Glass in Architecture

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PILKINGTON

Glass in Architecture

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Introduction

Welcome to an exclusive journey through the world of architecture, where glass takes centre stage as a revolutionary element that seamlessly blends creativity and sustainability with a distinctive touch. Through this book, I explore how NSG Group, with its commitment to excellence, has harnessed the power of glass to transform the architectural landscape.

Modern architecture is at a crossroads, facing a monumental challenge – how can it embrace aesthetics without compromising its responsibility towards the environment? This dilemma has brought glass into the spotlight as a potential solution that goes beyond mere visual appeal.

With its transparent nature and adaptability to various contexts, glass has become a prominent player in this debate. It offers more than just an aesthetic ploy; it embodies a symbolic declaration of openness to the surrounding environment, blurring the lines between physical borders. The projects we are about to explore in this book showcase the limitless perspective that glass can bring to architectural design. It becomes a bold statement, challenging our perception and pushing the boundaries of traditional architecture.

From gravity-defying skyscrapers to culturally rich museums, glass plays a vital role in blurring the distinction between inside and outside, merging the structure seamlessly with the surrounding landscape. The architectural projects we highlight here truly exemplify the fusion of innovation and versatility that glass brings to the table.

Here is where the NSG Group enters the picture – not just as a glass supplier, but as a true partner in the art of architecture. The Group's innovations do not merely focus on form, but also on function. Advanced thermal insulation technologies, high-performance glass, and targeted design solutions contribute to making each building a sustainable masterpiece. NSG Group has become one of the guardians of responsible architecture, providing not only transparency but also a clear vision of a sustainable future.

In the forest of architectural projects, those that embrace the aesthetics of glass, while being deeply committed to environmental sustainability, are the ones that stand out. Glass, in a world where eco-friendly construction practices are a necessity, proves to be an irreplaceable ally. Its transparency, when combined with advanced technologies, not only creates bright and open environments but also plays a crucial role in reducing the environmental impact of buildings.

Amidst this landscape, NSG Group emerges as a beacon of innovation. Beyond supplying high-quality glass, the company stands out for its unwavering dedication to sustainability. Every type of Pilkington glass serves as not just a window into the world but also as an opening towards a future where architecture embodies both beauty and ecological responsibility.

Through a thorough analysis of the selected projects, we will explore glass as more than just a physical element. It is an agent of social and environmental change, with each luminous reflection and transparency paving the way towards a clearer and more sustainable vision of our world.

I invite you to join us on this journey, venturing beyond the conventional boundaries of architecture, where glass, as well as NSG Group, acts as a trusted ally in creating spaces that tell timeless stories.

Welcome to the dialogue between light, form, and sustainability.

arch. Carlo Santambrogio

The horizontal tripartition of the façade, with the help of two continuous horizontal negative joints, introduces a macro scale into the composition.

PRAGUE | CZECH REPUBLIC

Main Point Pankrac

Pilkington **Activ Suncool**™ 50/25 & 70/40

Pilkington **Activ Suncool Optilam**™ 50/25 & 70/35

arch. DAM architekti s.r.o

Main Point Pankrac is a complex of five, ten-storey mixed-use office buildings located in the Nusle district of Prague. The buildings' rounded triangle shapes create an intricate ground plan as it adheres to the basic grid of the orthogonal system.

The distinctly shaped unified façade of the five buildings, with its undulating form, offers an interesting and variable appearance when viewed from the outside. This expression is unmistakable, clearly different from the standard flat glass façades of ordinary office buildings. With this design, the Main Point Pankrac is clearly distinguishable from other buildings in the local area.

The use of dual-coated Pilkington **Activ Suncool**™ glass, which has a self-cleaning coating on the external surface and high-performance solar control coating on the internal surface, provides not only excellent visibility, but also very good solar control and thermal insulation.

The Prague Main Point Pankrac is a construction where the emphasis has been put on the energy efficiency of the building. This is confirmed by the LEED certificate in the highest Platinum category, awarded for the first time to a building in the Czech Republic.

Raising one of the five buildings by the height of the ground floor (or "cutting" it from below) clearly points out the location of the main entrance.

The horizontal division takes place in a layer of offset spatial vertical shielding slats, which in their advance and in the visual impression, create the definition of the envelope of the individual masses.

The unifying joints between the façades deliberately abandon the classic division of the ground floor, body, and roof layer. In contrast, the seamlessly binding envelope between the five individual buildings is made of a transparent, all-glazed construction.

LIMONE | ITALY

Park Hotel Imperial, Centro Tao

Pilkington **Optiwhite**™

Pilkington **Mirropane**™ Chrome Plus

arch. ArtekStudio ing. Sergio Murgia

The Park Hotel Imperial, situated in Limone del Garda, on the Brescia coast side of the Lake, showcases extensive use of glass.

The hotel was designed to meet the needs of customers who value luxury and the unique natural environment of the picturesque Lake Garda. The location provides great views from every room.

The Park Hotel Imperial is well known and highly regarded for the philosophy of well-being emphasised in the Tao Centre, Natural Medical Spa within the hotel.

Two types of glass played key roles in the hotel latest upgrade; Pilkington **Optiwhite**™ low iron glass, and Pilkington **Mirropane**™ Chrome Plus, a toughenable corrosion-resistant mirror.

The extra clear glass was used in some of the suites' bathroom wall partitions, which were digitally printed white to provide privacy. Pilkington **Optiwhite**™ *enhances the brightness of the colours, providing rooms with an extraordinary lightness and transparency.*

Thanks to its production process and the careful selection of raw materials, Pilkington **Optiwhite**™ *is extremely neutral in colour, making it ideal for digital printing or leaving clear unframed edges.*

The choice of Pilkington **Mirropane**™ Chrome Plus *was made because the customer requirement was for large mirrors that rely on maintenance-free coating rather than reflective backing that can deteriorate over time. The client also required a simple, light, frameless, opaque glass door. This product fully meets both expectations.*

Thanks to the versatility of Pilkington **Mirropane**™ Chrome Plus T *toughened mirror, the fastening elements – the metal hinges and the handles – were fixed to the doors directly onto the glass, adding an attractive decorative element.*

Pilkington **Mirropane**™ Chrome Plus, *10 mm thick and toughened, was especially made for mirror parts in hotel rooms.*

The highly reflective coating of Pilkington **Mirropane**™ Chrome Plus *was expertly etched and enhanced by a white panel background to create motifs of branches and leaves.*

Décor etched on the glass create light and reflections that dance around the rooms.

Pilkington **Optiwhite**™ *10 mm thick toughened and then laminated glass (10+10, with PVB interlayer 1.52 mm) was used for the hotel's external parapets, which were subsequently digitally printed to create a soft white colour effect.*

Futuristic headquarters of BHS Corrugated with floor to ceiling high glazing made of Pilkington **Suncool**™ 50/25 *high performance solar control glass. The cantilevers of the curved concrete elements form a structural sun protection: in summer, they provide effective shading.*

WEIHERHAMMER | GERMANY

BHS Corrugated

Pilkington **Suncool**™ 50/25

arch. furoris gruppe

photo: © Michael Sommer

BHS Corrugated Maschinen- und Anlagenbau GmbH is the world market leader for corrugated board systems. The company invested heavily in its main location in Weiherhammer.

The heart of this investment is the new headquarters building. The office complex, which is very striking with its curved shape, was designed and built by the furoris gruppe. Glass plays an important role in their architectural language.

The architects, inspired by the appearance of the corrugated board, designed a vividly curved building with delicate glass joints. The building has an aesthetically curved structure made of reinforced concrete. Depending on the geometries, different sizes of white concrete slabs were cast on site for each floor and thermally separated from the building. This creates the impression of dynamic movement, but at the same time of a certain lightness and futuristic appearance.

Futuristic headquarters of BHS Corrugated designed by furoris gruppe GmbH has been awarded with German Design Award Special 2019 for Excellent Communications Design Architecture.

The glass façade is an aluminium mullion-and-transom construction with fixed elements and window and door elements.

For the large-area glazing, the architects wanted neutral and slightly reflective glass. At the same time, the requirements for solar control during summertime with the lowest possible g-value had to be met.

Triple solar control insulating glass units in the glass façade made of Pilkington **Suncool**™ 50/25 *ensure light and brightness as well as thermal comfort.*

HEILBRONN | GERMANY

QBIG III

Pilkington **Suncool**™ Blue 50/27

arch. Riemer Planung GmbH

photo: © Dirk Wilhelmy, Stuttgart

The striking innovative office building called QBIG III, belongs to the Heilbronn business park Schwabenhof. The impressive glass building features an extravagant steel skeleton. The unique architecture and high energy standard make this building an attractive rental property.

In QBIG III the steel braces are arranged asymmetrically vertically around a cube entirely made of glass. Room-high glass elements with high performance solar control glass Pilkington **Suncool**™ Blue 50/27 ensure a pleasant room climate in summer and offer all tenants a clear view of the surroundings.

With their expressive architectural language, the architects Riemer Planung created an ensemble with a high "identification factor". The natural lighting and ventilation of the workplaces as well as the efficient use of space were important elements that the architects pursued during the design. Thus, there are no dark zones in the whole building, all offices are equipped with room-high glazed windows or façade elements and can of course be ventilated. The high flexibility due to changeable spatial structures also takes the grid-finished window façade into account.

The entire glass building was equipped with triple solar control insulating glass units. The architects wanted a glass with medium exterior reflection and blue appearance.

The façade was designed as a mullion-and-transom construction with recurring façade and window elements in 1.25 m width to max. 3.40 m height.

The glazing was made of toughened glass due to the expected shadow effect of the steel beams in front of the glass façade. Thus, the risk of glass breakage could be minimised with temperature fluctuations.

The building physics demanded the lowest possible g-value for the glass in terms of summer solar control. The triple insulating glass made of Pilkington **Suncool**™ Blue 50/27 *has a low g-value of 24% and a* U_g*-value of 0.6 W/m²K.*

QBIG III, along with neighbouring buildings, plays with obscuring aesthetics and makes it clear that they belong together thanks to the expressive architectural language. With the QBIG III, the striking building trio in Heilbronn business park Schwabenhof is completed.

For interior barriers anti-reflective toughened and laminated Pilkington **OptiView**™ Ultra Protect T *16,8 mm glass has been used so that visitors can clearly see the pandas as the glass is nearly invisible.*

ÄHTÄRI | FINLAND

Snow Panda House, Ähtäri Zoo

Pilkington **Suncool**™ 70/35 AC

Pilkington **OptiView**™ Ultra Protect T

Pilkington **Optitherm**™ S1N

arch. Arkkitehtitoimisto Jääskeläinen Oy

Ähtäri Zoo was founded in 1973 and is the oldest natural zoo in Finland. Ähtäri Zoo's Snow Panda House design has considered the pandas' natural habitat in which they would live in the wild. Indoor conditions have been challenging because the relative humidity and temperature of the air as well as the required brightness had to meet the conditions of the average pandas living environment in the mountains of Tibet in Central China.

The key consideration of the interior design was the comfort of the snow pandas. The design was supported by the information provided by Chinese guidance cards, which contained precise requirements for animal housing. For example, temperature requirements of up to +25° C in summer, and of about +10°C in wintertime. The relative humidity of the air should be 50-60% throughout the year.

The largest glass façade of the Panda House faces north to the pandas' yard area. To optimise the amount of natural light entering the enclosure, the external windows were designed on site, which resulted in the glass units being placed at a 3-degree angle.

Thanks to the anti-reflective glass, the bears cannot see their own reflection in the glass. This was an essential feature because the pandas would assume its own reflection was a potential enemy.

In the panda house, glass has been widely used in both façades, terraces, and indoors.

The glazing was carefully considered and dimensioned to avoid accidental breakage from the 110-kilogramme weight of the Pandas and were calculated against a 3 kN point load.

All windows in the exterior walls of the panda house have an outer surface with anti-condensation coating and provide high performance solar control thanks to the solar control coating on surface 2.

The Snow Panda House includes a panda's room, a panda's viewing area, a deli/café, a summer terrace, and a souvenir shop.

SAN FRANCISCO | USA

1000 Sansome

Pilkington **Profilit**™

arch. Lundberg Design & MacCracken Architects

photo: © TGP America

The lobby of the historic industrial 1000 Sansome building in San Francisco underwent a facelift. The Lundberg Design & MacCracken Architects utilised modern design practices to refresh the outdated aesthetics and fill the spaces with natural light from the exterior of the building.

For the glazing throughout the lobby, the architects chose Pilkington **Profilit**™, an expansive translucent channel glass system installed by Technical Glass Products in a custom framing system fabricated by Chris French Metals and designed by MacCracken Architects.

The glazing modernises and brightens the space, evenly dispersing light deep into the interior while still maintaining privacy. Pilkington **Profilit**™ provides beautiful partitions between rooms and offers the strength and durability that was required instead of solid walls.

The elegantly lined structure of Pilkington **Profilit**™ Slim Line *is transferred to create a distorted yet clearly contoured view of objects located behind the glass.*


1000 SANSOME
FIRST FLOOR
Carmel Partners
ATC Partners, LLC
SECOND FLOOR
Cibo
THIRD FLOOR
Axiom
Isaacson Miller

The fine, undulating surface creates a gentle yet dynamic sense of motion as soon as the observer changes the view perspective.

Pilkington **Profilit**™ Slim Line T *thermally toughened channel glass is specifically designed for the increased safety requirements within traffic areas of public buildings. This product variant, which is distinguished by greater mechanical strength, supports the creation of large surfaces open to light when safety requirements must additionally be met.*

Pilkington **Profilit**™ Slim Line *is a channel textured glass with a pattern in the form of thin, linear grooves.*


EVACUATION PLAN

With both simple and yet technically sophisticated system components of the Pilkington **Profilit**™ *modular system, large-scale façade glazing for the natural lighting of buildings can be carried out in an optically continuous look.*

A visually striking and contemporary addition to the architecture of the Edinburgh square.

EDINBURGH | UNITED KINGDOM

6 St Andrew Square

Pilkington **Suncool**™ 66/33 T

Pilkington **Planar**™

arch. CDA and Hoskins Architects

photo: © SG Photography Ltd

When the joint design team of CDA and Hoskins Architects took on the brief to design a new scheme integrating five existing buildings in a historic Edinburgh square, they knew they would be creating a striking contemporary counterpoint to the surrounding architecture. The final design uses distinctive, custom-made fins – some bronze and some stone – along with projecting lantern glass boxes and a grand double-height entrance leading to a full height atrium to create a building that is unapologetically modern.

To complete the façade, two different glazing technologies were used: point fixed structural glazing system and a bespoke curtain wall system, onto which the bronze and stone fins are mounted.

Thanks to the cleverly concealed full-height glazing, the interior is filled with daylight and occupants enjoy the full benefit of the impressive views of Edinburgh Old Town and over the Firth of Forth.

High performance solar control glass helps reduce transmission of heat from the sun, while allowing high level of visible light through. It ensures a comfortable climate for occupants all-year-round without compromising on bright interiors and spectacular views.

Energy performance of this heavily glazed building has been achieved without aesthetic compromise.

Throughout the façade, the glazing breaks through to be viewed in full, uninterrupted by the stone and bronze fins.

To minimise heat loss during cold weather and excessive heating on hot days, Pilkington **Suncool**™ 66/33 T *glass was specified across the whole building.*

The ground floor retail units and the soffit glazing on the underside of the projecting spaces were achieved using a Pilkington **Planar**™ *structural bolted system.*

Pilkington **Planar**™ *uses low-profile stainless-steel fixings to provide frameless, glass surfaces that deliver clean lines and uninterrupted views.*

The new development's modern glazing perfectly reflects its historic Edinburgh setting.

The largest part of the façade features a bespoke curtain wall system, onto which the bronze and stone fins are mounted.

When you face the façade head-on, fins are narrow enough that you can hardly see them. But, as you move into the square itself, the building's frontage appears to become solid.

The fins play a critical role in allowing the designers to deliver such a heavily glazed building at this very sensitive site.

BLACKPOOL | UNITED KINGDOM

Blackpool Mirror Ball

Pilkington **Mirropane**™ Chrome

Artist: Michael Trainor

The Blackpool Promenade is renowned for its many sights and sounds, either by day or by night. A seaside getaway for all ages, the promenade is adorned with a giant 6 m mirror ball showcasing the town's love of partying and sparkling energy.

In September 2021, Blackpool Council saw fit to sign off on a refurbishment project to bring the Mirror Ball back to its shining glory. The refurbishment project was a team effort involving Garmendale Engineering, who were responsible for the servicing, refurbishment, and reassembly of the full structure, Jordans Glass, Mirror Finish Tiling Contractors, as well as students from Blackpool and Fylde College.

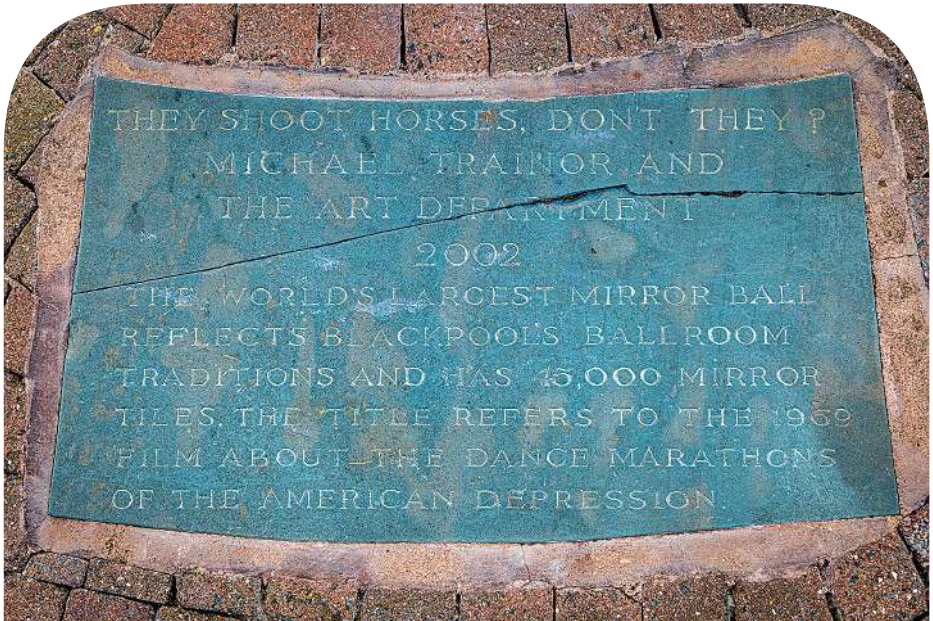
Over the space of two months, the team worked tirelessly to disassemble the massive disco icon, before working to fit over 47,000 new Pilkington **Mirropane**™ Chrome tiles, before returning it to its rightful place on the south end of the beach.

Choosing the right materials for a job of this size meant considering a lot of ambient variables, such as weather conditions as well as damp. Pilkington **Mirropane**™ Chrome, *which is resistant to atmospheric corrosion, was the right choice.*

As part of the project, the internal bearings have been refitted to ensure a full rotation of the sparkly globe is completed every minute, scattering rays of sunshine or floodlight across the beachfront at any time of day.

Around 47,000 tiles of our Pilkington **Mirropane**™ Chrome *glass were cut to size, placed, and now adorn the South Promenade.*

Over the course of 2 months, the team individually placed the tiles of high-performance, corrosion-resistant mirror.



Originally installed in 2002, the Mirror Ball has faced many years of standing up to hard winds, damp conditions and corrosive salt spray and had unfortunately become tarnished, losing its lustrous sparkle.

Coupled with Pilkington **Mirropane**™ Chrome *glass's resistance to humidity and damp, the tiles will resist weathering and black spots for many years ensuring that all that glitters does not get old for many years to come.*


ROSSMANN
ROSSMANN
ROSSMANN

WARSAW | POLAND

Plac Zamkowy - Business with Heritage

Pilkington **Suncool**™ 70/40 T

Pilkington **Activ Suncool**™ 70/40 T

arch. Wojciech Grabianowski, RKW Rhode Kellermann Wawrowsky Polska

Plac Zamkowy – Business with Heritage is a high-class building designed for office and retail tenants, located in the heart of one of the most prestigious places in Warsaw. The building is located approximately 100 metres from the main attractions of the Polish capital – Sigismund's Column and the Royal Castle.

The building combines tradition with modernity, skilfully hiding modern technical solutions behind a façade that resembles its surroundings. Wisely specified glass perfectly matches the prestigious realisation with aesthetics and functionality.

Plac Zamkowy – Business with Heritage is a modern building designed with sustainability in mind. It meets the high requirements of "green" construction. The facility designed in accordance with the principles of sustainable development, thanks to the use of energy-saving and ecological solutions, already at the design stage was awarded the BREEAM Interim certificate with a "very good" rating.

The Plac Zamkowy – Business with Heritage office building combines tradition with modernity, skilfully hiding modern technical solutions behind a façade that resembles its surroundings.

The windows were glazed with the use of toughened solar control glass Pilkington **Suncool**™ 70/40 T *in two thicknesses of 8 and 10 mm.*

Since Pilkington **Suncool**™ 70/40 *is a very neutral glass with a low degree of reflectivity, it harmonises very well with the stone façade of the building.*

The glass helps to optimise the energy consumption of the building. It is characterised by high light transmittance, reduced solar energy transmittance and high thermal insulation.

In the skylights, 10 mm Pilkington **Activ Suncool**™ 70/40 T *toughened solar control glass with self-cleaning properties was used, reducing future maintenance.*

The outer surface of Pilkington **Activ Suncool**™ 70/40 T *is covered with a self-cleaning coating, which breaks down organic dirt collected on the glass. Thanks to the hydrophilic properties, the water flows evenly over the glass surface, flushing the released dirt and leaving no unsightly stains.*

Pilkington **Suncool**™ 70/40 *is particularly suitable for buildings where maximum natural light is required.*

HONG KONG | CHINA

K11 Art & Cultural Centre

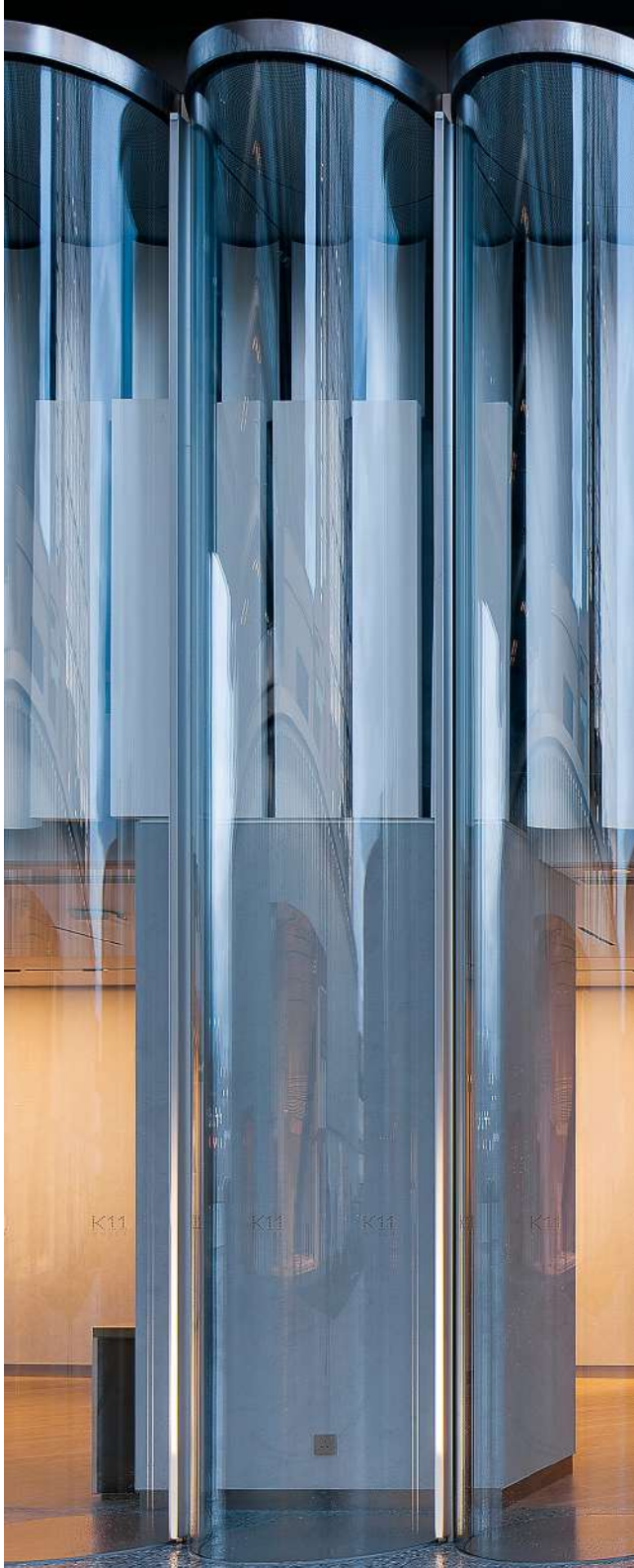
Pilkington **Optiwhite™**

arch. SO-IL

The K11 MUSEA on the region's Victoria Dockside, is the new cultural and retail destination. Located on the shores of the China Sea, the K11 MUSEA complex includes a public art collection and aims to promote art, culture, and design in Hong Kong.

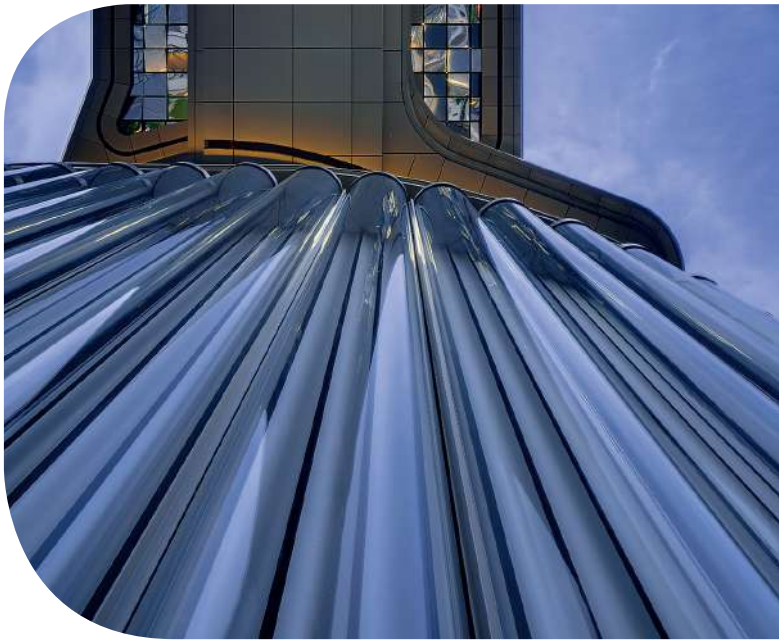
The K11 Art & Cultural Centre, located on the 6th floor of the K11 MUSEA, has been designed by SO-IL an award-winning New York-based architecture firm. A striking architectural feature – a façade made of 475 glass tubes 9 metres tall and one meter in diameter – is both aesthetically pleasing and functional. It provides its visitors with a comfortable thermally insulated environment, while its transparency also invites exploration indoors and outdoors in a dynamic and immersive way.

The tubes are made of Pilkington **Optiwhite™** *low-iron extra-clear curved glass by the Cricursa glass fabricator.*




K11

This unique design enables the museum to stand out from its surroundings – even when viewed from afar. Its transparency helps to differentiate the interior from the rest of the building.



The monolithic glass tubes are the first of their kind with each piece weighing two tons.

Pilkington **Optiwhite**™ *is perfect for applications where transparency and purity of colour is desired. These same qualities also allow for uninterrupted, natural daylight.*

UREDDPLASSEN | NORWAY

Public toilet

Pilkington **Insulight**™ Protect

Pilkington **Optilam**™ I Translucent White

Pilkington **Optifloat**™ Clear T

arch. Haugen/Zohar Arkitekter AS

Meaning 'Uredd rest area', the Ureddplassen is an unexpected attraction along the Helgeland coast near Storvik, Norway. In this location you will find a nine-metre-wide terrace with a breathtaking view over the sea and an 'out of this world' toilet.

The wave-shaped public toilet building, with glass walls made of Pilkington **Insulight**™ Protect, offers a place for travellers to use its facilities while being protected from the elements. The insulating glass units with toughened laminated glass and translucent white interlayers provide security and privacy.

One of the most unique toilet buildings fits perfectly into the scenery. As the night sets in, the restroom is lit from the inside.

Pilkington **Optilam**™ I Translucent White *is a laminated glass incorporating a matt milky/white translucent interlayer. It is designed to scatter light or appear translucent.*

Pilkington **Optilam**™ I Translucent White *maintains light penetration but provides privacy.*

BERGEN | NORWAY

DNB Office

Pilkington **Suncool**™ 70/35

Pilkington **Suncool Optilam**™ 70/35

Pilkington **Optiphon**™ Therm S3

Pilkington **Pyrostop**®

arch. Arkitektkontor AS

The DNB office building in Bergen designed by Arkitektkontor AS is located along the waterfront in Solheimsviken. The 330-metre long building consists of five smaller units that are connected with each other. The design had to follow strict regulations of the town's area which is dominated by small houses.

High performance solar control glass Pilkington **Suncool**™ 70/35 has been specified due to its high light transmittance, good solar protection, and neutral appearance. It was very important to provide comfortable workspaces placed along the outer façade.

For fire rated internal glazing Pilkington **Pyrostop**® clear, multi-laminated fully insulating fire-resistant safety glass met the required level of fire protection.

Pilkington **Suncool Optilam**™ 70/35 *laminated solar control glass was used in low level glazing.*

To improve thermal insulation of the building even more, Pilkington **Optitherm**™ S3 *low-emissivity glass has also been used as an internal pane of insulating glass unit that helped to reduce energy consumption and heat loss.*

In the areas where there was an additional requirement for higher noise reduction Pilkington **Optiphon**™ Therm S3 *laminated safety glass with special acoustic interlayer with low-e coating has been used.*

REILSTAD | NORWAY

Summer House

Pilkington **Suncool**™ 70/35

arch. Helen & Hard

Summer House Reilstad designed by Helen & Hard architects is the winner of the "Glass Award 2019".

This beautiful summer house located on the island of Finnøy – one of the largest islands in Ryfylke in Norway – is a great example of how a project can be customised to perfectly adapt to nature and the special qualities of the landscape. The house goes over four levels, and the residents move in an interior landscape linked directly to the outside terrain with various terraces and living areas.

The architects had a very sensitive approach to the landscape and only natural materials have been used and their form adapted to the steepness of the site.

To provide high levels of light and, at the same time, to protect the interior against overheating in the summer and heat loss in winter, triple glazed units made of high-performance solar control glass Pilkington **Suncool**™ 70/35 *in combination with low-emissivity glass have been used. The units have been filled with argon that helped to lower* U_g *value to 0.5 W/m²K.*

There is a large ceiling in wood, with support only in the façade and ridge beam under the roof.

When you enter the house, you have an overview of the whole interior, and views in all directions through the large glass façade.

Interior glazing balustrades around the fireplace have been made of clear toughened safety glass.

Internal glass ceilings have been used to spread natural light throughout the residential home.

To achieve required safety most of the external panes of triple glazed units have been made of laminated safety glass.

PARIS | FRANCE

La Samaritaine

Pilkington **Optiwhite**™

arch. Kazuyo Sejima + Ryue Nishizawa / SANAA

photo: © K. Khalfi

La Samaritaine can be found in a unique location on the Seine, in the first district of Paris. It is a newly renovated department store, now opened to the public after an extraordinary renovation due to its size and complexity.

La Samaritaine reveals its new contemporary, modern form to the neighbourhood, complementing the many aspects of Parisian life. After years it has become a lively place to meet, discover, and enjoy for Parisians and foreign guests alike.

Located in the heart of Paris, it houses a new department store, a prestigious hotel, cafes, brasseries and restaurants, social flats, children's nursery, and offices.

The contemporary façade of La Samaritaine, facing Rue de Rivoli, is a masterpiece that combines the sense of simplicity, the passion for detail, and the poetic inspiration of the architects of the Sanaa studio from Japan.

The stunning glass curtain wall is the outer skin of the building envelope standing in front of the triple glazed inner skin that acts as a core of thermal comfort and provides fire resistance properties.


A R I T A I N E
SOLDES
SOLDES


ERNEST

Facade specialists FRENER & REIFER, acting as contractor and design developer, opted for laminated extra-clear panels in Pilkington **Optiwhite**™ *and installed them after custom-bending by Cricursa.*

The outer façade has an irregular undulating form and comprises 343 curved glass panels measuring 2.7 by 3.5 metres.

MILAN | ITALY

La Terrazza

Pilkington **Optiwhite™**

arch. Carlo Santambrogio, Ennio Arosio

photo: © Santambrogiomilano

Situated near Foro Buonaparte, this private house boasts a terrace of extraordinary all-round beauty. By using extra clear, low-iron Pilkington **Optiwhite™** glass, a unique architectural vision for "La Terrazza" has resulted in a completely transparent, minimalist-style home – seemingly in the open air – one that allows all-round enjoyment of its unique character and surroundings.

The vision was realised by architects Carlo Santambrogio and Ennio Arosio, who deployed their sensitive and second-to-none interior design skills as well as their extensive experience in maximising the structural potential of glass to stunning effect.

The furniture collection is made of 15 + 15 mm Pilkington **Optiwhite™** *toughened and laminated glass, each item customised in size and colour according to the customer's request.*

Carefully selected for its purity and low-iron oxide content Pilkington **Optiwhite**™ *an exceptional colourless glass improves light transmittance and reflects the true colours of objects observable behind the glass.*

The all-glass pergola is made of 12 mm thick 4-layer toughened and laminated Pilkington **Optiwhite**™ *glass panels, while the glass shading ribs comprise* Pilkington **Optifloat**™ Grey, *8 mm thick body tinted glass, which reduces solar radiation.*

The product's absolute transparency and neutral colour on the edges, provides a clean and unobstructed all-round view, distinguishing it from any other glass commonly used in construction.

Appreciating that Pilkington **Optiwhite**™ *extra clear has properties beyond being merely transparent and therefore invisible, their design concept was elevated to a different level using the remarkable reflections that occur when lighting is turned on at night.*

SCHEVENINGEN | THE NETHERLANDS

Inntel Hotel Den Haag Marina Beach

Pilkington DesignPrint

Pilkington **Suncool**™ 60/31

Pilkington **Suncool Optilam**™ 60/31

Pilkington Spandrel Glass IGU

Pilkington **Optilam**™ I Translucent White

arch. KCAP architects & planners

Located on the Dutch North Sea coast, the new Inntel Hotel Den Haag Marina Beach in Scheveningen, is a seaside landmark like no other – and in no small measure, its outstanding visual qualities are thanks to a clever combination of glass products.

The Inntel Hotel is part of the city plan designed by KCAP for the Noordelijk Havenhoofd in Scheveningen. The innovative hotel façade contains special contours and lines that make it look like a sailing boat in the wind.

Comprising 226 luxurious rooms on 12 floors, some with their own whirlpool and floor-to-ceiling windows, a Spa & Wellness centre and meeting rooms, the triangular-shaped structure looks different from each vantage point, paying homage to the beach and the sea.

The characteristic arrangement of the glass, a gradual checkerboard pattern of the individual panes, immediately catches the eye. But each individual pane is also a small work of art.

The new Inntel Hotel in Scheveningen impresses with its look and what it has to offer. It's a great new landmark in the wind with the shape that signals a certain lightness and elegance.

The glazing on the ground floor comprises Pilkington **Suncool**™ 60/31 *high performance solar control glass in annealed or laminated form combined with laminated glass as inner pane.*

From afar, the glass façade with the diagonal stripes creates the dynamics of a sail, but at a closer look, it also represents the ripples in the water or those of a sandy beach after the water retreats.

The high-rise, sail-like hotel rooms are glazed with insulating glass units made of toughened and heat soak tested Pilkington DesignPrint – *clear float glass digitally printed in RAL 7032 colour combined with laminated glass with clear or translucent white interlayer.*

For the façade spandrel areas shadow boxes have been used glazed with Pilkington Spandrel Glass IGUs.

Pilkington Spandrel Glass IGUs *have been made of either toughened and heat-soak-tested* Pilkington **Suncool**™ 60/31 THS *or toughened and heat soak tested* Pilkington DesignPrint *glass as an external pane and toughened and heat-soak-tested Delogcolor® enamelled glass in colour RAL 9005 as an internal pane.*

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