

A close-up photograph of a modern building's facade. The facade is composed of vertical, perforated metal panels. A prominent, curved metal element, possibly a decorative fin or part of a window frame, runs diagonally across the image from the top left towards the bottom right. The lighting creates strong shadows and highlights, emphasizing the texture and geometry of the metal.

**FRENER  
REIFER**

FASSADEN

Company brochure



## **FRENER & REIFER**

Partner for architecture.

Partner for owners, architects and engineers.  
Custom-engineered building envelopes,  
facades and one-off constructions.





FRENER & REIFER, a long-established company based in South Tyrol, has been design-engineering, fabricating and installing innovative building envelopes and customised structures for almost 50 years in line with the highest technical, design, commercial and scheduling requirements.

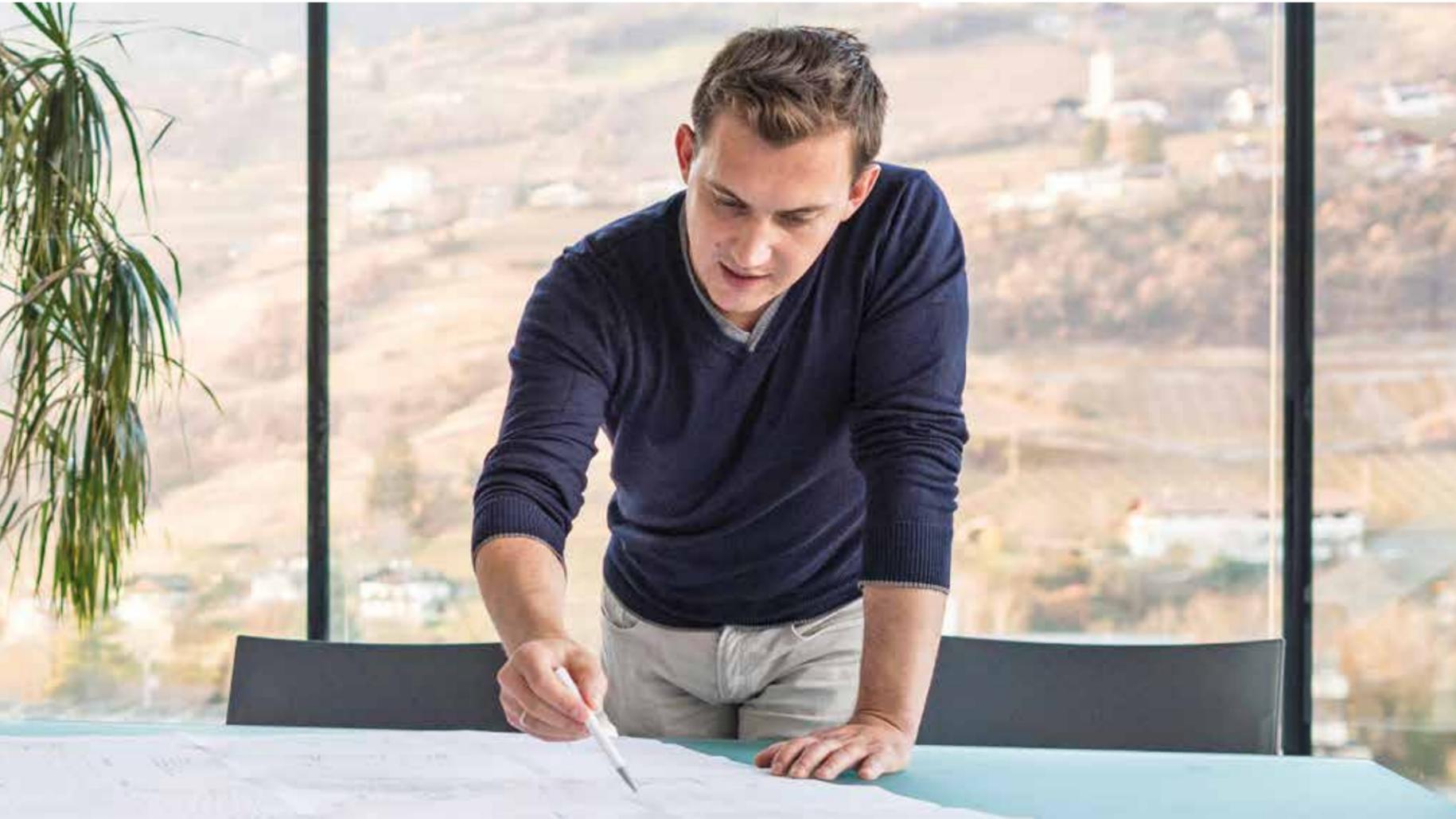
Subsidiaries in France, the UK and the USA implement custom-engineered solutions designed by the parent company specifically for each market. The subsidiary in Germany provides technical development for the American market.



## 1. DESIGN

Consultancy, development, prototyping + tests

For confident decision-making based on budget and design security



## 2. BUILDING

Engineering, fabricating, installing

For attention to detail and assurance on deadlines and quality

## 3. SERVICE

Commissioning, maintenance, revitalising

For functionality and longevity



# FRENER & REIFER

## THE COMPANY IN FACTS AND FIGURES

ALMOST **50 YEARS** OF EXPERIENCE

Approx.

# 200

EMPLOYEES  
FROM 10 COUNTRIES

Up to

# 150

LOCAL  
INSTALLERS

Companies in

Italy  
Germany  
Switzerland  
France  
UK  
USA



HQ BRESSANONE



HEAD OFFICE

## Bressanone, South Tyrol

in Italy

**Development, design-engineering,  
fabrication and installation.**

FRENER & REIFER

German quality +  
Italian design flair  
= South Tyrol

Collaboration with the best-known architects worldwide,  
including 8 PRITZKER PRIZEWINNERS

**Norman Foster, Herzog & de Meuron,  
Renzo Piano, SANAA, Richard Meier,  
Kenzo Tange, Squire and Partners,  
Diller Scofidio + Renfro, Christoph  
Ingenuhoven, Zaha Hadid, Tadao Ando...**

1100 + worldwide projects realised in 17 countries on 5 continents

CLIENTS

Apple Inc.  
BMW AG  
Louis Vuitton  
Audemars Piguet  
ThyssenKrupp AG  
Novartis AG  
LG Electronics  
Actelion Pharmaceuticals  
Swiss Re Group  
Vitra AG  
Meyer Werft  
MoMa  
IOC - Int. Olympic Committee  
Dolder Hotel AG  
and many more

HIGHEST PROJECT



at 3,440m / 11,286ft  
Wildspitzbahn

# SWISS RE NEXT

900 glass "waves" on Lake Zurich

## Quality assurance policy

The Swiss Re Group did not want to take any risks with the realisation of their new curved glass facade.

FRENER & REIFER's experience in working with unusual building envelopes provided the insurance specialists with the security they were looking for.

## CHALLENGES

- Curved panel geometry
- Exacting aesthetic and optical quality requirements for the undulating glazing
- External reflective properties and distortion-free viewing from inside
- Technical design, development and installation of the stainless steel brackets
- Precise positioning of the brackets, with a tolerance of +/-1.5 mm / 0.06 in



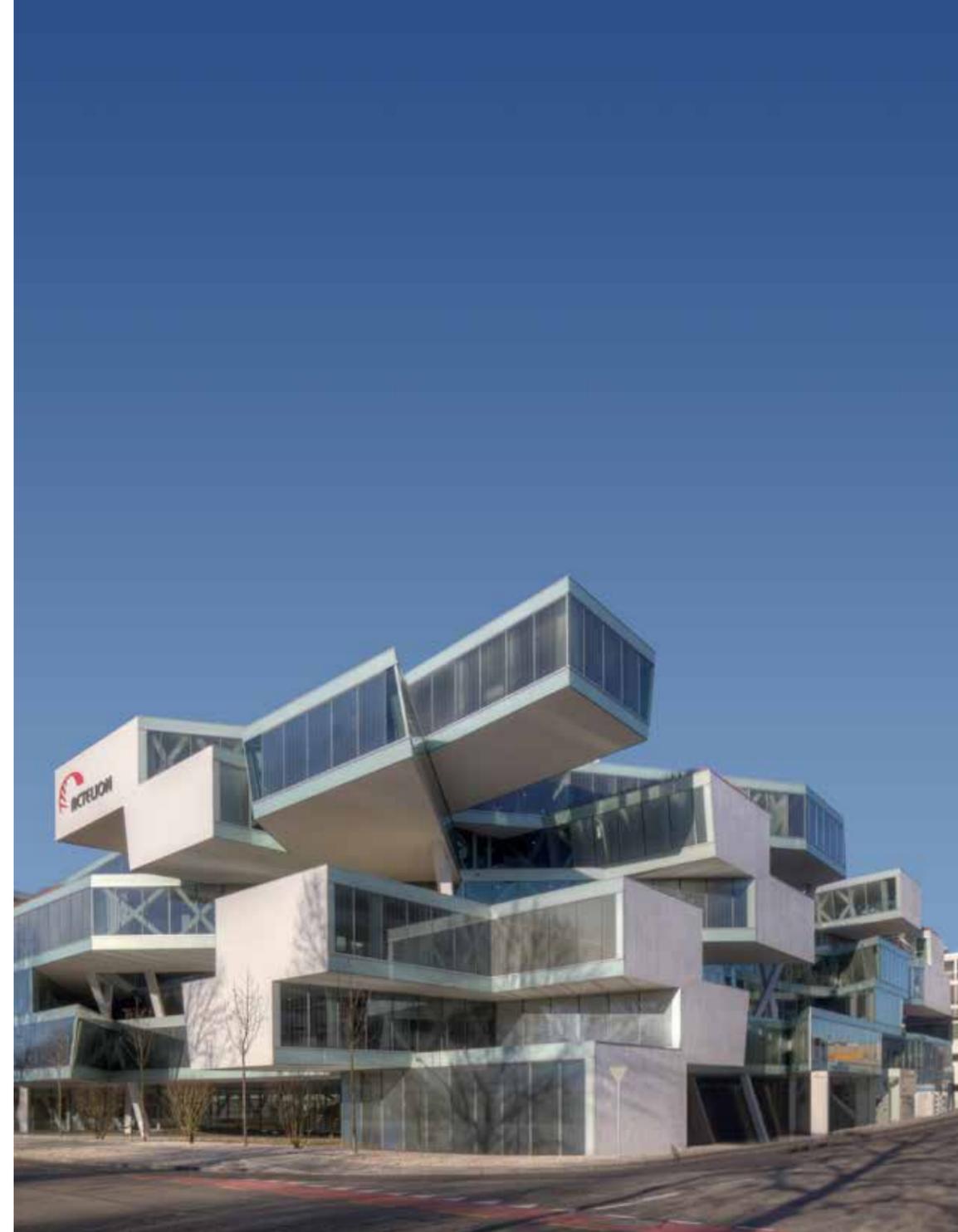
**CLIENT** Schweizer Rückversicherungs-Gesellschaft AG  
**ARCHITECT** Diener & Diener Architekten  
**LOCATION** Zurich, Switzerland  
**DESIGN & FABRICATION** 2014 – 2016  
**INSTALLATION** 2015 – 2017





Over 900 glass "waves" were fabricated for the 6,475 m<sup>2</sup> / 69,296 ft<sup>2</sup> vertically-arranged undulating glass curtain wall of the Swiss Re Next building. These were fitted with special stainless steel mounting brackets and suspended from the building using tension rods.

Load transfer for the undulating glass is achieved solely via the tension rod attachments on the 4th and 6th levels of the building.



# ACTELION BUSINESS CENTER

**Glass facade in Allschwil with  
200 different corner configurations**

## **Design perfection on an inclined and stacked facade**

The technical solutions competencies of FRENER & REIFER were exhibited to perfection at the biopharmaceutical company Actelion. Over 200 different corner configurations were called for on this building envelope.

Maximum precision was the fundamental requirement in design-engineering, fabricating and installing this challenging, stacked structure featuring a facade inclined by 10°.

**CLIENT** Actelion Pharmaceuticals  
**ARCHITECT** Herzog & de Meuron  
**LOCATION** Allschwil, Switzerland  
**DESIGN & FABRICATION** 2009 – 2010  
**INSTALLATION** approx. 20 months

## **CHALLENGES**

- Complex installation logistics due to the intricate geometry of the building
- Glass facades inclined inwardly and outwardly by 10°
- 200 different corner configurations at the facade element intersections

# CLARGES MAYFAIR

Elegant glass and aluminium facade in London

CLIENT Laing O'Rourke  
DEVELOPER British Land  
ARCHITECT Squire & Partners  
LOCATION London, UK  
DESIGN & FABRICATION 2014 – 2016  
INSTALLATION 2015 – 2017

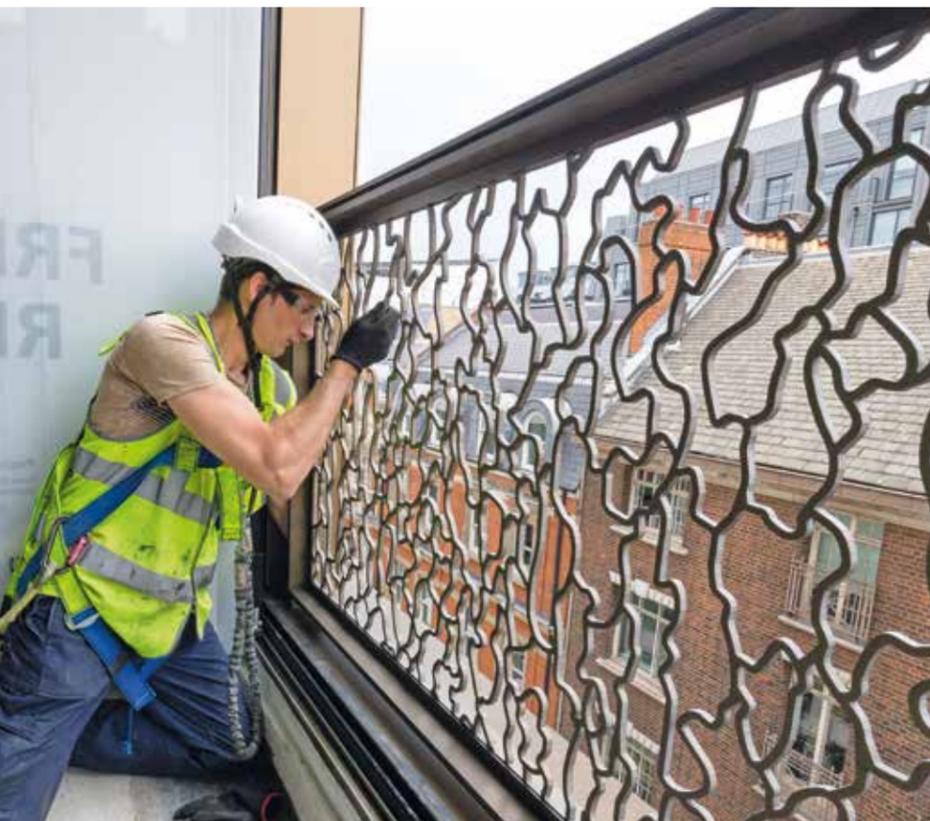


**Exclusive, highly detailed, custom-engineered constructions**  
These luxury apartments and offices in London's Mayfair, within sight of Green Park and Buckingham Palace, had to meet the highest standards.

British Land commissioned FRENER & REIFER to design-engineer, fabricate and install over 100 exclusive window elements, stick system constructions and an automatic entry door unit. All customised elements had to be fitted with optimum precision into the prefabricated stone facade.

## CHALLENGES

- Exacting (just-in-time) logistics on a constrained city-centre site
- Customised construction of facade elements
- Striking design of the laser-cut, aluminium balustrades in anodized bronze
- Customised ground floor glass elements with laminated bronze mesh



#### CHALLENGES

- Highest attention to details
- Short installation period
- Complex logistics on a constrained city-centre site
- Restricted storage availability
- 3D roof design

## LA SAMARITAINE

10 extremely sophisticated types of facade for a historic Parisian building



#### Customised envelopes for Louis Vuitton

FRENER & REIFER is realising the new facades for the historic former La Samaritaine department store in the heart of Paris. The project, for the LVMH Moët Hennessy Louis Vuitton Group, a global market leader in the luxury goods industry, comprises an entire collection of unique facade types, including an undulating glass facade, thermal facades, roof-level facades, a number of glass roofs and a pedestrian bridge.

**CLIENT** Samaritaine LVMH Group  
**DEVELOPER** VINCI Construction  
**ARCHITECT** SANAA, Japan  
**LOCATION** Paris, France  
**DESIGN & FABRICATION** 2015 – 2017  
**INSTALLATION** 2017 – 2019



## IOC HEADQUARTERS

Inclined double facade with rotated floor plan for the new International Olympic Committee HQ in Lausanne

#### A balancing act between design, engineering and cost-effectiveness

As in elite sport, success in realising this customised three-storey double facade comprising 582 different glass panels called for a peak technical performance. FRENER & REIFER held firm under pressure from the competition and won the award from the International Olympic Committee.

**CLIENT** IOC  
**ARCHITECT** 3XN Architects  
**LOCATION** Lausanne, Switzerland  
**DESIGN & FABRICATION** 2016 – 2017  
**INSTALLATION** 2018

#### CHALLENGES

- 3D design of exterior facade
- Every panel is unique
- Structural solution to high wind loads



# FOSTER FOUNDATION PAVILION

Minimalist glass facade with pivot door for Palace courtyard in Madrid

## Technical expertise down to the smallest detail

When one of the most famous architects in the world decides to build a slender, elegant pavilion in which to exhibit his life's work, naturally he places his trust only in the best partners in the industry.

During the design phase in 2016, Lord Foster personally travelled to the FRENER & REIFER HQ in Bressanone to work on the details of the building envelope of this unique pavilion in Madrid with Franz Reifer.

**CLIENT** Norman Foster Foundation  
**ARCHITECT** Norman Foster Foundation  
**LOCATION** Madrid, Spain  
**DESIGN & FABRICATION** 2016–2017  
**INSTALLATION** 5 Weeks

## CHALLENGES

- Technically demanding new development of filigree stainless steel frame
- The city centre site meant that all facade elements had to be hoisted over a three-storey building before being carefully placed into the narrow 2.5 m / 8+ ft gap available.



# HOTEL THERME MERAN

Exclusive 1,900 m<sup>2</sup> / 20,450 ft<sup>2</sup> external  
glass facade realised in less than 3 months

CLIENT Hotel Therme Meran GmbH

ARCHITECT Hugo Demetz

LOCATION Merano, Italy

DESIGN & FABRICATION 2016 – 2017

INSTALLATION 2017

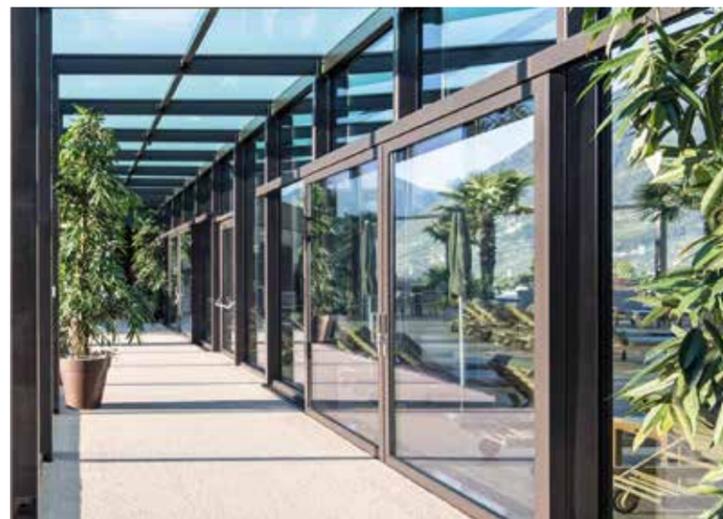


**Efficient design-engineering, fabrication and installation of spectacular 5 m / 16+ ft high wraparound panorama glazing.** The Hotel Therme Meran offers its guests premium quality and the highest standards of service – and demanded the same for the construction of its new "Sky Spa" facade.

The 5 m / 16+ ft high exclusive wraparound glazing for the roof spa had to be realised by FRENER & REIFER during the off-season in less than 3 months.

## CHALLENGES

- Very tight time-frame: 1 year from award of contract for engineering, fabrication and installation
- Installation period of less than three months





## PRIVATE VILLAS

Unique dream facades

### Luxurious custom designs, for ultimate quality

FRENER & REIFER delivers all types of custom-made facade for private villas, in glass, steel, stone, wood and other materials, providing design-engineering, fabrication and installation.

Clients benefit from a wealth of over 40 years' experience with, for example, customised minimalist constructions, all-glass solutions and special drive technologies.





We advise and support private clients in realising projects featuring custom-engineered structures.

We are always happy to place our years of facade construction know-how, including countless solutions and technical innovations, at your service for private projects.



Private villa.  
Design: a.punkt architekten

# COAL DROPS YARD

Graduated "zigzag" facade with curved metal panels in London

CLIENT Argent Services LLP  
DEVELOPER BAM Construction Ltd  
ARCHITECT Heatherwick Studio  
LOCATION London, UK  
DESIGN & FABRICATION 2015 – 2017  
INSTALLATION 2017 – 2018



The "kissing point" where two parts of the building come together.



## Parametrically-designed construction

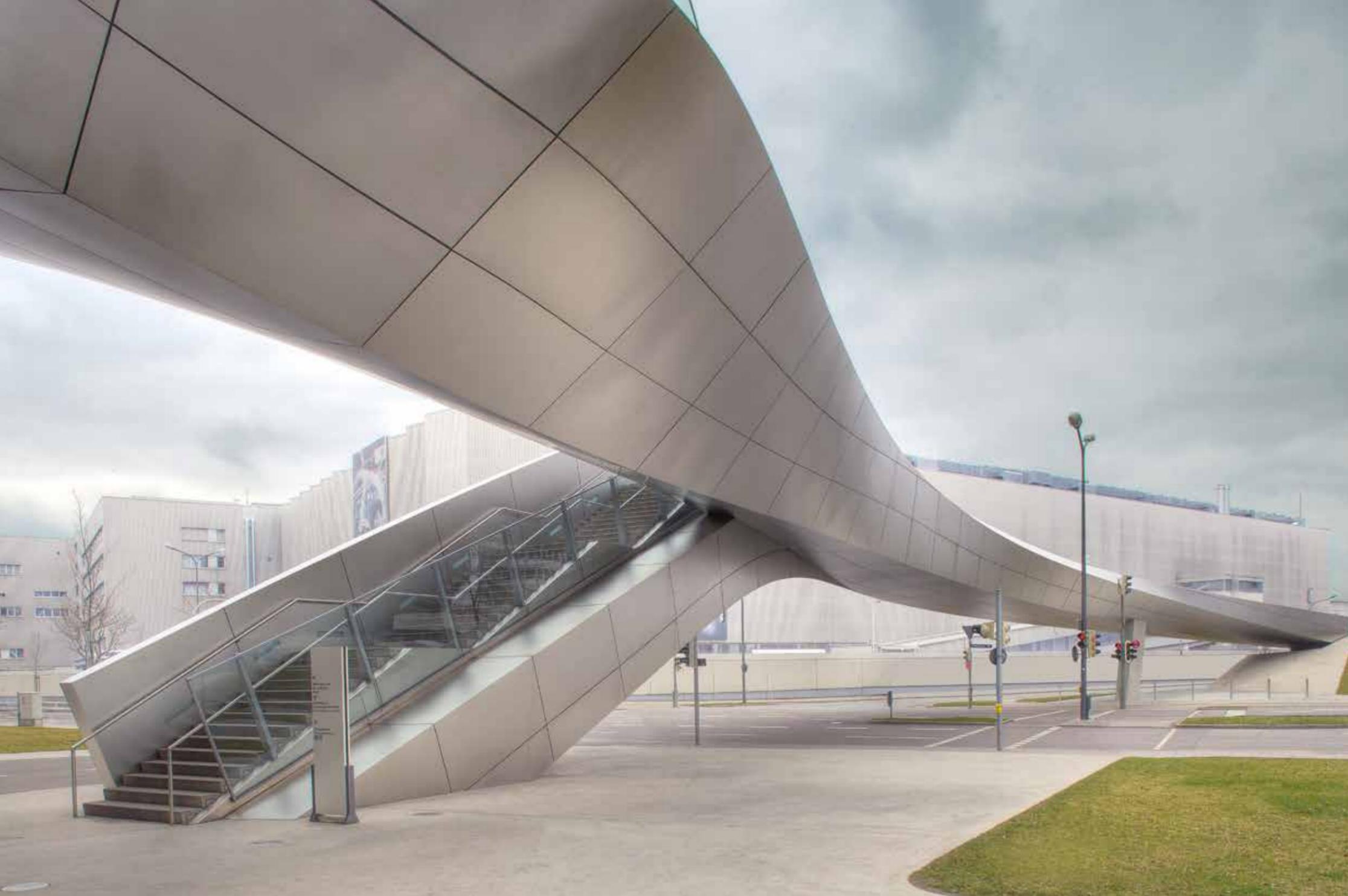
Parametric design tools were indispensable for FRENER & REIFER in realising the technically demanding building envelope for the Coal Drops Yard ensemble.

The facade of the former coal-loading station displays several unique engineering features: the "kissing point", where two parts of the building come together, and the 7 m / 23 ft high "zigzag" insulation glazing with its special glass mounting brackets and metal panelling curved in three dimensions. Almost every section of the facade is distinct.

## CHALLENGES

- Special glass mounting brackets to accommodate the movements and tolerances of the free-floating "kissing point"
- Exacting building physics requirements
- Transparency of the "zigzag" glazing
- Metal panelling curved in three dimensions
- Extremely exacting design-engineering requirements
- BIM-assisted design





# BMW WELT & TRIAS BRIDGE

Freeform steel and glass geometry in Munich

## Dynamic outer envelope for a global brand

The building reflects the innovative character of this premium brand and its realisation therefore needed to satisfy the highest quality requirements.

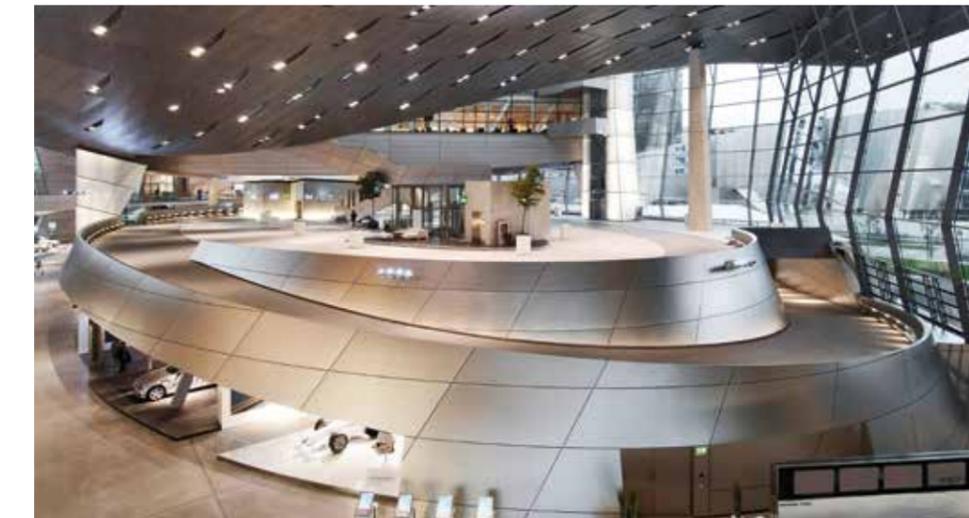
FRENER & REIFER, as the directly-commissioned facade specialist, was responsible for the freeform work at the 'Service Building Facades' and the new visitor walkways. The South Tyrol-based company was also chosen as the general contractor for the Trias Bridge.

## CHALLENGES

- Approx. 9,600 laser-cut stainless steel panels in various shapes and sizes
- Solution development and realisation of the three dimensionally curved structural geometry
- Diagonally joint pattern
- Short construction period, with a very tight schedule
- 3D metal panel design



CLIENT BMW AG  
ARCHITECT Coop Himmelb(l)au  
LOCATION Munich, Germany  
INSTALLATION 2005 – 2007



# WILDSPITZBAHN

An envelope of 900 curved panels for the Pitztal Glacier

Peak technical performances at 3,440 m / 11,286 ft

The operators invested around € 20 million to establish a new high point in Alpine tourism – the Wildspitzbahn.

FRENER & REIFER was the lead company responsible for the freeform building envelope comprising hundreds of different metal panels. After design-engineering and fabrication, the complete facade had to be installed in less than 5 months, under the most extreme weather conditions, at a maximum altitude of 3,440 m / 11,286 ft. The result, design faithful and on schedule, continues to impress both the clients and its numerous visitors.



## CHALLENGES

- Complex outer envelope geometry
- Hundreds of differently-formed aluminium panels, fixing brackets and installation and spacer profiles
- Logistical challenge of transporting components to the mountain station at 3,440 m / 11,286 ft
- Altitude and extreme weather conditions
- Millimetre-accurate engineering, prefabrication and installation.

CLIENT Pitztaler Gletscherbahnen  
ARCHITECT Baumschlagner Hutter Partner  
LOCATION Pitztal Glacier, Austria  
DESIGN & FABRICATION 2011 – 2012  
INSTALLATION 4 months



# FONDATION JÉRÔME SEYDOUX-PATHÉ

7,500 curved and perforated aluminium louvres  
for a Foundation building in Paris

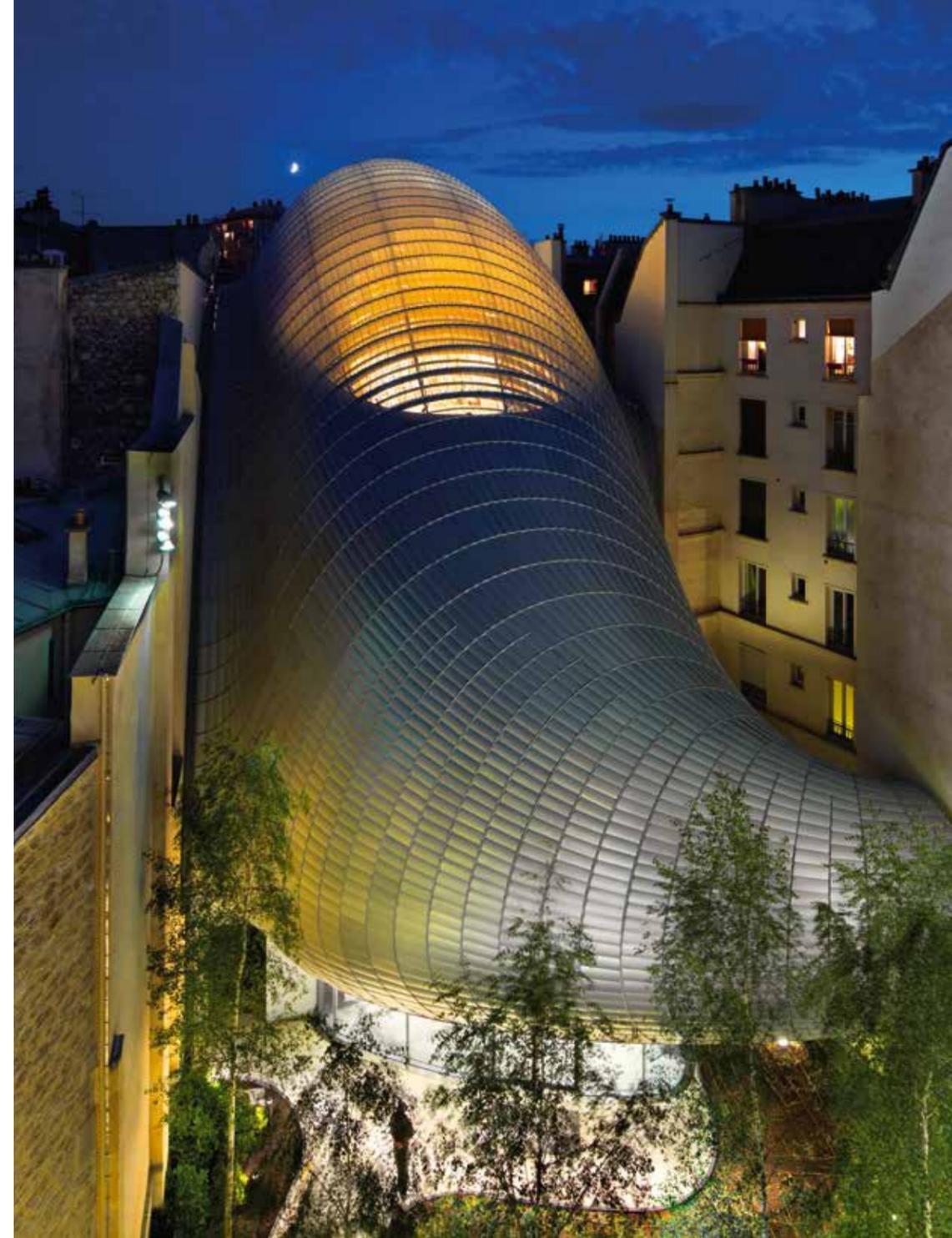
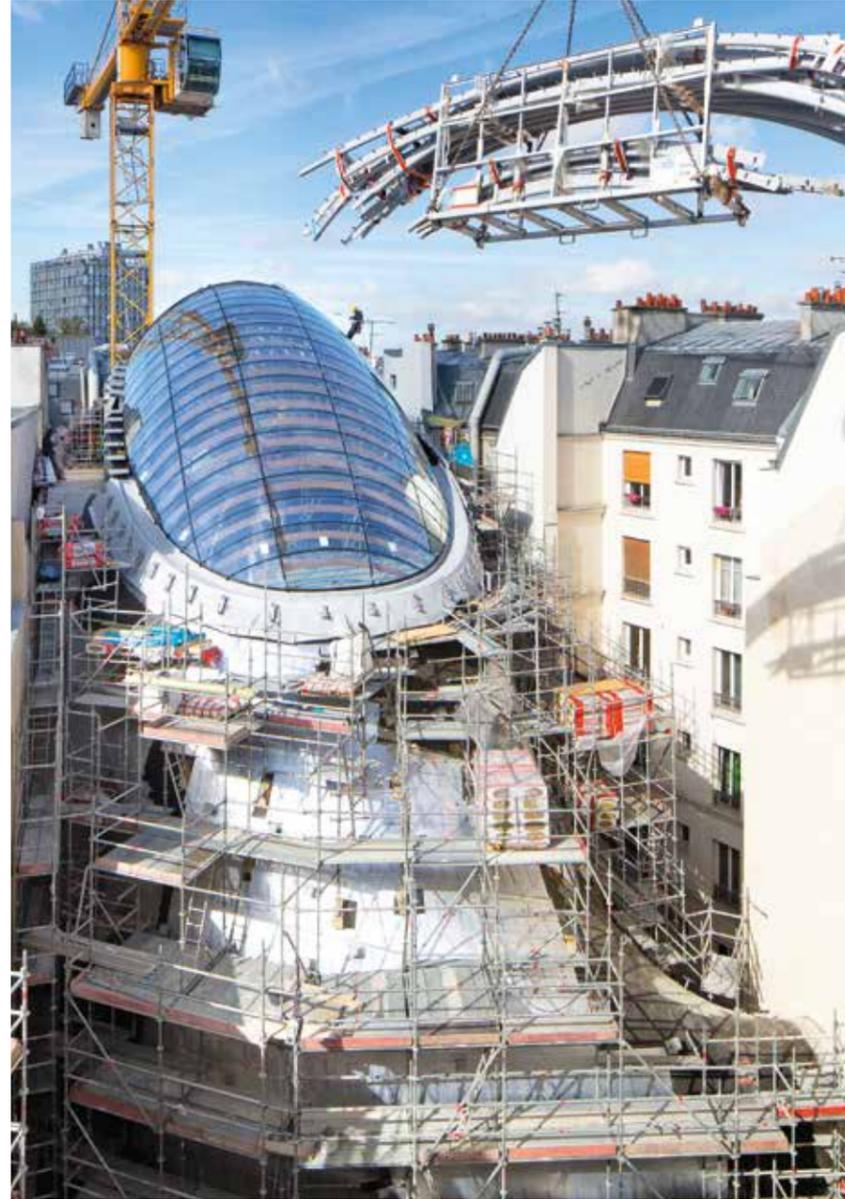
## Cinematic exterior thanks to a unique building envelope

The spectacular metallic facade of the Fondation Pathé, a well-known French film foundation, was realised to a design by Renzo Piano. The soft curves of the structure nestle elegantly and directly up against the neighbouring buildings.

Daylight enters the interior of the building in the cupola area via perforations in the aluminium outer skin. Beneath the cupola is a domed glass roof consisting of 174 double-curved, double-layer glass units.

The complex geometry of the building envelope could only be realised using parametric design tools combined with the absolute precision of expert installers, an exacting task requiring creative strategic solutions from FRENER & REIFER's logistics department.

**CLIENT** Fondation Jérôme Seydoux-Pathé  
**ARCHITECT** Renzo Piano Building Workshop  
**LOCATION** Paris, France  
**DESIGN & FABRICATION** 2012 – 2013



## CHALLENGES

- The freeform geometry of the building
- Difficult-to-access city centre site
- Roof dome comprising 174 different, double-curved, double-layer glass elementsFabrication, supply and installation of the curved aluminium external cladding
- Adaptation of the *minimo\_*™ system for the curved glass elements on the ground floor





CLIENT BAM Construction Ltd  
ARCHITECT Zaha Hadid Architects  
LOCATION Oxford, UK  
DESIGN & FABRICATION 2014

#### CHALLENGES

- Approx. 300, partially double-curved, electro-polished stainless steel panels
- Parametrically-designed complete solution
- Proximity of centuries-old redwood tree which could not be damaged
- Development, fabrication and installation of drop-shaped skylights
- Packaging and logistics for the highly sensitive electro-polished stainless steel panels



## INVESTCORP BUILDING

A bold, reflective stainless steel skin in Oxford

**Built around the curve: 3D-designed building envelope, installed with millimetre precision**

This is the last of Zaha Hadid project entirely realised during her lifetime. At first glance, the 3 mm / 0.118 in thick, electro-polished surface of the three-storey university connecting structure has the appearance of flowing metal. Minimal vertical hairline joints are the only thing interrupting the homogeneity of the reflective surfaces.

Clean execution is the defining characteristic of the connections from the new building to its existing neighbours, of the elegant, slender *minimo\_*™ stick system glass facade, of the special-format windows with their complex geometry, and of the 25 drop-shaped skylights.



CLIENT Truebeck Construction  
ARCHITECT Foster + Partners  
LOCATION Cupertino (CA), USA

#### CHALLENGES

- Load-bearing building envelope in glass without any kind of auxiliary construction
- The world's largest contiguous carbon fibre roof, consisting of 44 individual segments and with a 47.5 m / 155+ ft diameter
- The entire roof was placed onto the load-bearing glass facade as a single piece
- International project team collaboration in four countries and three continents

## STEVE JOBS THEATER

7 m / 23 ft high, curved, load-bearing all-glass construction

#### Maximum precision and structural transparency

This exclusive glass building is in Apple Park, directly adjacent to the IT company's new headquarters. The elegant, circular theatre with a diameter of over 40 m / 144 ft was entirely glazed using 44 ultra-large panels to the highest quality standards.

The 7 m / 23 ft high panels are all curved and together bear the weight of the 65 t carbon fibre roof (the world's biggest), without the assistance of any additional supports. The roof was lifted onto the glass construction as a single piece.



# ST. GILES CIRCUS

Fully retractable facade for urban mixed-use hub

## Technically innovative approach opens new doors

St. Giles Circus, in the heart of London, is a publicly accessible mixed-use hub with a flexible, golden building envelope.

The interior of the main building is four storeys high, equipped with large interactive screens and has a fully openable facade. 18 of the approx. 10 m / 32+ ft (height) x 2.5 m / 8+ ft (width) facade elements are both pivoted and sliding.

The elements are partially glazed, clad with stainless steel panels and have a titanium-coated surface.

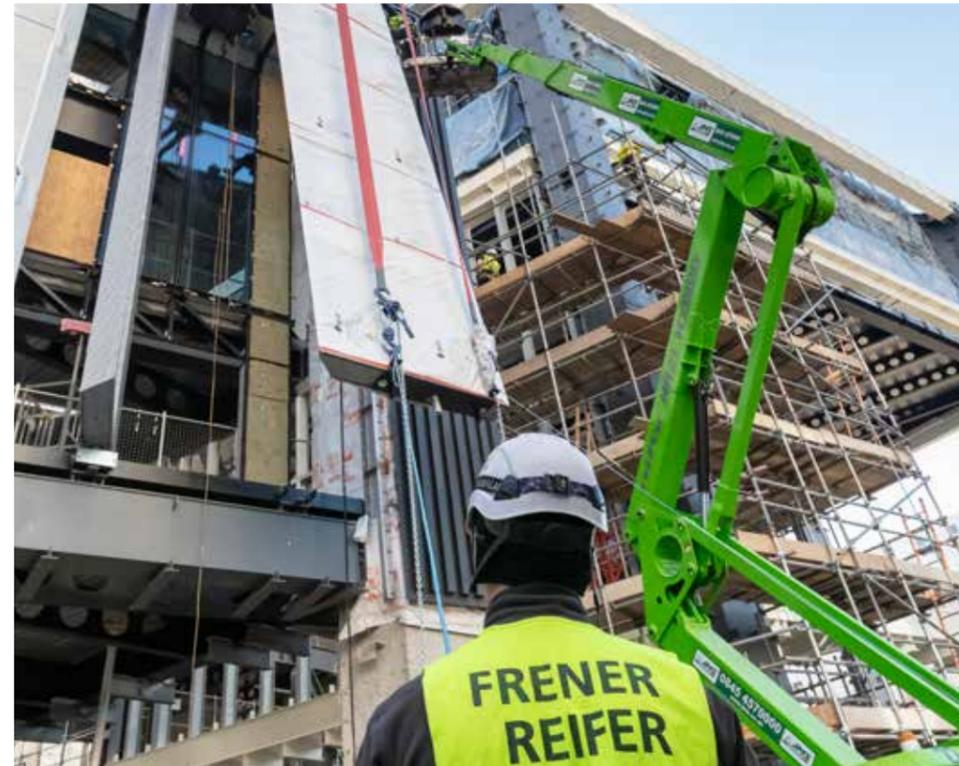


Mock-up of the hinged and sliding facade elements.

CLIENT Skanska  
ARCHITECT Orms  
LOCATION London, UK  
DESIGN & FABRICATION 2017 – 2018  
INSTALLATION 2018 – 2019

## CHALLENGES

- 18 operable, pivoting and sliding elements, approx. 10 m / 32+ ft (height) x 2.5 m / 8+ ft (width each) with titanium-coated surface
- Large fully openable, sliding doors to the ground floor
- Working in the heart of London city centre





# THYSSENKRUPP QUARTER

New development of an automatically operated exterior envelope for steel corporation in Essen

## Sophisticated drive solution for adaptive sunlight availability

FRENER & REIFER developed not only the primary facade in glass with custom aluminium profiles, but also a completely new, automatically operated sun protection system using 3,000 interlocking stainless steel panels for ThyssenKrupp's HQ.

Approximately 380,000 horizontal louvres feature around 1.6 million fasteners and connection parts and automatically follow the course of the sun during the day.

**CLIENT** ThyssenKrupp AG

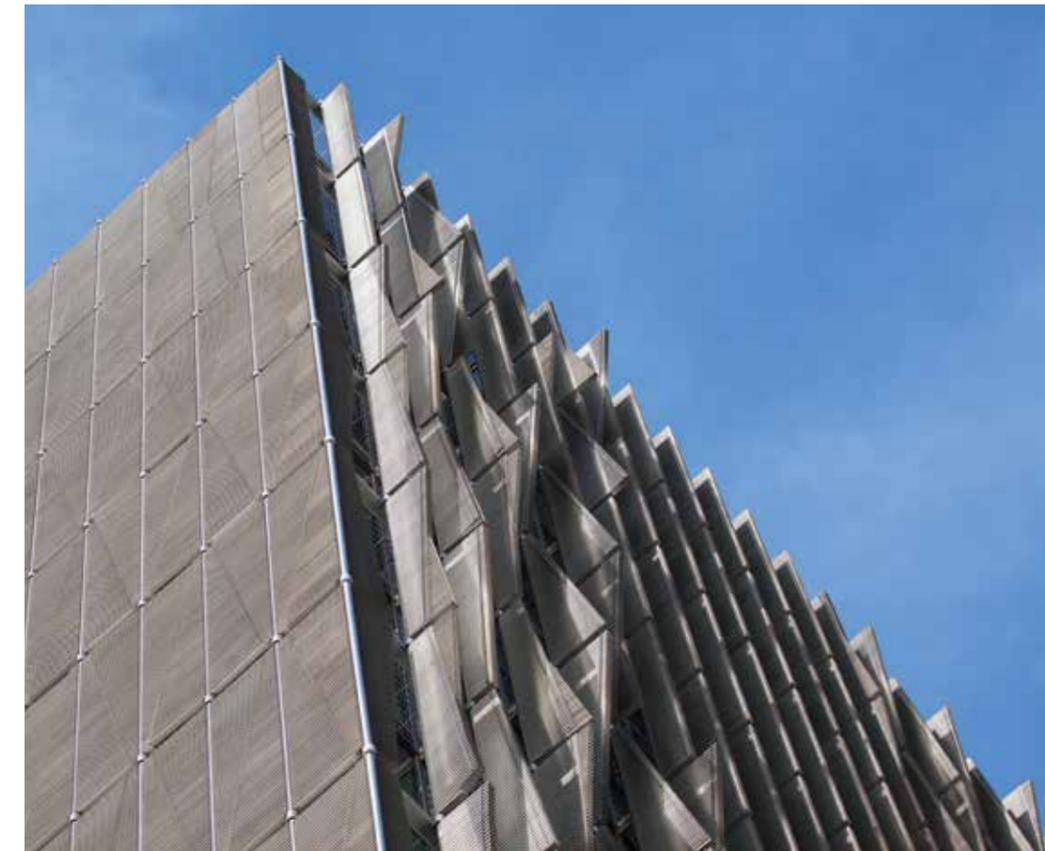
**ARCHITECT** Chaix & Morel et Associés and JSWD Architekten

**LOCATION** Essen, Germany

**DESIGN & FABRICATION** 2009 – 2010

## CHALLENGES

- Development of new, automatically operated stainless steel sun protection system, featuring interlocking tree-shaped panel elements
- Outwardly opening pivoted leaves in SSG, with specific application approval





# GASHOLDERS LONDON

355 openable concertina blind units  
for high-class apartments

## Moving engineering achievements

A historically important project came into being in the King's Cross area of London. FRENER & REINER integrated an elegant, curtain-style, perforated sheet metal panel facade into the cast-iron, former gasholder structures.

This lustrous, warmly metallic skin in 3 mm / 0.118 in aluminium panels is fitted with 355 electromechanically operated, fully openable concertina blind units of up to 3.5 m / 11+ ft in height. Each unit can be controlled individually, providing sun protection to the windows, terraces and balconies.

**CLIENT** King's Cross Central Limited Partnership

**ARCHITECT** WilkinsonEyre Architects

**LOCATION** London, UK

**DESIGN & FABRICATION** 2015 – 2017

**INSTALLATION** 2015 – 2017

## CHALLENGES

- Concertina blind system with exacting mechanical requirements re. durability, resilience and appearance
- Complex site logistics due to simultaneous installation of cast iron supports by others
- BIM-assisted design





## BAADER BANK

Moveable glass roof for an investment bank opens to the heavens

**Openable steel/glass construction transforms courtyard into a garden**

The challenge in constructing the glass roof for the Baader Investment Bank was to conceal the load-bearing details as effectively as possible.

FRENER & REINER's precision work developed a steel/glass roof that appears to float above the inner courtyard. The two roller-mounted sliding leaves of the roof move apart almost soundlessly.



**CLIENT** Baader Bank AG

**ARCHITECT** Architekturbüro Baader

**LOCATION** Unterschleissheim, Germany

**DESIGN & FABRICATION** 2011

### CHALLENGES

- 15.50 m x 15.50 m / approx. 51 x 51 ft moveable roof glass construction, as two automatically opening leaves
- When set in motion, the frame runs over the steel substructure and the fixed roof areas on either side
- Adjustable roof frame construction with rollers



# minimo\_<sup>FR</sup>

Minimal stick system construction principle  
with a visible profile width of 30 mm

The stick system developed by  
FRENER & REIFER offers the possibility  
of realising almost transparent facade  
architecture.

Technical execution can be individually  
adapted in conformity with the structural  
requirements, depending on the form, dimen-  
sions and materials chosen. The minimalist  
profiles guarantee maximum freedom in  
designing elegant building envelopes.

The minimo\_™ system can be used both for  
ultra-large vertical glass facades (heights up  
to 14 m / approx. 46 ft) and for sliding doors,  
windows and curved glass elements.  
Construction heights of up to 20 m / 65+ ft  
are possible for free-standing facades.

Design options using steel, solid or hollow  
profiles, stainless steel and aluminium profiles  
or floor-to-ceiling glass fins are patented  
system variants.



minimo\_™ STICK SYSTEM



VITRAHAUS, Showroom  
Interior facades executed using  
30 mm / 1.18 in wide steel mullions.

minimo\_™ PIVOT DOORS



BOLZANO UNIVERSITY  
All-glass insulating doors, with concealed fittings  
and integrated aluminium profiles

minimo\_™ SLIDING LEAFS



SLIDING LEAF SYSTEM  
Minimal and elegant, with precision-detailed design  
in unusual formats



**MAISON DES FONDATEURS AUDEMARS PIGUET | Le Brassus, Switzerland**  
BIG, BJARKE INGELS GROUP

Load-bearing glass facade comprising over 100 curved, trapezoid glass panels in various formats. Sun protection screen consisting of approx. 15,000 different brass louvres. Steel roof: in the shape of a double helix, using approx. 50 different elements all of which are solely supported by the glass panels. The glazing also makes the building self-reinforcing.



**GASHOLDERS LONDON | London, UK**  
WILKINSONEYRE

Unitised facade with metal curtain wall featuring integrated motorised concertina blind systems. Sliding doors to steel balconies with glass parapets. Glazed internal courtyards, motorised sliding roofs.



**MOMA | New York (NY), USA**  
DILLER SCOFIDIO + RENFRO

360 m<sup>2</sup> / 3875 ft<sup>2</sup> entrance facade with metal cover panels, cantilevered entrance canopy 20 x 7 m / 65+ x 23 ft with glass bead blasted surface, delivered to site in 3 parts. 215 m<sup>2</sup> / 2314 ft<sup>2</sup> of ground floor shop facades and 350 m<sup>2</sup> / 3767 ft<sup>2</sup> tension rod facade, 590 m<sup>2</sup> / 6350 ft<sup>2</sup> panel facade.



**SWISS RE NEXT | Zurich, Switzerland**  
DIENER & DIENER ARCHITEKTEN

6,475 m<sup>2</sup> / 69,696 ft<sup>2</sup> undulating glass curtain wall. 5,100 m<sup>2</sup> / 54,896 ft<sup>2</sup> steel stick system facade. 580 m<sup>2</sup> / 6243 ft<sup>2</sup> atrium roofs. 600 m<sup>2</sup> / 6458 ft<sup>2</sup> natural stone facade. 360 t steel construction.



**HOTEL THERME MERAN | Merano, Italy**  
HUGO DEMETZ

1,900 m<sup>2</sup> / 20,451 ft<sup>2</sup> wraparound aluminium stick system exterior facade with triple-layer glazing. 1 m / 3+ ft deep and 2 m / 6+ ft wide skylights. All-glass connecting corridor 4 m / 13+ ft high x 3.2 m / 11+ ft wide).



**COAL DROPS YARD | London, UK**  
HEATHERWICK STUDIO

565 m<sup>2</sup> / 6081+ ft<sup>2</sup> of graduated "zigzag" glass facade with max. 8 m / 26+ ft high double-layer glazing. 120 m<sup>2</sup> / 1291+ ft<sup>2</sup> of skylights and 200 m<sup>2</sup> / 2152+ ft<sup>2</sup> of stick system facades.



**LA SAMARITAINE | Paris, France**  
SANAA

Undulating glass facade with graduated mirror print. Facade in white, with white graduated screen print, thermal facade using triple-layer glazing. Patio facade, roof terrace facade, various glass roofs and a pedestrian bridge.



**ESO SUPERNOVA | Garching, Germany**  
BERNHARDT + PARTNER

3,200 m<sup>2</sup> / 34,444+ ft<sup>2</sup> of rear-ventilated system facades using 4 mm / 0.157 in aluminium sheet metal panels. 550 m<sup>2</sup> / 5290 ft<sup>2</sup> steel stick system facades with a cupola roof (star roof), diameter 17 m / 55+ ft.



**IOC HEADQUARTERS | Lausanne, Switzerland**  
3XN ARCHITEKTEN

Exterior facade: customised 3,100 m<sup>2</sup> / 33,368 ft<sup>2</sup> inclined glass curtain wall, rotated in plan view and consisting of approx. 582 structurally bonded glass panels. Interior facade: 2,300 m<sup>2</sup> / 24,757 ft<sup>2</sup> all-glass facade with silicone joints.



**DUKA | Bressanone, Italy**  
KUP ARCHITEKTEN

Approx. 3,000 m<sup>2</sup> / 32,292 ft<sup>2</sup> of stick system office facade, DUKA WELT and a main entrance facade with vestibule.



**DURST | Bressanone, Italy**  
MONOVOLUME

2,350 m<sup>2</sup> / 25,295 ft<sup>2</sup> freeform metal exterior facade with 850 LED illuminated window elements. 850 m<sup>2</sup> 9149 ft<sup>2</sup> triple-layer glazing as skylight strip, comprising approx. 250 panels. 930 m<sup>2</sup> / 10,010 ft<sup>2</sup> stick system facade, 1,200 m<sup>2</sup> / 12,917 ft<sup>2</sup> faceted stick system facade.



**FOSTER FOUNDATION PAVILION | Madrid, Spain**  
NORMAN FOSTER FOUNDATION

160 m<sup>2</sup> / 1722 ft<sup>2</sup> load-bearing all-glass facade, using nine large-format, five-layer laminated glass panels. 5.6 x 2.8 m / 18+ x 9+ ft pivot door weighing 3 t with filigree profiles, in glass bead blasted and mirror-polished stainless steel.



**STEVE JOBS THEATER | Cupertino (CA), USA**  
FOSTER + PARTNERS

44 ultra-large, 3 x 7.3 m / 9+ x 23+ ft high load-bearing glass panels. Carbon-fibre roof with a diameter of over 40 m / 131+ ft and weighing 65,000 kg / 71+ US tons. 4 curved all-glass double doors.



**DEVONSHIRE HOUSE, 150 BISHOPSGATE | London, UK**  
PLP ARCHITECTURE

Steel load-bearing structure with glass and metal shingle elements, comprising approx. 317 panels in different forms, geometries and complex drainage situation. Gable facade. 4 entrance boxes and glazed lift facade.



**CLARGES MAYFAIR | London, UK**  
SQUIRE AND PARTNERS

Hundreds of exclusive custom window elements and stick system constructions. 268 anodized bronze aluminium balustrades. 3.5 m / 11+ ft high door systems in laser-cut, anodized bronze aluminium panels.



**ST. GILES CIRCUS | London, UK**  
ORMS

Wide variety of completely different facade constructions. Hinged and sliding elements, approx. 10 m / 32+ ft high and 2.5 m / 8+ ft wide, with titanium-coated surface.



**LG ELECTRONICS HQ | Englewood Cliffs (NJ), USA**  
HOK ARCHITECTS

2,200 m<sup>2</sup> / 23,680 ft<sup>2</sup> of 17 m / 55+ ft high SG steel facade, 5 automatically adjustable steel gates, 3 m x 3 m x 2 m / 9+ ft x 9+ ft x 6+ ft visual mock-up, 32.05 m<sup>2</sup> / 345 ft<sup>2</sup> performance mock-up.



**UNISPHERE, UNITED THERAPEUTICS | Silver Spring (MD), USA**  
EWING COLE ARCHITECTS

4° inwardly and outwardly inclined unitised facade at atrium and exterior and multiple stick system facades.



**FLATIRON INSTITUTE | New York (NY), USA**  
PERKINS EASTMAN

minimo™ system facade with doors and skylights.



**GARDA RESORT HOTEL | Lazise, Italy**  
MARX / LADURNER

970 m<sup>2</sup> / 10,441 ft<sup>2</sup> steel/glass atrium facade, approx. 300 m<sup>2</sup> / 3229 ft<sup>2</sup> of sliding doors and an openable 500 m<sup>2</sup> / 5382 ft<sup>2</sup> roof construction.



**KÖ-BOGEN II | Düsseldorf, Germany**  
INGENHOVEN

As the general facade contractor, FRENER & REIFER is responsible for the entire building envelope with hedge facade, steel/glass main facade, roof sealing, interior courtyard glazing, service lift systems, sun protection, and much more.



**MEYER WERFT | Papenburg, Germany**  
MEYER WERFT

970 m<sup>2</sup> / 10,441 ft<sup>2</sup> steel/glass roof with elliptical 41 x 24 m 134+ x 78+ ft footprint for a luxury cruise ship. Directly-glazed triangular mesh using solid rectangular profiles. Double-layer glazing with max. 3 m / 9+ ft edge length.



**FONDATION JÉRÔME SEYDOUX-PATHÉ | Paris, France**  
RENZO PIANO BUILDING WORKSHOP

Multi-skin, complex freeform building envelope using curved and perforated aluminium louvres. Glass cupola using 800 m<sup>2</sup> / 8611 ft<sup>2</sup> of bi-directionally curved double-layer glass units.



**BMW TRIAS BRÜCKE | Munich, Germany**  
COOP HIMMELB(L)AU

FRENER & REIFER was general contractor for the realisation of the 100 m / 328 ft pedestrian bridge. Structural and steel works, stainless steel cladding, lighting technology, heated flooring.



**INVESTCORP BUILDING | Oxford, UK**  
ZAHA HADID ARCHITECTS

850 m<sup>2</sup> / 9149 ft<sup>2</sup> double-curved stainless steel panel facade with electropolished surface finish, **minimo**<sup>™</sup> stick system glass facade in various geometries, with drop-shaped skylights.



**WILDSPITZBAHN | Pitztaler Glacier, Tyrol, Austria**  
BAUMSCHLAGER HUTTER PARTNER

Highest skiing region in Austria. Lead company for steelwork / facade construction. Aluminium panel skin: valley station 1,250 m<sup>2</sup> / 13,455 ft<sup>2</sup> (at 2,840 m / 9317 ft), mountain station 1,650 m<sup>2</sup> / 17,760 ft<sup>2</sup> (at 3,440 m / 11,286 ft) incl. panoramic facade.



**VITRAHAUS, SHOWROOM | Weil am Rhein, Germany**  
HERZOG & DE MEURON

1,000 m<sup>2</sup> / 10,764 ft<sup>2</sup> filigree facades in **minimo**<sup>™</sup>. Width of mullions and cover caps 30 mm / 1.18 in. Custom-configured facade construction (component movement +/- 3 cm / 1.18 in).



**HAUS DER ASTRONOMIE | Heidelberg-Königstuhl, Germany**  
BERNHARDT + PARTNER

Incl. 850 m<sup>2</sup> / 9149 ft<sup>2</sup> all-glass ribbon windows in customised **minimo**<sup>™</sup> construction with integrated stainless steel sun protection system. 2,600 m<sup>2</sup> / 27,986 ft<sup>2</sup> bi-directionally curved aluminium panel facade.



**SÜDWESTMETALL | Reutlingen, Germany**  
ALLMANN SATTLER WAPPNER ARCHITEKTEN

2,900 m<sup>2</sup> / 31,215 ft<sup>2</sup> ventilated stainless steel building envelope including roof. Integrated dynamic sun protection blinds, glass facade, insulated wall panels, 3 all-glass bridges, and much more.



**THYSSENKRUPP QUARTIER, MAIN ADMINISTRATIVE BUILDING | Essen, Germany**  
CHAIX & MOREL ET ASSOCIÉS, JSWD ARCHITEKTEN

7,700 m<sup>2</sup> / 82,882 ft<sup>2</sup> floor-to-ceiling primary aluminium/glass facade, customised construction. 7,800 m<sup>2</sup> / 83,958 ft<sup>2</sup> dynamic stainless steel sun protection facade.



**ACTELION BUSINESS CENTER | Allschwil, Switzerland**  
HERZOG & DE MEURON

12,500 m<sup>2</sup> / 134,549 ft<sup>2</sup> office facade with 3-layer insulation glazing. With partial 10° inward and outward inclination. Integrated retractable Venetian blind louvre system. Ground floor facade in **minimo**<sup>™</sup>.



**"DIVES IN MISERICORDIA", CHURCH | Rome, Italy**  
RICHARD MEIER & PARTNERS

710 m<sup>2</sup> / 7642 ft<sup>2</sup> 3 steel/glass roof constructions incl. earthquake damping system and steel lattice beams. 550 m<sup>2</sup> / 5920 ft<sup>2</sup> stick system facade with steel load-bearing structure. Windows, doors etc.



**THE DOLDER GRAND | Zurich, Switzerland**  
FOSTER + PARTNERS

General contractor for facades and metalwork Over 11,000 m<sup>2</sup> / 118,403 ft<sup>2</sup> of facades in various types for old and new buildings. including wood-aluminium sliding leaves. 3,000 m<sup>2</sup> / 32,292 ft<sup>2</sup> of forest motif screens, canopy etc.



**TOBIAS GRAU, HEAD OFFICE AND PRODUCTION HALL | Rellingen, Germany**  
BRT - BOTHE RICHTER TEHERANI

Custom development of the sun protection system featuring curved screen-printed glass louvres with sun protection coating. Photovoltaic facade.



**DOCKLAND OFFICE BUILDING | Hamburg, Germany**  
BRT - BOTHE RICHTER TEHERANI

3,750 m<sup>2</sup> / 40,365 ft<sup>2</sup> double glass facade. Circumferential aluminium panel framing, 1,000 m<sup>2</sup> / 10,764 ft<sup>2</sup> overhanging west and roof level facades. Entrance portal, glass balustrades etc.



**"PAVILION 21" MINI OPERA SPACE | Munich, Germany**  
COOP HIMMELB(L)AU

Turnkey general contractor role for design-engineering and realisation. Structural steelwork, sound-reflecting and sound-absorbing interior and exterior cladding. Custom door systems, canopies, podium.



**PRIVATE VILLA | Germany**  
A.PUNKT ARCHITEKTEN

Complete external glazing (windows, doors, *minimo*™ lift/slide doors), entrance door in wood, all-glass parapets, aluminium panel cladding, external sun protection/Venetian blind systems, entrance gate and garage gates.



**PRIVATE VILLA | Germany**  
HARDEGGER ARCHITECTS

Complete external glazing, 5.0 x 3.5 m / 16+ x 11+ ft elevating roof, vertically sliding windows, entrance door in wood, conservatory as *minimo*™ facade in steel, add-on construction in wood, copper panel surrounds. Carport: load-bearing construction in wood with stick system add-on, all copper panel framings.



**SAINSBURY WELLCOME CENTRE | London, England**  
IAN RITCHIE ARCHITECTS

2,400 m<sup>2</sup> / 25,833 ft<sup>2</sup> curved cast glass facade. 3,700 m<sup>2</sup> / 39,826 ft<sup>2</sup> opaque panel facades, 1,400 m<sup>2</sup> / 15,069 ft<sup>2</sup> windshield screens. 600 m<sup>2</sup> / 6,458 ft<sup>2</sup> stick system facades, *minimo*™ lift/slide doors, 750 m<sup>2</sup> / 8,073 ft<sup>2</sup> pixelated louvre facade.



**HOTEL LAMM | Castelrotto, Italy**  
SENONER & TAMMERLE ARCHITEKTEN

100 m<sup>2</sup> / 1,076 ft<sup>2</sup> openable sliding roof, curved entrance facade, and other customised constructions in glass.



**PRIVATE VILLA | USA**  
STEVEN HOLL ARCHITECTS

718 m<sup>2</sup> / 7,729 ft<sup>2</sup> flush-mounted stick system glazing, 418 linear metres / 1,371 linear feet of translucent glass fence, height 2 m / 6+ ft.



**PRIVATE VILLA | Italy**  
RUDOLF PERATHONER

Complete external glazing (windows, doors, sliding doors), extensive gable glazing, window reveals, all-glass parapets, floor glazing, external sun protection/Venetian blind systems.



**PRIVATE VILLA CONSERVATORY | Switzerland**  
CAMPONOV ARCHITETTI & ASSOCIATI

Floor-to-ceiling panoramic facade in curved triple-layer glazing. Various mirror-polished stainless steel claddings. Stainless steel "chain mail" sun protection.

FRENER & REIFER GmbH was founded in 1974 by Georg Frener and Franz Reifer.

Since their retirement in 2019, the company has been managed by long-standing employees and the parent company, FRENER REIFER Holding AG, Munich.

Today the company employs a team of around 200 highly qualified specialists - engineers, technicians, skilled workers and qualified installation team.

