GKD

THE ARCHITECTURE OF METAL FABRICS

THE ARCHITECTURE OF METAL FABRICS

AESTHETICS, SAFETY, IDENTITY

Architectural mesh from GKD – outstanding solutions that combine sustainability and functionality

World renowned architects rely on GKD for their metal fabric solutions. Whether as a façade or specialty, GKD's all-in-one solutions for architectural metal fabric is unique and functional.

Whether Aachen or Abu Dhabi, Bergen, Bangkok, Miami, or Mannheim – the architectural marvels presented here shows our wide range of applications for woven stainless steel, aluminum, and non-ferrous metal in architecture.

In the early 90's, GKD was the first company in the world to produce metal mesh on a large scale for architecture projects. This enabled us to create a completely new kind of façade design which quickly caught on and is now an integral part of contemporary architecture.

It is not only the variety of fabric types, surfaces, colors, and system innovations that prove GKD's leading position. Architects, building owners, and design firms also value and trust our comprehensive expertise and experience. From planning, delivery, and installation to acceptance and approval procedures, we offer our customers comprehensive and tailored services. The worldwide availability of even large mesh surfaces is guaranteed by international production sites and secure supply chains.

Radiance Apartments

Location
Sydney, Australia

Architect
Tzannes

Metal fabric
PC-ALU 6010

Metal fabric surface area
2,607 m^2

Attachment solution
Frame

The name of this 15-story commercial and residential complex fits perfectly with the golden anodized PC-ALU 6010 aluminum fabric adorning it. Architectural fabric does more than give the building a glamorous appearance. It also withstands all weather conditions, serves as solar protection, and offers visual privacy, providing an unobstructed view outside and allowing natural light inside the building. What's more, the façade is adaptable: All 1,600 fabric panels can be moved and folded. The façade possesses another distinguishing feature: even in the breathtaking skyline of Darling Harbour, the structure's shimmering golden sheath stands out.

Minerva High School

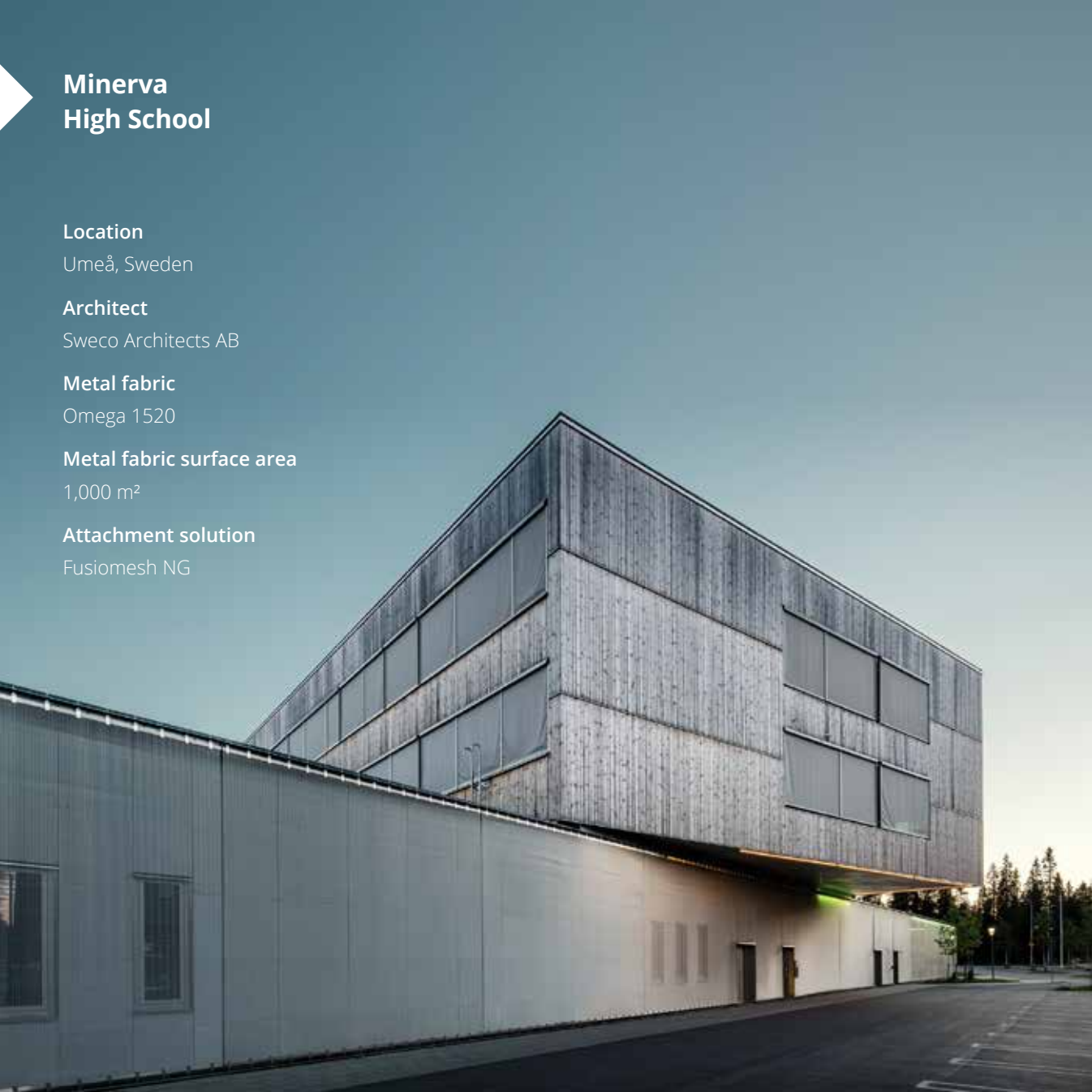
Location
Umeå, Sweden

Architect
Sweco Architects AB

Metal fabric
Omega 1520

Metal fabric surface area
1,000 m²

Attachment solution
Fusiomesh NG



The offset second floor of the high school in the Swedish municipality of Umeå immediately catches the eye. Timber cladding interacts with its natural surroundings and is subtly emphasized and highlighted by the fabric façade from GKD on the first floor. This interplay creates a visually modern and distinctive impression. Yet the 93 panels of Omega 1520 selected by Sweco Architects not only enhance the appearance of the building. The façade elements, each around four meters high and six meters wide, also serve as effective solar protection and can withstand extreme weather conditions.

Elwick Place

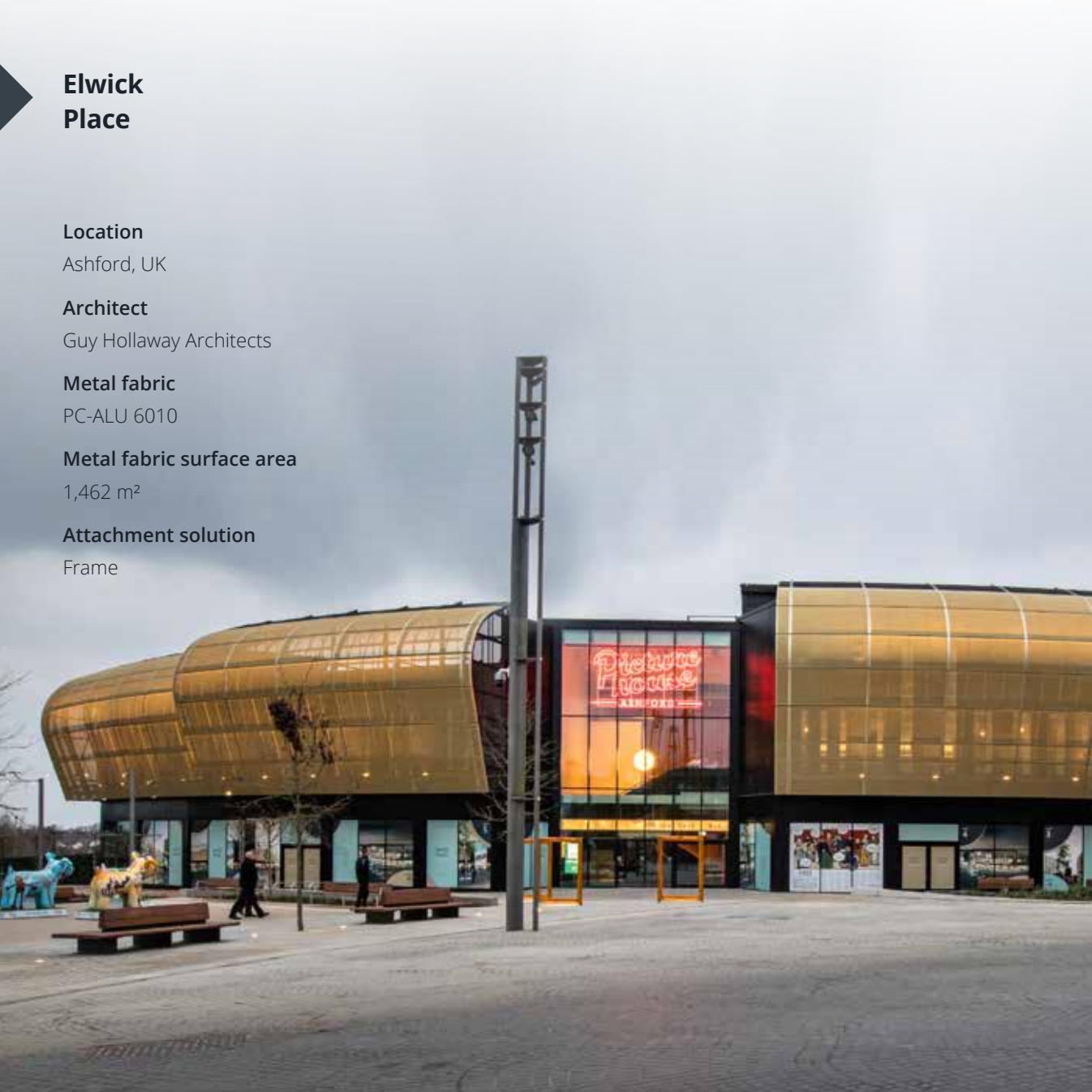
Location
Ashford, UK

Architect
Guy Hollaway Architects

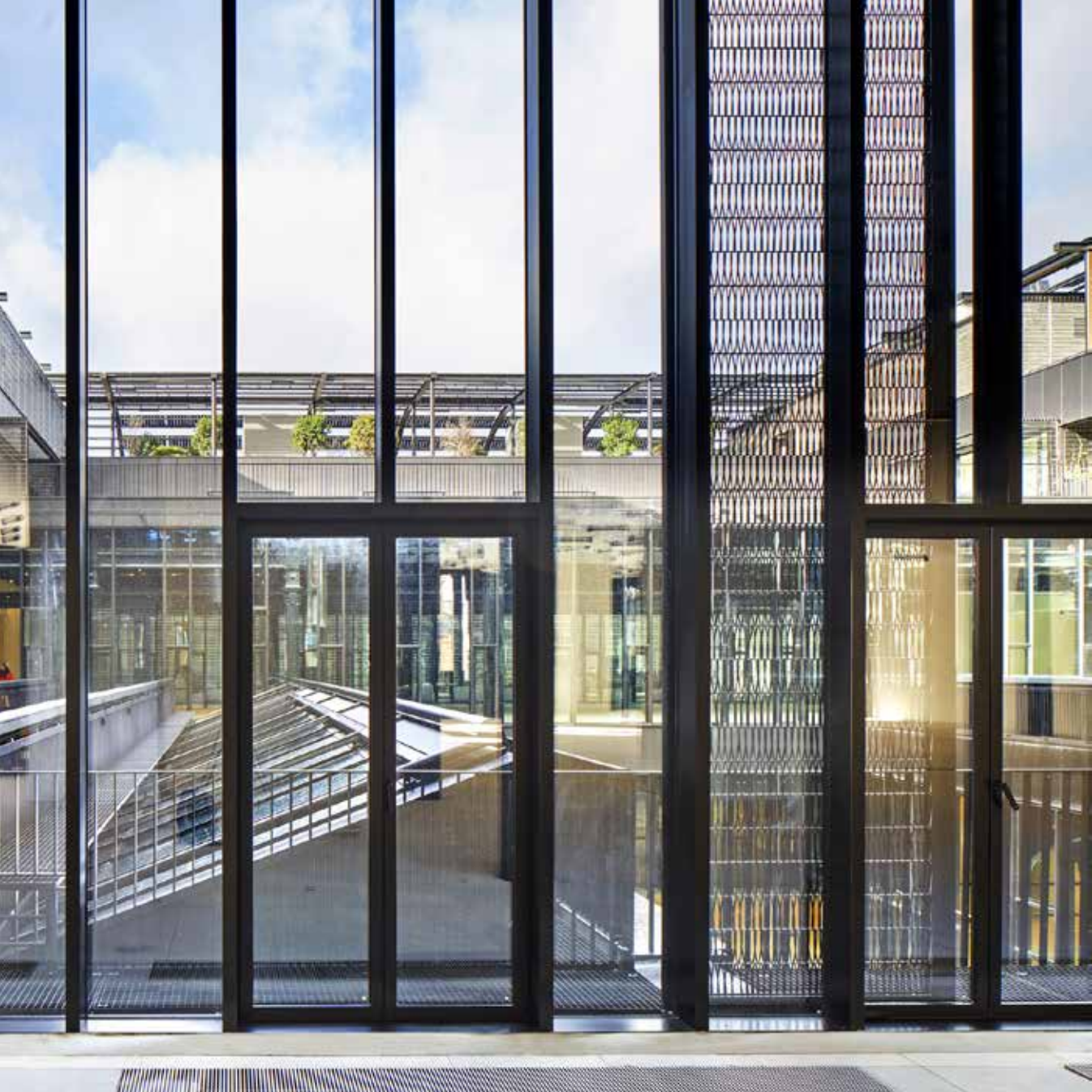
Metal fabric
PC-ALU 6010

Metal fabric surface area
1,462 m²

Attachment solution
Frame



The huge shopping and leisure center captivates visitors with its striking façade. The golden finish of the anodized aluminum fabric from GKD makes the building highly recognizable. Not only does the fabric withstand weather-related stresses such as wind and rain, it also provides effective solar protection. While the façade material lends Elwick Place a reserved, elegant presence during the day, it is a real head-turner at night. The anodized metal contrasts with the black body of the building and unites everything the center has to offer: a promise of individuality, variety, and design.



Poste du Louvre

France's former largest post office captivates with its historic supporting structure made of cast iron and steel as well as its classicist stone façade. Architect Dominique Perrault combined those elements with targeted accents using black-coated Escale 7x1 stainless steel fabric from GKD. The 100 floor-to-ceiling sliding panels serve as efficient solar protection for the two office floors and hotel balconies, while still allowing natural light to enter. Inside, the same type of fabric is used as fall guard protection and visual screening. The Escale fabric brings its decorative qualities to bear on the green roof, where filigree climbing plants create a natural, urban look.

Location
Paris, France

Architect
Dominique Perrault Architecture

Metal fabric
Escale 7x1

Metal fabric surface area
2,039 m²

Attachment solution
Eyebolts

Capital Gate Tower

Elegance meets world record:
The world's most crooked tower stands at an inclination of 18 degrees and is immortalized in the Guinness Book of Records. GKD's Tigris architectural fabric connects the main building with the neighboring grandstand. This required the metal curtain to be warped horizontally by up to 25 degrees. The outer shell also provides strong solar protection, blocking around 30 percent of the sun's rays. What's more, this cooling skin has an avant-garde design that fits in perfectly with the futuristic architecture of the capital of the United Arab Emirates.

Location
Abu Dhabi, UAE

Architect
RMJM

Metal fabric
Tigris

Metal fabric surface area
4,915 m^2

Attachment solution
Fusiomesh flat / flat with clevis

National Institute of Information and Communications Technology (NICT)

Location
Koganei, Japan

Architect
Nihon Sekkei

Metal fabric
Omega 1520

Metal fabric surface area
567 m²

Attachment solution
Angle, flat mounting

In the new building for the NICT, a national research and development agency for communications technology, architectural fabrics from GKD simultaneously provide sun protection, privacy, and fall guard protection. A total of 23 mesh panels form a transparent and partial second skin for the building. The architecture firm Nihon Sikkei also makes full use of the fabric's aesthetic qualities. The panels, which are up to 9.5 meters long and four meters wide, give the building façade an overall sense of clarity and calm. Additional stainless steel fabric on the ceiling of the lobby picks up on the transparent overall impression of the building sheath and continues it inside.

WTZ
Medical Center

Location
Freiburg, Germany

Architect
Guido Epp

Metal fabric
Omega 1520

Metal fabric surface area
Approx. 700 m²

Attachment solution
Fusiomesh NG

A mighty horizontal wing now extends this stately eight-story building. In front of the windows on the first and second floors of the new building, stainless steel fabric provides effective privacy and solar protection for the medical facilities behind. The architect's vision was to replicate the striking shadow play from the surrounding trees on the older building's façade onto the new building. GKD provided the solution with its Omega 1520 fabric, the panels of which were screen-printed with silhouettes of trees and branches. The woodland adjacent to the medical center continues visually on the façade of the new building, combining nature and architecture.

Kindluse Kool

Location
Peetri, Estonia

Architect
Sweco Project AS

Metal fabric
Escale 7x1, 100x45

Metal fabric surface area
580 m^2

Attachment solution
Flats with clevis

The ultramodern school complex on the outskirts of Tallinn is fitted with a customized stainless steel fabric. The architectural firm Sweco opted for the Escale 7x1 spiral mesh with a pitch of 45 degrees. They specified a high transparency of 64 percent, adapting the visual screening and solar protection to local light conditions. The fabrics become a recurring design element, visually uniting the different building structures. Good reflective properties of the material harmonize with the fabric geometry and allow daylight and artificial light to become part of the living architecture.

Maha Nakhon

Location
Bangkok, Thailand

Architect
Büro Ole Scheeren

Metal fabric
PC-Sambesi

Metal fabric surface area
2,098 m²

Attachment solution
Frame

At 313 meters and 77 floors, the second tallest building in the heart of Bangkok combines leisure with luxury. In reflection of this, the skyscraper's nine-story parking garage is clad with architectural fabric from GKD. The 464 panels made from PC-Sambesi 450 metal fabric are characterized by their robustness and are ideal for areas that require a high level of security. The building skin wraps around the base of the building and highlights its unique and futuristic-looking glass construction, nicknamed the "Pixel Tower" owing to its protruding elements.

Ikoyi Restaurant

Location
London, UK

Architect
David Thulstrup

Metal fabric
Baltic

Metal fabric surface area
110 m²

Attachment solution
Custom attachment

It is the ceiling design that gives the interior of this London gourmet temple its distinctive character. Danish designer David Thulstrup uses flexible Baltic stainless steel fabric as an iconic element. Long fabric panels clad the ceiling, curving down one side of the room to meet the backs of the benches. Together with a minimalist material palette, they enhance the intimate atmosphere. Exquisitely fashioned suspension and guidance of the fabric along the defined curvature fit perfectly into the overall concept of a restaurant that has won awards for both its cuisine and its interior design.

CAIXA BANK

Location
Getafe, Spanien

Architect
LNN Estudio

Metal fabric
Tigris

Metal fabric surface area
107 m²

Attachment solution
Flats with clevis

Times have changed.
Whereas in the past it was all about strength and solidity, today it is friendliness, openness, and transparency that count. For many years, banks presented an intimidating front in mighty buildings behind opaque mirrored façades and large portals with heavy doors. Now this is a thing of the past. In Getafe, Spain, Caixa Bank provides a perfect example of a contemporary image. When converting the two-story building, architecture studio LNN used a combination of vertical, gray-coated aluminum profiles and Tigris stainless steel fabric panels from GKD in front of the window façades. Forty-four ceiling-high panels create an exciting contrast to the plain plaster front and give the bank a distinctive look.

I.E.S. Sagasta

As part of the complete restoration of this neoclassical building, architects paid particular attention to its two large inner courtyards. They were covered with glass domes to enable the open spaces to be used in a variety of ways. Arched windows facing the courtyard significantly shape the overall character of the patios and were retained. The architects therefore opted for a stainless steel fabric as it was the only material capable of guaranteeing both safety and transparency. A side benefit of this choice: Natural light that penetrates through the glass dome is reflected on the fabric surface, increasing the brightness of the inner courtyards. The metal mesh also serves as an effective ball net.

Location
Logroño, Spain

Architect
Virseda Vila Arquitectos

Metal fabric
Omega 1530

Metal fabric surface area
1,775 m²

Attachment solution
Flats with clevis

Twickenham Stadium

Location
Twickenham, UK

Architect
Wilson Owens Owens

Metal fabric
Tigris

Metal fabric surface area
147 m²

Attachment solution
SER roll-up door

The home of the English national rugby team relies on roller shutters made of GKD fabric for security. Architects Wilson Owens Owens selected our Tigris stainless steel fabric, which combines stability, safety, and aesthetics. This gives even the spectator entrance to the famous "Twickers", the second-largest sports stadium in the United Kingdom, a stylish appearance. Different lighting conditions during the day and at night provide spot accents on the fabric material. Stainless steel roller shutters fit well with the stadium's tubular structures and subtly enhance their look.

Birchgrove

Location
Sydney, Australia

Architect
Coso Architecture

Metal fabric
Lago

Metal fabric surface area
88 m²

Attachment solution
Fusiomesh flat with clevis

Lago stainless steel fabric combines multiple functional aspects in Birchgrove, Australia. As solar protection, the façade of this exclusive residential building reflects most UV rays while allowing plenty of natural light to enter thanks to its translucency. This gives the building a higher level of energy efficiency. At the same time, the multi-story fabric façade serves as fall guard protection and effective visual screening, while the view to the outside remains unobstructed. In addition to its sustainability benefits, the shimmering stainless steel façade creates a timeless, elegant design.

CT² Center for Teaching and Training

Location
Aachen, Germany

Architect
SOP

Metal fabric
Omega 1520

Metal fabric surface area
1,900 m²

Attachment solution
Fusiomesh NG

The side façades of the teaching and training building of the Biomedical Engineering research cluster at RWTH Aachen University are completely clad in stainless steel fabric. The Omega 1520 façade fabric reduces both the surface temperature of the building and the degree of sunlight entering rooms. Despite these properties, the view to the outside remains clear and the light level is unchanged thanks to the transparency of the fabric. Clamping forks ensure that the façade can also withstand impacts and wind loads. Visually, the modern façade blends in with the open, high-tech look of the innovation site.

Hippodrome de Longchamp

Location
Paris, France

Architect
Dominique Perrault Architecture

Metal fabric
Escale 7x1,5, CMP-ALU 6010

Metal fabric surface area
2,779 m²

Attachment solution
Eyebolts
Standard ceiling substructure

The Longchamp horse racecourse in Paris was completely redesigned by French architect Dominique Perrault. Inside the grandstand building of the renowned racecourse, Perrault used large fabric panels to improve the sound quality in the grandstand aisles, which are made of glass and concrete. These gold-colored ceiling elements optimize reverberation time and at the same time accentuate the size of the aisles. In the Salon Présidentiel, it is the combination of golden spiral fabric, huge chandeliers, and large-format wall hangings made of Escale fabric that creates an atmosphere of elegant comfort.

Stade Roland Garros

Location
Paris, France

Architect
Dominique Perrault Architecture

Metal fabric
Escale 7x1.5, 200x30

Metal fabric surface area
1,280 m²

Attachment solution
Custom attachment

It is the central venue for one of the most famous clay court tennis tournaments in the world – the French Open. In addition to powerful rallies, spectators can also admire the façade construction of the "Court Suzanne-Lenglen", which consists of a specific stainless steel fabric from GKD. Its curved, transparent façade is linked to an integrated, folded roof membrane. The newly developed Tensiomesh system was used to attach the mesh to this unconventional substructure. The stainless steel fabric gives the stadium an elegant, light, and open character and bridges the tradition of the time-honored sports venue with modernity.

United Cycling Store & Lab

Location
Lynge, Denmark

Architect
Johannes Torpe Studios

Metal fabric
Mandarin

Metal fabric surface area
66 m²

Attachment solution
Frame

The design team at Johannes Torpe Studios developed a clear spatial concept with grids and right angles for the showroom of a cycle sport manufacturer. The Danish studio wanted to create nothing less than the retail space of the future. Panels made of bronze fabric support the technoid room design, which is based on clarity, light, and transparency. In keeping with the concept, the Mandarin fabric panels were mounted on a total of 19 rectangular frames and cover one side of the room. Like the other elements of the exhibition space, these panels follow precise lines, creating an atmosphere reminiscent of a science fiction laboratory.


ARGON 18

HERMÈS

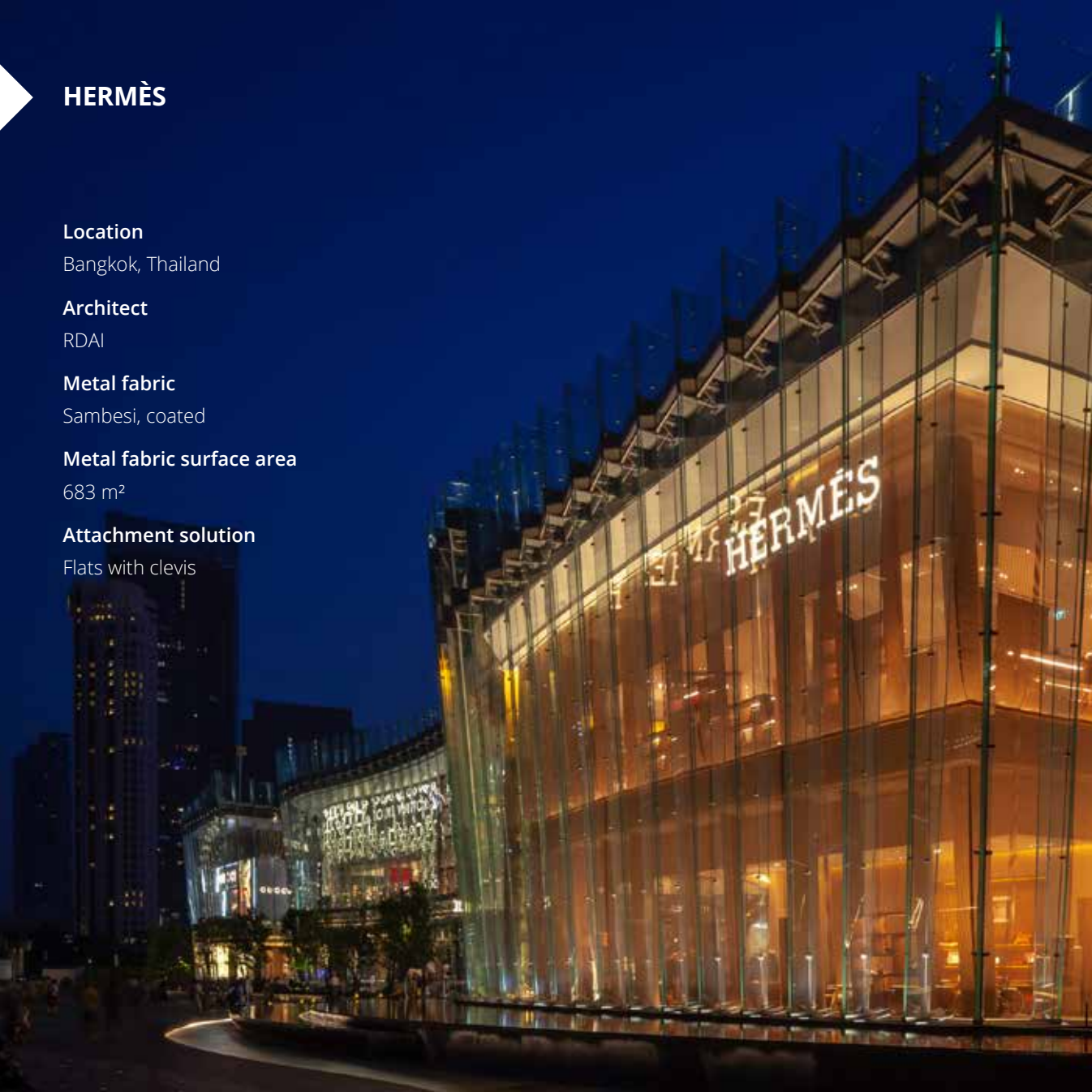
Location
Bangkok, Thailand

Architect
RDAI

Metal fabric
Sambesi, coated

Metal fabric surface area
683 m²

Attachment solution
Flats with clevis



The façade of the Hermès flagship store in Bangkok, with its huge panes of glass, is dazzling. The staggered arrangement of the surfaces creates a façade reminiscent of cascading cloth, which is reinforced by the free-hanging metal fabric on the inside. Bronze-colored mesh panels from GKD forge a visual connection between the individual floors. These allow an unobstructed view of the outside world while preserving the intimacy of the shopping experience. The enormous dimensions, coupled with the dynamic façade design, required correspondingly expansive mesh panels, which were custom-made for the application.

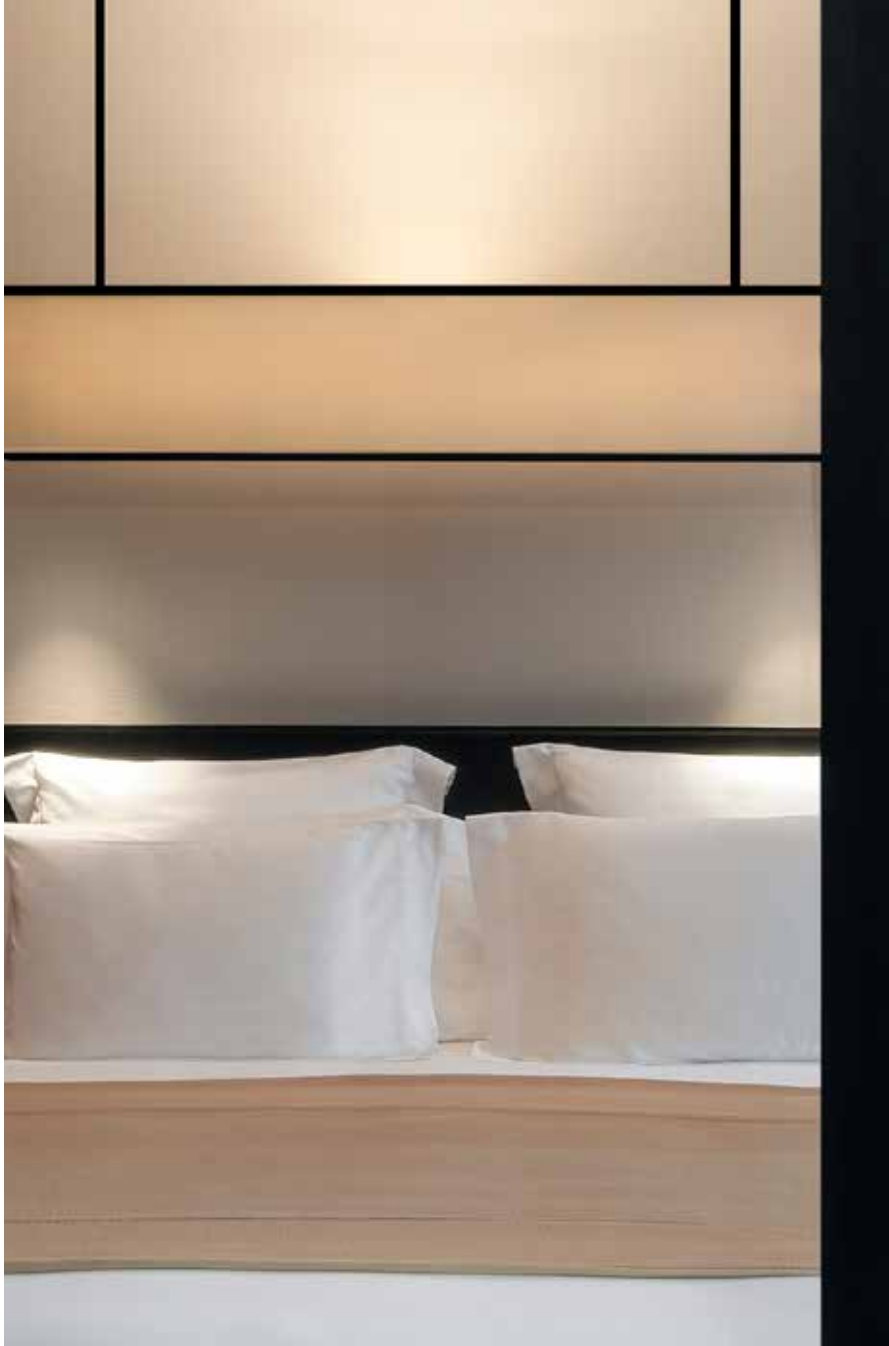
Bulgari Hotels

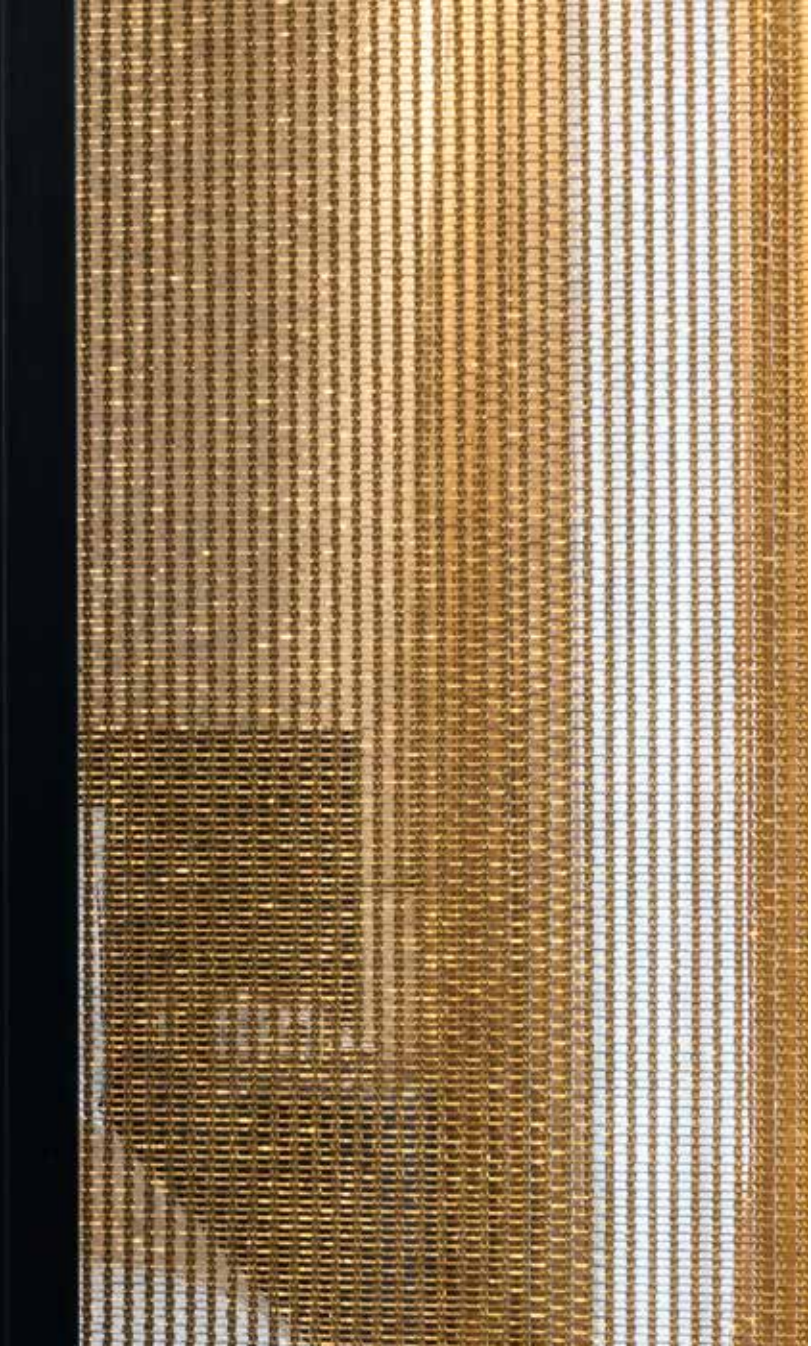
Locations
Worldwide

Architect
Antonio Citterio Patricia Viel

Metal fabric
Mandarin

Attachment solution
Laminated between glass panes





The luxurious rooms and suites of Bulgari Hotels & Resorts are designed in a contemporary, refined style. The design is inspired by the environment and culture in which the hotel is located. Bronze-colored fabrics from GKD are part of these meticulously planned room concepts. Laminated between glass panes, these translucent screening fabrics act as doors to separate the bathroom from the living area, and they give the bathrooms their shimmering bronze look in the form of glazed wall panels. Depending on the hotel, ACPV Architects also uses the fabrics in the public areas of the building.

St. Edwards School

Location
Oxford, UK

Architect
TSH Architects

Metal fabric
PC-ALU 6020

Metal fabric surface area
307 m²

Attachment solution
Frame

The storied St. Edward's School in Oxford received a prestigious new building in the form of Olivier Hall. The designers wanted a lightweight, discreetly transparent material that would ensure optimized room acoustics. TSH Architects opted for PC-ALU 6020 metal fabric from GKD for the ceiling cladding. Its gold-bronze finish continues the uniform color scheme of the hall and creates a gleaming, glossy finish. For the oval ceiling construction, panels were individually cut to size and care was taken to ensure the tightest possible dimensional tolerances.

State Archives of Bergen

Location
Bergen, Norway

Architect
NAV Arkitekter AS

Metal fabric
Baltic Bronze

Metal fabric surface area
840 m²

Attachment solution
Fusiomesh flat with clevis

Almost one hundred years separate the new extension to the regional state archives in Bergen, Norway, from the original 1921 building. The new building, which is completely clad in a transparent bronze fabric from GKD, does not even attempt to echo the architecture of the past. Instead, it extends the archive into an exciting ensemble of buildings. The fabric façade fulfills several functions at once. It not only provides privacy, solar shading, and building protection, but is also aesthetically appealing. The grid-shaped substructure of the fabric panels creates a framework that simulates a cuboid structure lying at an angle in the ground.

UGI Utilities, Inc.

Location
Denver, Pennsylvania, USA

Architect
Bernardon

Metal fabric
Omega 1520

Metal fabric surface area
169 m²

Attachment solution
Frame

Stainless steel fabric with golden shimmer provides the perfect ambiance in the lobby at the new headquarters of energy supplier UGI Utilities in Denver, Pennsylvania. The Omega 1520 fabric produces a soft border on one side of the open, circular lobby, creating a kind of stage that frames the free-floating staircase. Its woven metal surface united with the staircase acts as a room partition, fall guard, and design statement, all-in-one. The Venetian Gold coating of both the fabric and the frame is perhaps the most striking feature which gives the curved metal fabric and the whole lobby a warm and elegant overall feel.

Las Olas Parking Garage

Location
Fort Lauderdale, Florida, USA

Architect
Arquitectonica

Metal fabric
Tigris

Metal fabric surface area
4,127 m²

Attachment solution
Inserted round bar with eyebolts

With its impressive architecture, this parking garage creates a dramatic gateway to the beach on Las Olas Boulevard in Fort Lauderdale. The façade design establishes a connection between the city environment and the nearby ocean. Its distinctive façade elements, reminiscent of a wave, transform into an enchanting light sculpture when the sun goes down. The structure of the parking garage sits behind vertical slats and is enclosed in stainless steel fabric. Due to the strict hurricane regulations in Florida, the architecture firm decided to go with Tigris fabric from GKD with an open area of 65 percent, which lends the building a refined and classy appearance.

Hayward Field
University of Oregon

Location
Eugene, Oregon, USA

Architect
SRG Partnership

Metal fabric
Omega 1510

Metal fabric surface area
6,741 m²

Attachment solution
Flats & clevis /
flat bar & hook plate

Following a complete redesign, a track and field stadium that is steeped in tradition received asymmetrically arranged stands with a curved roof line. Architectural metal fabrics from GKD enclose the stands on the building exterior like a flexible skin. A total of 276 trapezoidal stainless steel panels create a surface that appears continuous. While the fabric pattern becomes denser and allows less light transmission as it reaches the roof in order to protect the crowd from excessive solar radiation, it is also used in the lower section of the building to depict the history of the 110-year-old stadium. Graphic elements have been applied to the metal fabric here using an etching process.


29

Port Everglades

Location
Miami, Florida, USA

Architect
Bermello Ajamil & Partners

Metal fabric
Mediamesh

Metal fabric surface area
215 m²

Attachment solution
Inserted round bar with eyebolts

Within the scope of modernization work for the Celebrity Cruises Terminal at the Port Everglades seaport, the building was fitted with woven LED screens using Mediamesh® fabric from GKD. The stainless steel fabric with integrated LED profiles allows the cruise company to offer vacationers a taste of what they can expect while they wait, as well as showing news, weather information, and both departure and arrival times. Thanks to the building shell, the terminal at the world's third largest cruise port really stands out, lending the building a modern and futuristic appearance.

Kansas City University Center

Location
Kansas City, Missouri, USA

Architect
CO Architects,
Helix Architecture + Design

Metal fabric
Omega 1520

Metal fabric surface area
294 m²

Attachment solution
Flats with clevis

Large sections of the three-story atrium at the Center for Medical Education Innovation are clad in metal fabric. The Omega 1520 fabric panels from GKD perform multiple functions. They not only enhance the aesthetics with a distinctive look but also shield the atrium's tall glass façade from intense solar radiation while permitting clear views from inside the building. Made of durable stainless steel fabric, these panels protect the façades from heavy rain. Long cables, about 13 meters each, stretch from the floor to the roof, securing the panels in place. By day, they reflect the sunlight, giving the façade a soft shimmer. At night, color-changing LEDs illuminate the transparent fabric, adding a dynamic visual element.

Salina South High School

Location

Salina, Kansas, USA

Architect

DLR Group

Metal fabric

Omega 1510

Metal fabric surface area

81 m²

Attachment solution

Loops with slide-in round rod

As part of a comprehensive refurbishment plan, the high school searched for a new solution for its main entrance. The school was keen to preserve the open character of the covered forecourt, while also using the entrance to showcase its brand and place greater visual emphasis on the courtyard area. The solution was ultimately found using stainless steel fabric as transparent signage, fitted over an area measuring some 80 square meters. The school's name and logo were applied to five fabric panels using an etching process. These panels not only draw attention to the school building, they also offer protection from sun, wind, and rain.

Care Resource Health Center

Location
Miami, Florida, USA

Architect
David Scott Parker Architects

Metal fabric
Helix 24

Metal fabric surface area
1,711 m²

Attachment solution
Woven-in bar with eyebolts top and bottom

The architects of the Care Resource Midtown Miami Health Center were inspired by the Miami Modernist (MiMo) style, which was popular from the 1940s to the 1960s. The building's appearance is characterized by playful and innovative shapes, as well as exciting contrasts. This eye-catching design continues to the parking garage, where a 1,711-square-meter architectural fabric façade from GKD fits in seamlessly with the building's color scheme. The metal fabric panels are equipped with a woven-in bar attachment system and pivoting intermediate brackets. The panels combine aesthetics with functionality, while also being capable of withstanding strong winds.

Doha
Expo House

Location
Doha, Qatar

Architect
Dar Al-Handasah

Metal fabric
Mediamesh

Metal fabric surface area
179 m²

Attachment solution
Inserted round bar
with eyebolts

The central structure of the Expo 2023 Doha horticultural exhibition in Qatar is a hill-shaped building planted with greenery. Visitors are greeted by a transparent media façade as they approach the main structure. Mediamesh® from GKD not only serves as a display, but also as solar protection for the glazed entrance hall. A special feature of the façade is the wave-shaped border at the top. Although the Mediamesh® continues upwards behind the roof, the display was programmed to end exactly at this point and all LEDs situated behind the cladding are deactivated. The media façade also defies the challenging climate of the Gulf region and can withstand ambient temperatures of 50 degrees Celsius.

THE ARCHITECTURE OF METAL FABRICS

GKD – Gebr. Kufferath AG
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