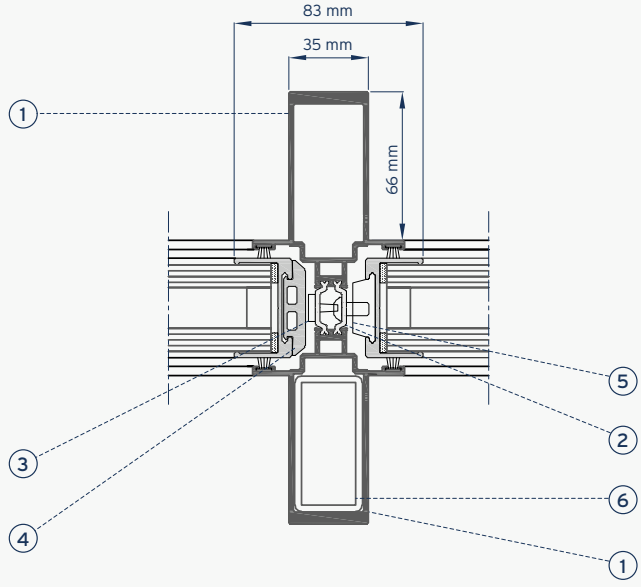
Project description:
- External motor mounted on top of frame (20 cm required built-in depth)
- Special connection from motor to the moving parts of the vents
- Bespoke middle section: double reinforcement profile to support high loads
- Extensive research on strength and sizes

Element:
- Four vent Hi-Finity sliding door with centre opening
- Dimensions: 5.9 x 1.25 m per vent
- Weight per vent: 285 kg

Glazing:
- Double laminated glazing: 44.1/20/44.1

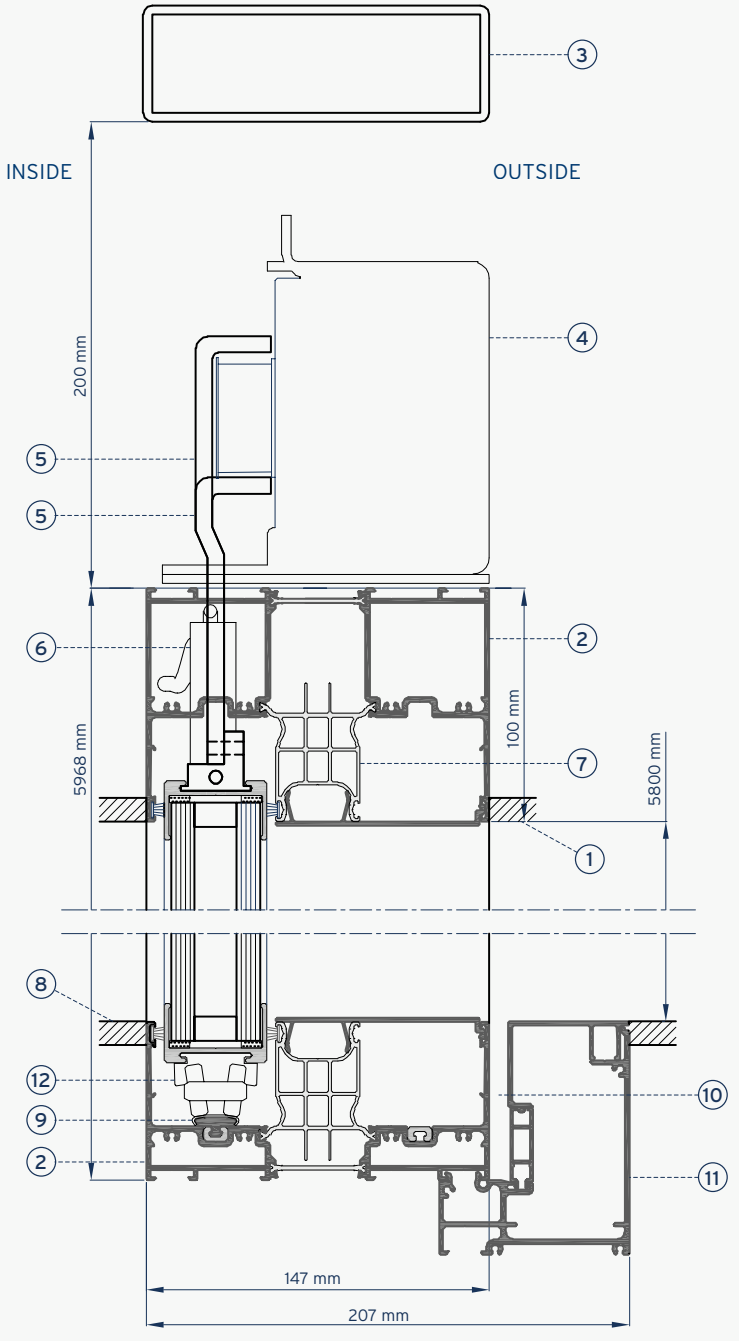
Horizontal section Hi-Finity bespoke meeting section ↓

1. Hi-Finity bespoke solution
2. Thermal insulation strip
3. Buffer
4. Gasket
5. Adjusting piece
6. Reinforcement



Vertical section Hi-Finity bespoke solution →

1. Ceiling
2. Hi-Finity outer frame
3. Support beam
4. Motor
5. Brackets
6. Electrical lock
7. Thermal insulation strip
8. Floor
9. Rail
10. Gutter
11. Gutter profile
12. wheel



VALENTÍN DE MADARIAGA



Valentín de Madariaga was born in 1960 in Seville. After studying architecture at Escuela Técnica Superior de Madrid (Superior Technical School of Architecture Madrid) he set out, together with Ernesto Merello, on a quest in 1987 to combine traditional and modern architecture. De Madariaga quickly specialised in high-standing, detached houses with the so-called 'hacienda typology' representative of his native region, Andalusia. In addition to around 150 private houses, he has designed golf clubs, restaurants, and swimming pools. He has also restored historical heritage sites such as churches. 'The environment is a decisive factor in the development of architecture, and that translates into proportions, materials, temperature, light, and sound, and then into experiences,' says De Madariaga.

valentindemadariaga.es

PROJECT

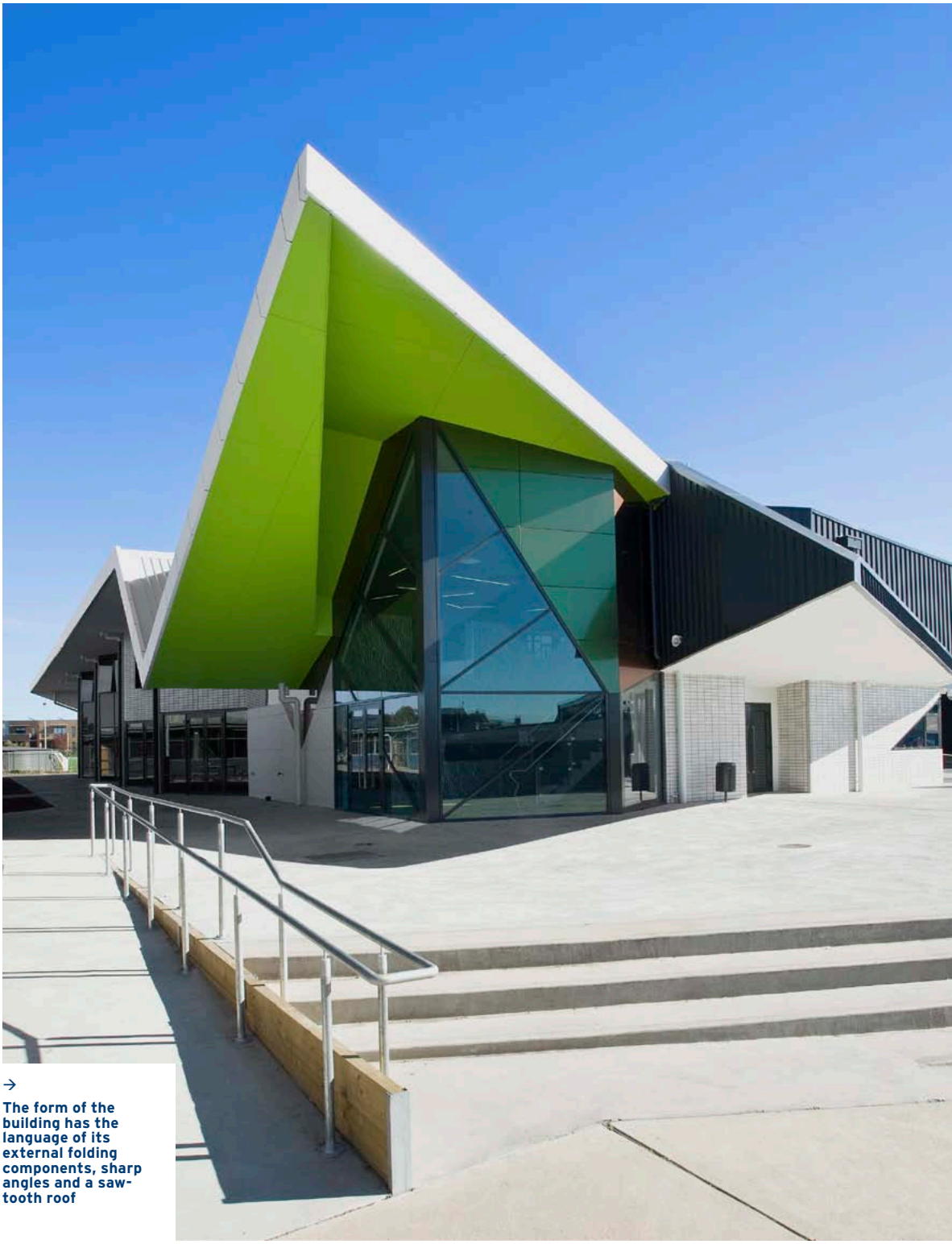
THOMAS CARR COLLEGE
YEAR 7 AND 8 CENTRE



TARNEIT, AUSTRALIA – Architect: **Smith & Tracey** Fabricator: **MSF Thermal Doors and Windows**



DYNAMIC ARCHITECTURE



→

The form of the building has the language of its external folding components, sharp angles and a saw-tooth roof



The Year 7 and 8 center is the first of a number of projects being completed by Smith & Tracey Architects for Thomas Carr College, a Roman Catholic co-educational secondary school, as the Melbourne suburb of Tarneit expands rapidly in response to population growth and development. The dynamic architecture - moving walls between classrooms, connections to the outside - depict a non-traditional way of learning.

Text **Isabelle Priest** Photography **Chris Matterson Photography**

"This project is seen as the first building of our masterplan for the school to allow for its foreseen future growth", explains Smith & Tracey project lead architect Stasinos Mantzis. Founded in 1997, the current school is a mix of permanent and temporary classroom buildings. The newly built Year 7 and 8 center seeks to replace some of these temporary classrooms which were required due to rapid growth in student numbers as well as envelope over and around the existing science laboratory building on the site. "Apart from meeting the functional requirements of the brief, we wanted to design a building which expressed the aspirations of the school's future and position within this new suburb as a public building", explains Mantzis.

Smith & Tracey has extensive experience in the educational sector and providing future-proof design solutions adaptable to evolving trends in pedagogy in Australia. This particular building incorporates the recently completed existing labs to create twenty additional flexible classrooms, large breakout areas, a demonstration kitchen, offices and student facilities. These programs are designed in a horseshoe arrangement around a sun-filled, circular outdoor gathering space.

"The building underwent an evolutionary process, testing and discarding many form-making techniques", the architect says. Each stage of the process was documented with 3D renderings to result in a determined and functional building. What also became clear from these discussions was the need to develop a dynamic architecture that would: "Engage the students with the built environment and challenge them that there might be more independent ways of learning."

FLUID WAYS

This challenge became articulated in the very form of the building with the language of its external folding components, sharp angles and saw-



→

Classrooms are designed in a horseshoe arrangement around a circular outdoor gathering space



"THE EARLY INVOLVEMENT OF STUDENTS ON INFLUENCING THE DESIGN IS GIVING THEM A STRONG SENSE OF OWNERSHIP FOR THE BUILDING"

tooth roof and internal patterns, colours and shapes. The challenge also produced many of what have become Mantzis' favourite aspects of the design, including the timber amphitheatre in the main breakout space. The ambition of the project was to "express the fluid way in which education and information can be accessed through non-traditional means." This resulted in innovative ways in which the classrooms are used and connected to each other, the circulation areas and gardens outside. For example, through operable walls between classrooms the building can accommodate the teaching of small groups, and large glass sliding doors allow for individual learning areas to be opened onto the adjoining common areas and exterior courtyard. "The early involvement of students on influencing the design has been a success in engaging them with the built environment and giving them a strong sense of ownership for the building," Mantzis explains.

In addition to the functional and desirable requirements of the brief, the architect had to take the environmental conditions into consideration. In a region susceptible to drought, the architect installed 50,000 litres of underground rainwater tanks for irrigation and toilet flushing, used highly insulated precast panels for the walls, inserted clerestory





SMITH & TRACY



Stasinos Mantzis was born in Melbourne in 1971. He graduated from RMIT University in 1998 with a Bachelor of Architecture. As a design architect he joined Smith & Tracey in 2011 after working at a number of Melbourne practices. He has been teaching at RMIT University since 1999 as head of the design studio and master's student thesis supervisor. Mantzis: "I have a strong narrative design approach drawing inspiration from pop cultural, art, and architecture references."

www.smithtracy.com.au

←
internal patterns, shapes and colours for the circulation areas



"THE AMBITION WAS TO EXPRESS THE FLUID WAY IN WHICH EDUCATION AND INFORMATION CAN BE ACCESSED THROUGH NON-TRADITIONAL MEANS"

windows in all first level learning areas for cross-ventilation and natural light and chose high insulating windows with low-e glass to reduce heat transfer and increase performance.

The fabricator MSF was key to the latter and was contacted in the early stages as standard local glazing systems did not meet the required energy ratings. It took a creative approach not to compromise the design



by employing systems it had not used before. Guido Nobile of MSF explains: "Issues such as incorporating different cladding were overcome in consultation with the architect. Our careful planning and experienced employees took the project as a personal challenge." "With Reynaers' products we could achieve the level of glazing needed to provide light, ventilation and comfort to the classrooms", the architect adds. ■

THOMAS CARR COLLEGE YEAR 7 AND 8 CENTRE
Architect: **Smith & Tracey Architects, Hawthorn**
General contractor: **Total Construction, Richmond**
Structural and civil engineer: **Brown Consulting**
Fabricator: **MSF Thermal Doors and Windows, Morwell**
Reynaers systems: **CW 50-HI, CS 77-HI**

FABRICATOR MSF

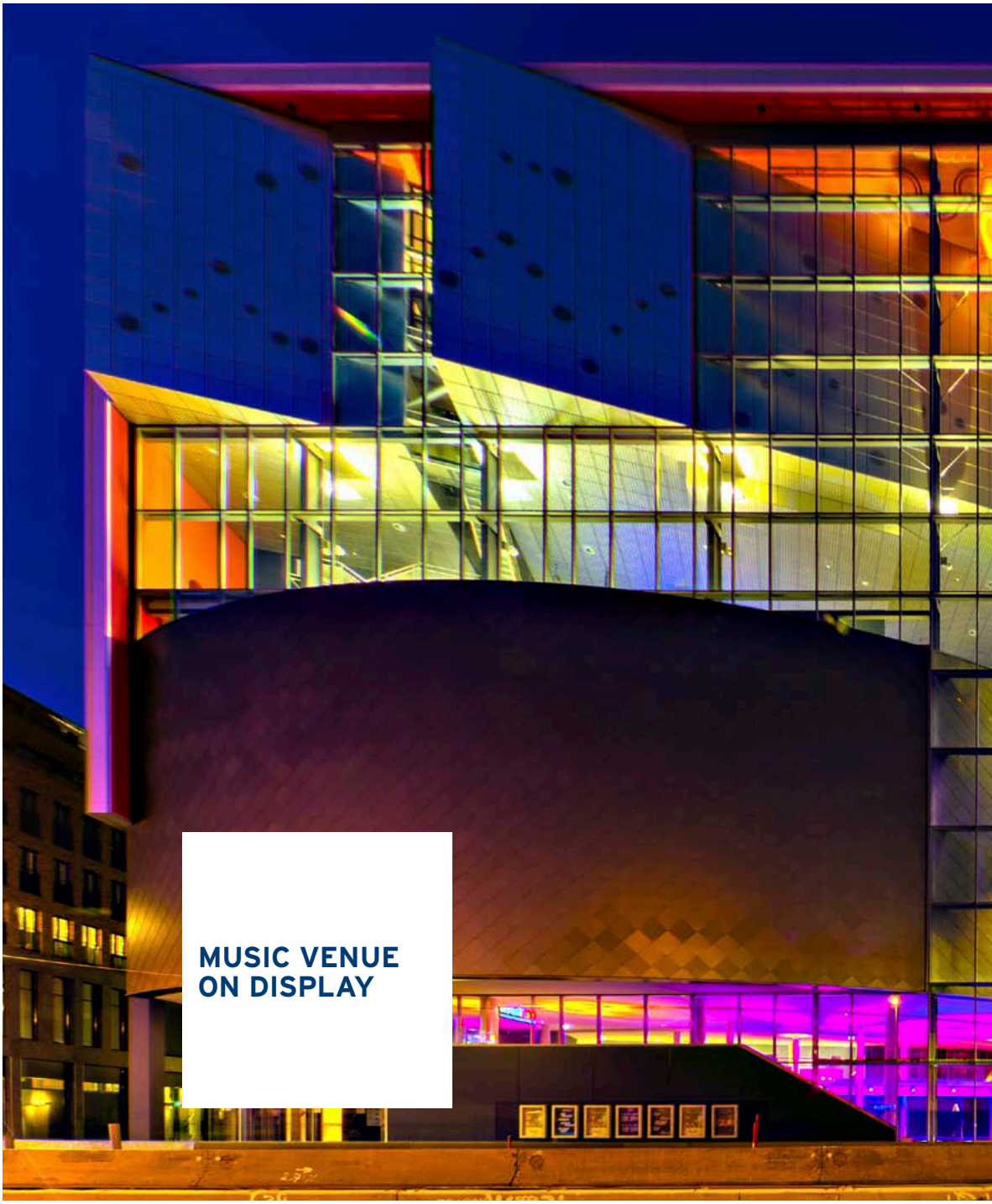


Guido Nobile was born in 1973 in Melbourne. He started a food processing company in 1993, but in 2009 he joined his wife's family business Morwell Shopfitters which fabricated and installed aluminium systems for commercial projects in Victoria, Australia. Nobile rebranded the company to MSF Thermal Doors & Windows in 2010 to best reflect the company's new direction and relationship with Reynaers Aluminium. MSF now offers consulting services for high performance window systems for the Australian market. "MSF's overriding aim is to offer architects a system that meets building energy requirements without compromising design," he says.

msfaustralia.com.au

PROJECT

TIVOLIVREDENBURG



MUSIC VENUE ON DISPLAY

UTRECHT, THE NETHERLANDS – Architects: **Architectuurstudio HH, Jo Coenen & CO Architekten, Thijs Asselbergs architectuurcentrale, NL Architects** Fabricator: **DRL Benelux B.V.**





↑
Everything is visible to passers-by through the enormous glass façade

A city within a city – that's how acclaimed Dutch architect Herman Hertzberger describes TivoliVredenburg, the completely renovated music venue in Utrecht. The building is a showcase for what happens inside: the public strolling through the foyers, the encounters between visitors and artists and, of course, the theatre itself. Everything is visible to passers-by through the enormous glass 'display windows', a façade that had to meet demanding engineering, fire-resistance, and acoustic requirements, and that due to its inner-city location, was a tour de force in its technical execution.

Text **Kirsten Hannema** Photography **ArFU - www.ArFU.nl**

TivoliVredenburg - a combination of the name of the music venue and the new location - has been a special project for Herman Hertzberger, now aged 82. How many architects are given the opportunity to renovate one of their own buildings? And this was no ordinary renovation. The complex, which dates from 1979, has undergone a genuine metamorphosis: a major portion of the building was demolished, four new, vertically stacking concert halls have been added, and the façade has largely been replaced. "That's an improvement", thinks Hertzberger, "because the original building was not really that attractive." Most importantly, the large concert hall, with its world-famous acoustics and intimate atmosphere, has been preserved. The interior has simply been 'updated' with a new floor and bar. Everything else remains just as it was before. The latter, in particular, surprised the architect. As Hertzberger relates, "everyone has been unreservedly enthusiastic about the concert hall, which in no way appeared outdated."

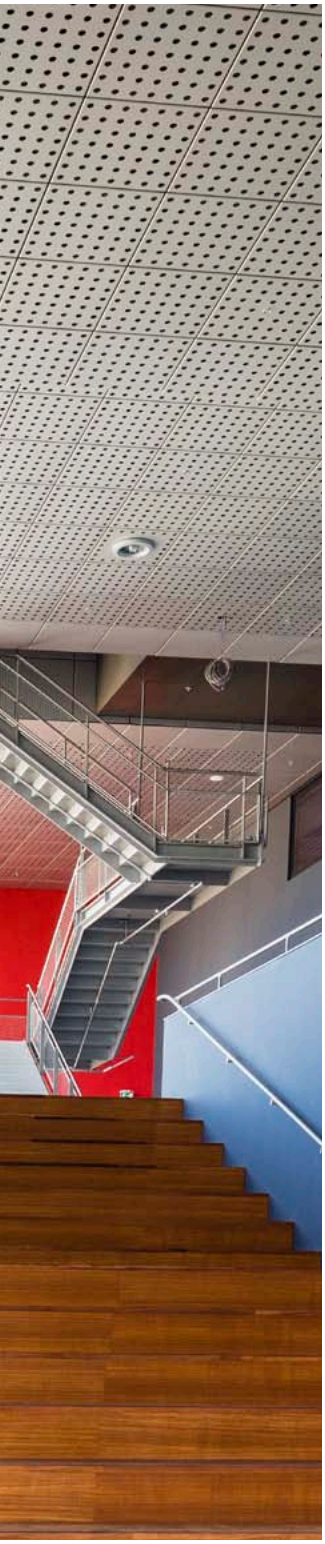
TRANSPARENCY

On the city-centre side, however, much has changed. The original Vredenburg has been transformed from a relatively low-rise grey building with a small façade into a real music venue with a 45-metre-tall façade traversed by five concert halls. The music venue looks especially spectacular when lit up against the night sky. "I insisted that lights be installed which would illuminate the halls", recounts Hertzberger. "That's important for me: being able to see what's happening inside. To me, that's far more interesting than the composition."

The task of creating the building's overall impression of transparency, while staying within budget, fell to façade producer DRL Benelux, a subsidiary of Oskomera. "We worked with the Reynaers DRL curtain wall system", says



→
The interior has simply been 'updated'



HERTZBERGER: "BEING ABLE TO SEE WHAT'S HAPPENING INSIDE, TO ME THAT'S FAR MORE INTERESTING THAN THE COMPOSITION"

ARCHITECTUUR-STUDIO HH



Herman Hertzberger was born in Amsterdam in 1932. He completed his structural engineering studies in 1958 at the Delft University of Technology and founded his architectural firm in 1960. Hertzberger's most famous buildings include the head office of Centraal Beheer in Apeldoorn and the former Vredenburg Music Centre in Utrecht. He is also well-known for the many schools he designed. Hertzberger has won numerous awards, including the RIBA Royal Gold Medal in 2012 from the Royal Institute of British Architects. Hertzberger believes that something is beautiful when it makes sense. "A building or a neighbourhood is correct when its dimensions match the perception of the people within it."

www.ahh.nl

Director Leon Kerkhofs. "The advantage is that, unlike a conventional curtain wall, this system does not require clamping frames; silicon rubber frames are used instead. This creates the wonderfully smooth effect the architect had in mind when he chose a structural façade. What's more, the costs are lower."

ENORMOUS ACHIEVEMENT

The stringent noise reduction, fire-resistance, and safety requirements combined with the aesthetic requirements made this a complicated project. "The façade derives its strength and its rigidity from the rear steel support structure. As a result, you have to

DRL BENELUX



Leon Kerkhofs was born in Meerveldhoven, the Netherlands, in 1960. He began his architecture studies in 1978 at the Institute of Technology in 's-Hertogenbosch. He then went on to study architecture at Eindhoven University of Technology. Kerkhofs started working at DRL Benelux as a commercial manager in 1988. In 1997 he became the director of the company and co-owner in 2000.

www.oskomera.nl

"FROM A RELATIVELY LOW-RISE GREY BUILDING WITH A SMALL FAÇADE VREDENBURG HAS BEEN TRANSFORMED INTO A REAL MUSIC VENUE"

deal with different tolerances", explains Kerkhofs. "The maximum deflection for the curtain wall is three millimetres; for the steel support; it's easily ten to twenty millimetres. We had to reconcile that difference in the connections between the profiles. We also developed a special assembly plan so that the load on the structure, particularly during the glazing process, would be increased gradually." An extra complication in the mix was that the new southern façade had to be built above the old construction. "It was an enormous challenge, ultimately we had to erect scaffolding on the new construction in order to assemble the façade."

"The fire-resistance requirements also resulted in special measures. "Because the façade sections measure 1.80 by 3.60 metres, the fire certification for conventional curtain wall systems was inadequate. We had already begun testing the DRL system using the largest format available for fire-resistant glass, which is 2.30 by 3.80 metres. TivoliVredenburg is the first project for which this fire-resistant DRL system was used with a resistance up to thirty minutes." ■

TIVOLIVREDENBURG RENOVATION
Architects: **Architectuurstudio HH, Amsterdam (project supervision and chamber music hall), Jo Coenen & CO Architekten (pop hall), Thijs Asselbergs architectuurcentrale (jazz hall), NL Architects (crossover hall)**
Main contractor: **Heijmans Utiliteitsbouw B.V., Rosmalen**
Fabricator: **DRL Benelux B.V, Deurne**
Reynaers systems: **CW 60-DRL/FP EI30, CS 77**



↑
The music venue looks especially spectacular when lit up against the night sky



↑ Huge glass panes: Crepain Binst Architecture nv

NEW: CW 50 EXTENSIONS

The CW 50 curtain wall system offers new innovative solutions for unlimited creative freedom for higher glass weights and sophisticated connections of profiles. These solutions stand for excellence and ultimate design applications within this proven curtain wall system.

Freedom in curtain wall design
A first extension to the CW 50 system features an extensive range of profiles with which a wealth of design constructions can be created. This solution allows the profiles to be coupled to each other in an infinite number of overlapping levels. The overlap method provides perfect performance in terms of water and air tightness. This extension provides architects with extensive creative freedom in façade design: the division and coupling of the glass surfaces is unlimited, and the integration of diagonal lines is simple.

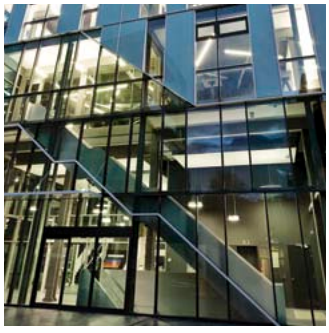
Easy assembly and quick installation
Façade construction is now even easier with the use of the new subsystem CW 50-TT (Transom-Transom). This extension ensures that the façade can be constructed with a single profile, without the use of complex operations. Through the pre-assembly option, the construction of a façade can take place in a quick and cost-efficient manner. What's more, it is compatible with the standard

CW 50 system and the design variants CW 50-TT/SC (Structural Clamped) and CW 50-TT/HL (Horizontal Lining). The CW 50-TT system has the same insulation value as the standard CW 50 and CW 50-HI (High Insulation) and it can support the same maximum weights.

Larger elements and triple glazing
A final extension to the CW 50 system makes it perfectly suited for large glass panes and for use of triple glazing. The maximum glass thickness can measure up to 62 mm and the system can carry a maximum weight of 700 kg thanks to a special glass support. With this addition in the CW 50 system, specific bespoke solutions are no longer required for extra-large glass panels.



↑ CW 50-TT



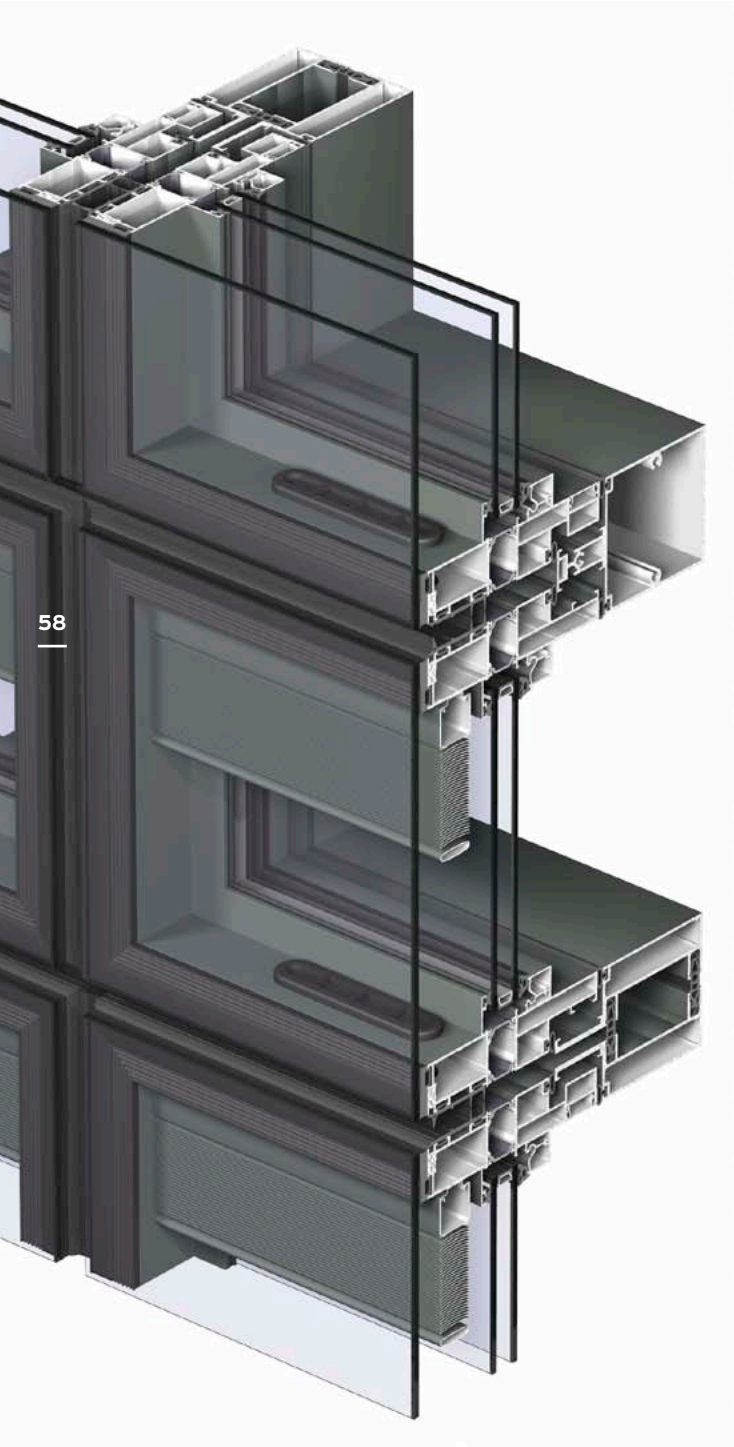
↑ Tree structure:
BURO II & ARCHI+I



↑ Barcode design:
MA - MURAIL Architectures - Guy Murail - Nantes (44)

Examples structural tendencies:
Barcode design = horizontal panels with individual vertical distribution
Tree structure design = organic distribution of the vertical lines
Huge glass panes = transparent façades for maximum daylight

Performances CW 50:
- Thermal insulation (EN 13947): Uf value down to 0,8 W/m²K
- Acoustic performance (EN ISO 10140-2 EN ISO 717-1): RW (C;Ctr) = 33 (-1; -3) dB / 60 (-2; -6) dB
- Air tightness (EN 12153, EN 12152); AE 1200 (1200 Pa)
- Water tightness (EN 12155, EN 12154); RE 1200 (1200 Pa)
- Wind load resistance, max. test pressure (EN 12179, EN 13116); 2000 Pa



CW 86 BREATHING FAÇADE

In buildings such as hospitals, offices or schools, the influence on the choice of floor plan, infrastructure, materials, building shell, and façade design are of great importance. Building management, acoustic performance, and ease of maintenance are crucial factors in the façade design. Reynaers has combined these three properties, in a 'breathing' façade: CW 86-BR, which will be launched early 2015.

← CW 86-BR

CW 86-BR is an extension of the known Reynaers CW 86 system and complements the breathing window system XS 50-BR previously introduced in France (BR is breathable or respirante).

CW 86-BR is a 'double layer' façade, consisting of double glazing on the inside and single glazing on the outside. The single glazing can be mounted either with structural sealant or with glazing beads, and this choice determines to a large extent the design of the façade.

No condensation
The major advantage of a breathing façade is that it prevents condensation. Through the use of Reynaers CW 86-BR, the relative humidity in the 'breathing' cavity is equalised with the outside relative humidity. This new system makes it possible to construct a breathing façade as an element façade and stick façade.

THE MAJOR ADVANTAGE OF A BREATHING FAÇADE IS THAT IT PREVENTS CONDENSATION

The breathing cavity can accommodate blinds that are up to 35 mm in width. Motorised control of the blinds and windows simplifies building management. This creates a system that is exceptionally well-suited to automatically controlling the indoor climate of the building when additional fresh air is desired, or more or less sunlight.

Hygiene and acoustics
CW 86-BR also has extra low-maintenance and hygienic properties due to its structure in which blinds are enclosed between two panels of glass. This prevents disruptions to the functioning of the blinds. Furthermore, the use of different glass panels promotes thermal insulation and proper acoustics – factors that are significant for hospitals, schools, and office buildings.

Condensation
Condensation occurs when relative humid air comes in contact with a relative cold surface. The balance between both is the dew point. For example: air with a temperature of 10°c and a relative humidity of 70% will condensate to a surface with a temperature below 5°c.

CONVENIENT LUXURY WITH A NEW MOTOR AND SHOCK ABSORBER

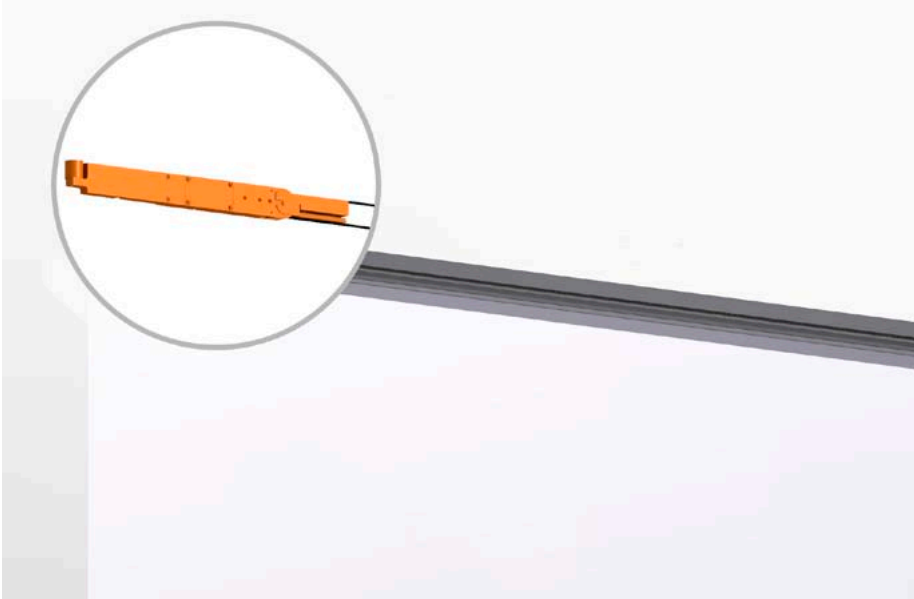
Triple glazing is steadily advancing, as is the need for panes in large sizes. This allows as much light as possible to enter into the home and creates the sense that indoors and outdoors merge into each other.

This implies that the glass panels in sliding elements are becoming heavier. Reynaers has devised a specific solution for this: a new motor that ensures that the full glass Hi-Finity sliding system and the lift-and-slide systems CP 155-LS and CP 130-LS open and close automatically.

↑ Scan the QR code to watch a movie on the Hi-Finity automated solution

Motor supports heavy weights
The motor ensures optimum convenience during use and is a safe and reliable solution. In addition, it can deal with heavy weights. For instance, the motor in Hi-Finity can support a glass panel weighing 700 kg, or even greater weights if appropriate wheels are used. For CP 155-LS, the maximum weight is 400 kg and 300 kg for CP 130-LS.

Invisibly built in
The motor is invisibly built into the frame of the sliding systems, creating an attractive total appearance. As a result, the user has the option of operating the system with a switch or with a so-called home automation system.





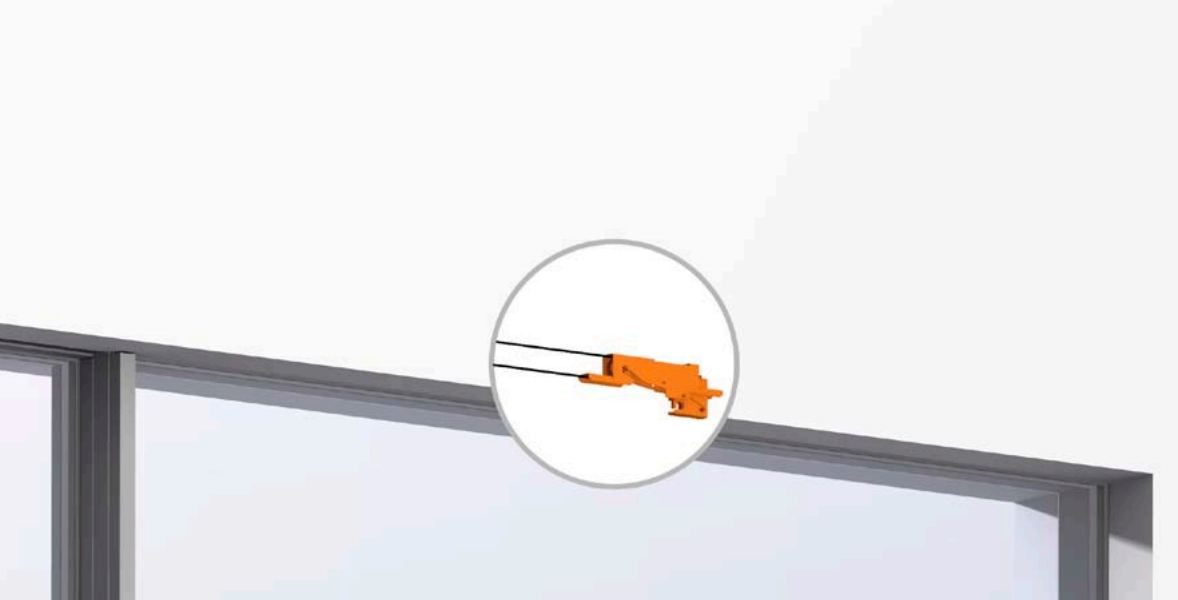
↑ Hi-Finity automated opening corner solution

THE MOTOR IS INVISIBLY BUILT INTO THE FRAME OF THE SLIDING SYSTEM, CREATING AN ATTRACTIVE TOTAL APPEARANCE

New: shock absorbing or braking system
Reynaers devised a special braking system ensuring safety when manually operating large sliding elements. Heavy sliding elements that move at high speed represent a danger of crushing. The shock absorber or brake detects the speed and will slow down the sliding door just before it approaches the final position if it is moving at a hazardously high speed. At normal speeds, the shock absorber or brake will not respond, and the sliding door closes in the normal way.

Like the motor, the shock absorber is carefully integrated into the sliding system, forming a luxurious and elegant whole as a result.

↓ Hi-Finity conceiled motor





MADRID, SPAIN

The luxury apartments for the young players of Real Madrid FC are located at their training institute, Sports City. Particularly striking are the two elongated prisms that contain common spaces and car parks, as well as the light apartments located on the top two floors that have terraces offering a view of the park.

RESIDENCE FOR THE YOUNG PLAYERS OF REAL MADRID FC
Architect: **Estudio Lamela Arquitectos, Madrid**
Main contractor: **UTE Residencias Real Madrid, Madrid**
Façade specialist/fabricator: **Proinller Ingeniería del Vidrio, Madrid**
Reynaers systems: **CW 50-SC, CS 77**



BIEL, SWITZERLAND

The three apartment buildings, each with five residential floors, are situated against a stunning mountain backdrop. The windows in the rooms and the large terraces face the water, taking advantage of light on the front side and a panoramic view of the lake. The apartments are sustainable with Minergie certified CP 155-LS sliding doors.

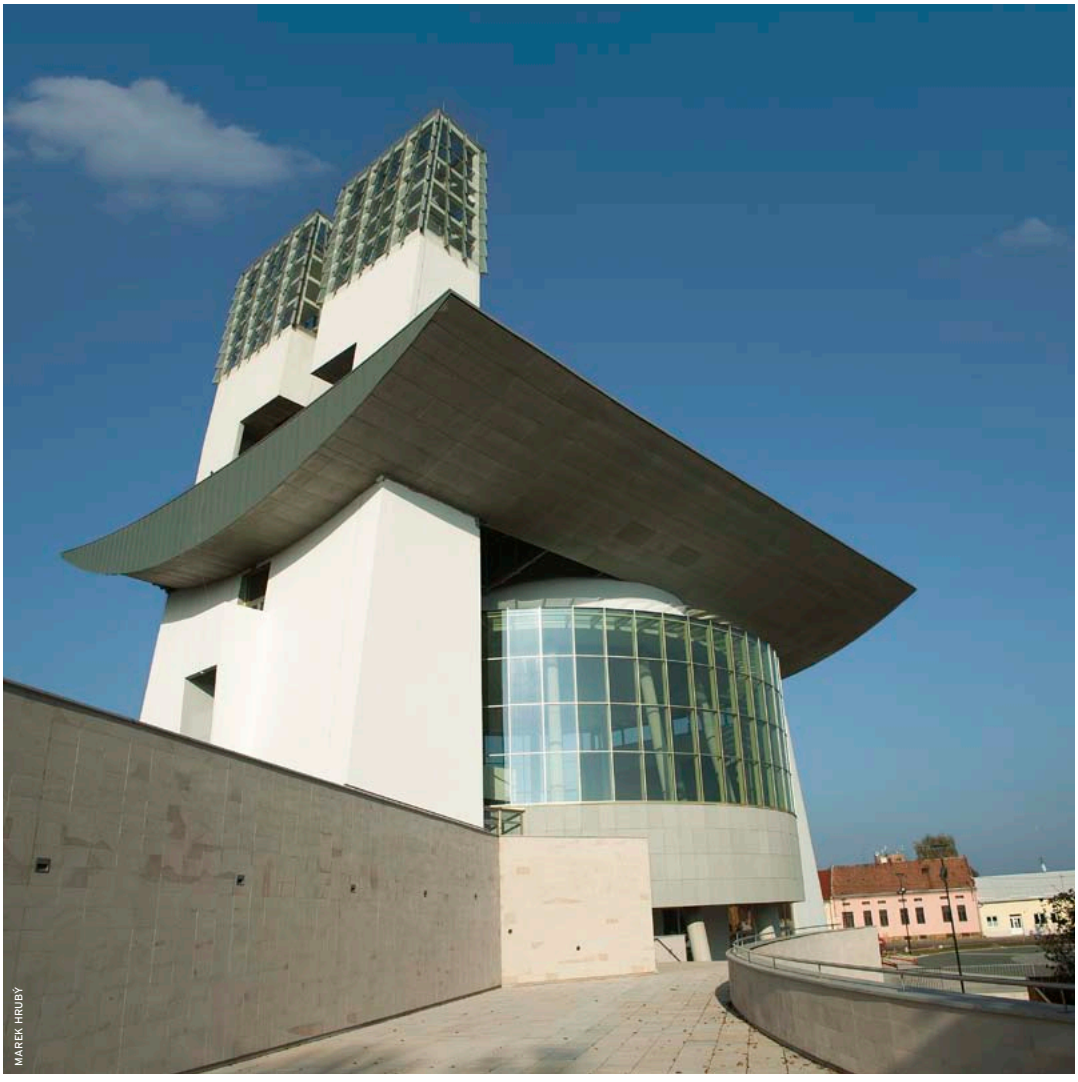
BEAURIVAGE APARTMENTS
Architect: **Bauzeit Architekten GmbH & Strässler Architektur, Biel**
General contractor: **Strässler Generalbau AG, Biel**
Fabricator: **Hartmann & Co. AG, Biel**
Reynaers systems: **CP 155-LS Minergie, CS 86-HI, CW 50**



TRARALGON, AUSTRALIA

Thanks to the enormous windows and the sliding and folding doors, this house is modern, light, and transparent. The owners opted for the CF 77 folding door system to integrate the indoor living area with the outdoor terrace. The eye-catching doors open up beautiful mountain views and serve as a thermal buffer against Australia's hot summers and cold winters.

NOBILE PRIVATE RESIDENCE
Architect: **AD Robertson & Associates, Traralgon**
Main contractor: **Waltcon Constructions, Traralgon**
Fabricator: **MSF Thermal Doors & Windows, Morwell**
Reynaers systems: **ES 50, CP 130, CF 77**



MAREK HRUBÝ

STARÉ MĚSTO, CZECH REPUBLIC

The building's modern architecture is atypical for a church. Nevertheless, this castle-like building is named the Church of the Holy Spirit. The architect added a building to the two existing towers, thereby increasing the seating capacity to 100. The different forms and materials give a playful appearance to this church.

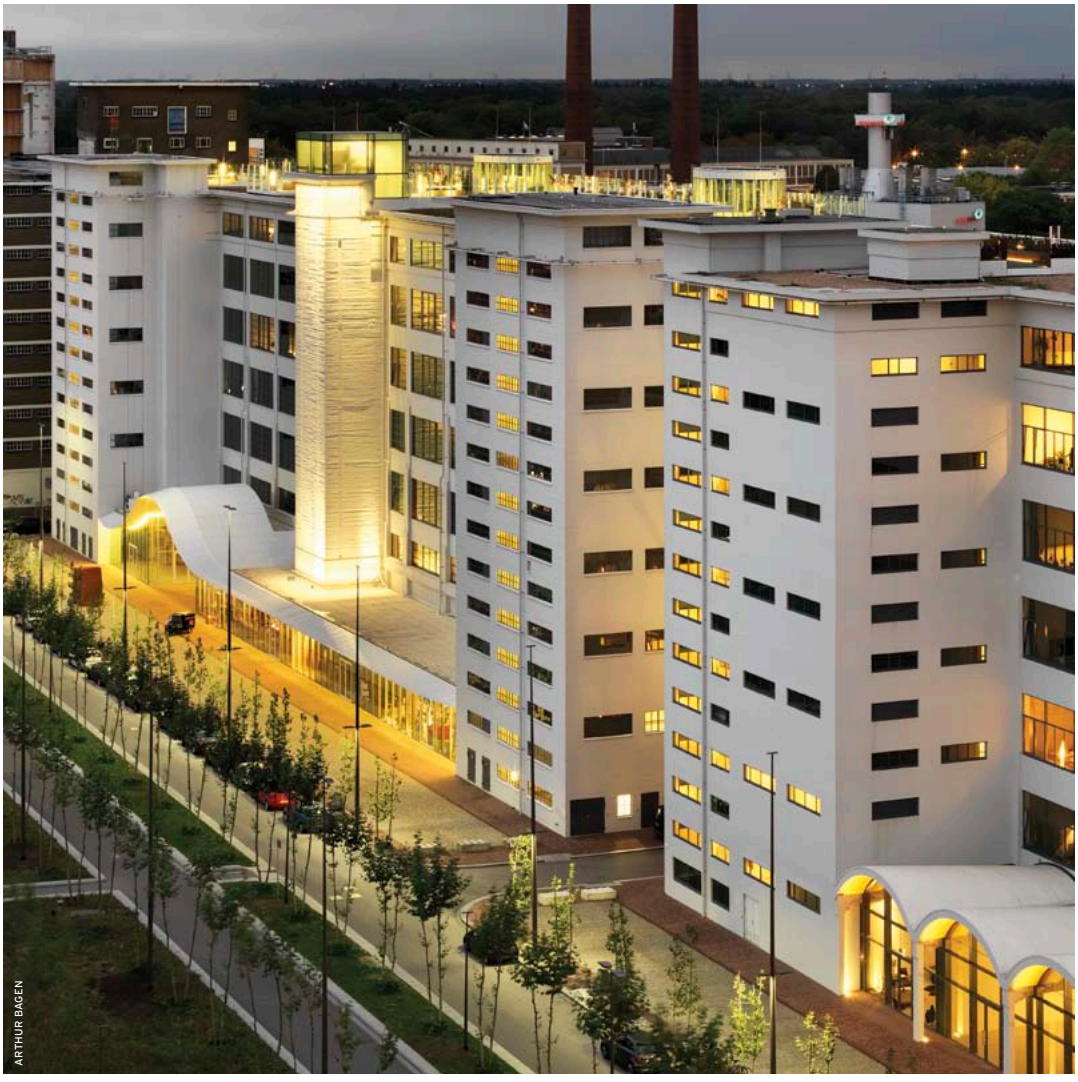
CHURCH OF THE HOLY SPIRIT
Architect: **Ivo Goropevšek, Maribor (SI)**
Main contractor: **Promont, Uherské Hradiště s.r.o., Uherské Hradiště**
Fabricator: **Alventis, Zlín**
Investor: **Římskokatolická farnost, Staré Město, Uherské Hradiště**
Reynaers systems: **CW 50-HI, CS 77-HI, CS 59Pa**



GAUCHY, FRANCE

Reynaers installed the CF 77 system, in addition to the CS 86-HI system, in a large, modern swimming pool in France. 7 folding elements were installed that can be fully opened and lead to the outside. For additional lighting, the building has large, distinctive, interconnected glass domes that curve above the pool.

SWIMMING POOL
Architect: **Gruet Ingenierie, Serres Castet**
Main contractor: **Communauté d'Agglomération de Saint-Quentin**
Fabricator: **Espace Aluminium Du Vermandois, Saint Quentin**
Reynaers systems: **CF 77, CS 86-HI**



ARTHUR BAGEN

EINDHOVEN, THE NETHERLANDS

This beautiful monumental building is part of the former Philips industrial complex at Eindhoven's Strijp S district, currently being transformed into a vibrant new city sector. Diederendirrix architects combined residential, commercial, and recreational uses in the Anton building (named after Anton Philips, co-founder of the technology company).

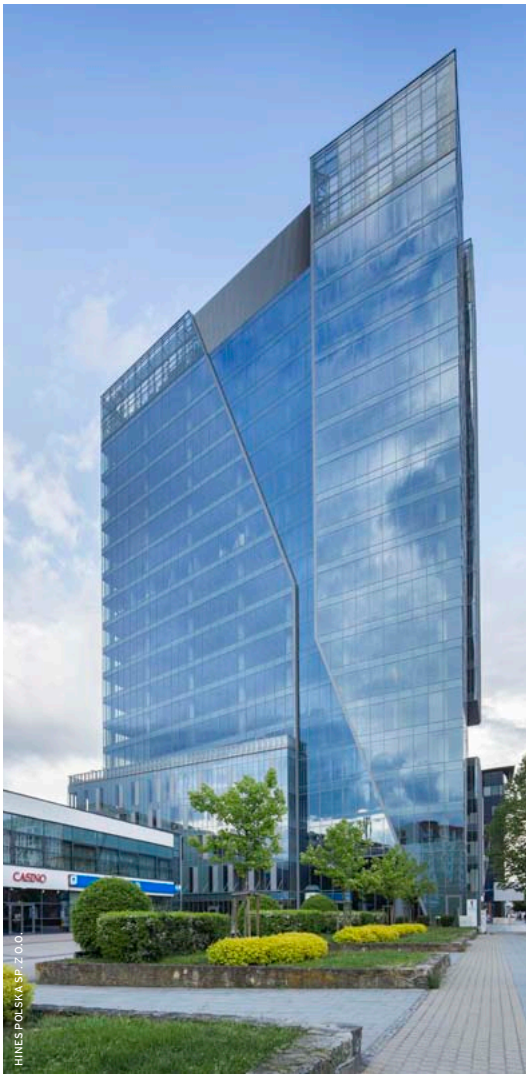
ANTON BUILDING AT STRIJP S
Lead Architect: **diederendirrix architecten, Eindhoven**
Executive architect: **V-Architecten BV, Sittard**
Main contractor: **Stam + De Koning Vastgoed bv, Eindhoven**
Fabricator: **Rutolux Groesbeek BV, Groesbeek**
Reynaers systems: **CS 38-SL, CF 77**



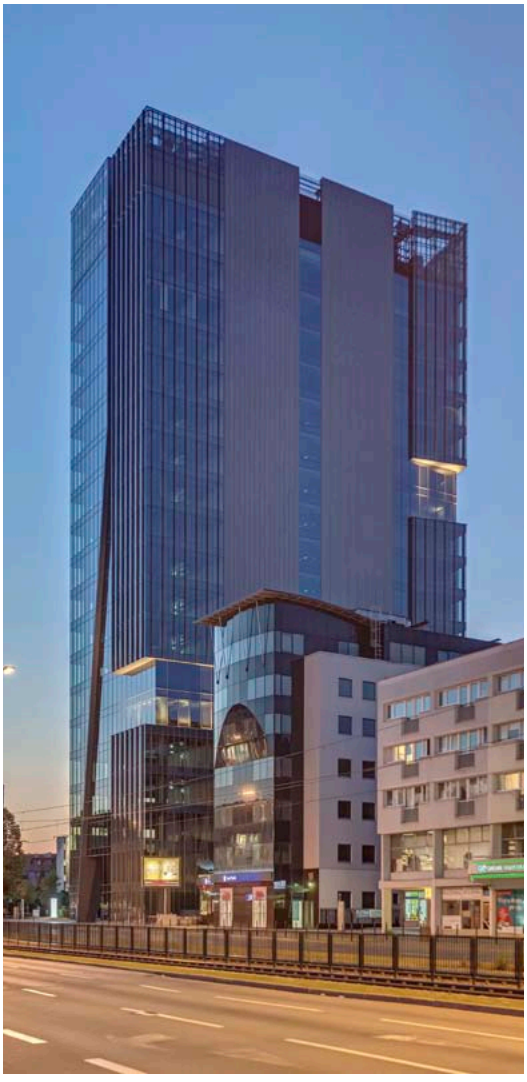
GEEL, BELGIUM

This vibrant two storey house displays a variety in used materials and colours. Whereas the ground floor is completely open and transparent, the rooms on the second floor are more private and divided in perfect symmetry. A touch of colour gives each room its own identity.

PRIVATE RESIDENCE
Architect: **Bart Coenen, Antwerp**
Fabricator: **Moors NV, Houthalen-Helchteren**
Reynaers systems: **CP 155-LS, CS 77**



HINES POLSKA SP. Z O.O.



GDAŃSK, POLAND

Neptun is located at one of the most attractive commercial sites in Gdańsk. The more than 15,300 square-metre large office building is characterised by a full glass façade ensuring both a wonderful view and plenty of daylight. The building has 19 floors, 160 subterranean parking spaces, and has been awarded the BREEAM certificate 'Very Good'.

OFFICE BUILDING NEPTUN
Architect: **Aedas CE Sp. z o.o., Warsaw**
Main contractor: **Budimex SA, Warsaw**
Fabricator: P.P.H.U. **Aluprojekt, Warsaw**
Reynaers systems: **CW 50-HI, CW 50-FP, CS 86-HI**

SOFIA, BULGARIA

Offices, service station, warehouses, a restaurant, storage, and a fitness centre all come together in this avant-garde building with a slanted prism. The volume of the office building with its glazed façade of geometric forms is in full contrast with the solid volumes of the warehouses and service station.

SOFSTOK
Architect: **Ivo Petrov architects, Sofia**
Reynaers systems: **CW 50, CW 50-SC, CS 77**



SAN DONÀ DI PIAVE, ITALY

Cutting-edge construction technology and high energy performance have been used for these light apartments with a frontage that conforms to the shape of the road. Reynaers' CP 155-LS Minergie system allows the large sliding doors to seamlessly connect the living rooms with the large terraces.

CINQUECENTRO APARTMENTS
Architect: **Ank Studio, San Donà di Piave**
Main contractor: **AW S.R.L., San Donà di Piave**
Fabricator: **Carollo Serramenti s.n.c., Zero Branco**
Reynaers systems: **CS 86-HI/HV, CP 155-LS Minergie**



CAIRO, EGYPT

The segmented façade design of this 11-storey office and commercial building in Cairo, is built up with the CW 50 horizontal lining system and composite panels. The special shape of the building and use of many different façade materials give the building a prominent look.

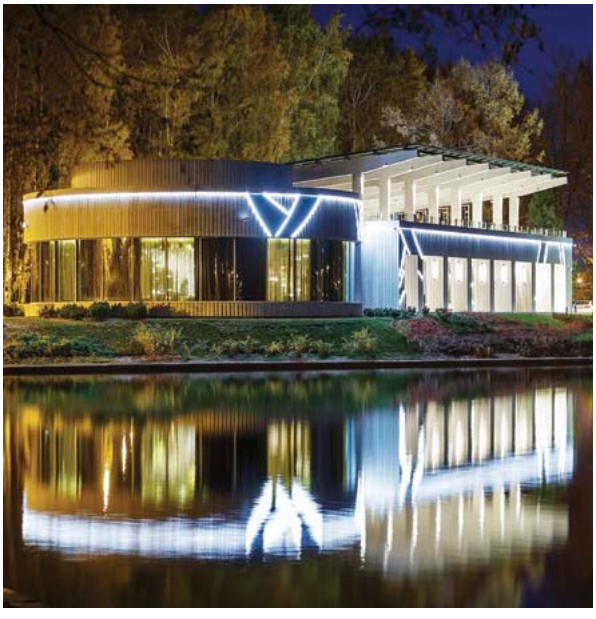
HAZEM MAHER TOWER
Architect: **Archilab, Cairo**
Investor: **Dr. Hazem Maher, Cairo**
Main contractor: **EG Contractors, Cairo**
Fabricator: **Wajhat A.A.P., Cairo**
Reynaers system: **CW 50-HL, CW 59Pa, CP 50Pa**



ST. PETERSBURG, RUSSIA

A highly exclusive and immaculately decorated restaurant, Il Lago dei Cigni (Swan Lake in Italian) is located in the historic centre of Krestovsky Island on the shore of Lake Lebiazhi. Floor-to-ceiling windows in the restaurant provide a panoramic view of the water, and the façade, for which the curved glass was especially manufactured in Italy, forms a four-metre high semicircle.

IL LAGO DEI CIGNI RESTAURANT
Architect: **Hirsch Bedner Associates, Moscow**
Main contractor: **BaltStroy, St. Petersburg**
Fabricator: **Comfort Group, St. Petersburg**
Reynaers systems: **CW 50-SC Slim Line, CW 50-SC**



REYNAERS ALUMINIUM N.V.
Oude Liersebaan 266 · 2570 Duffel · Belgium
t +32 (0)15 30 85 00 · f +32 (0)15 30 86 00
www.reynaers.com · info@reynaers.com

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