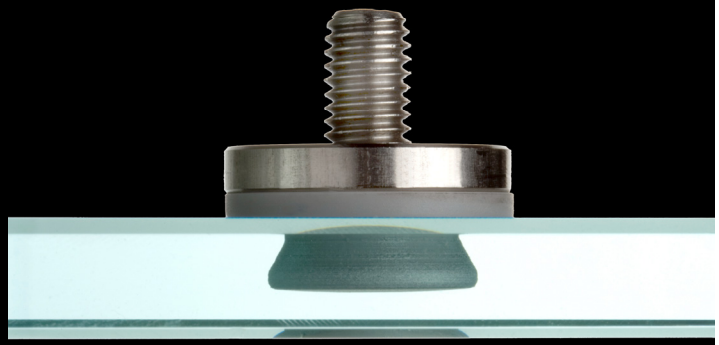
ADVANCED CURTAIN WALL TECHNIQUE
- PROJECT DOCUMENTATION -

ILLUMINATED GLASSFACADE HAMBURG

fischer
FIXING SYSTEMS

ADVANCED CURTAIN WALL TECHNIQUE
- GLASS TECHNIQUE -



fischer
FIXING SYSTEMS

Content project documentation fischer FZP-G:

Akademiehof Ludwigsburg
Ludwigsburg / Germany

Akademiehof Ludwigsburg
Ludwigsburg / Germany

Companies

- Building owner:

  Ludwigsburger Parkierungsanlagen GmbH
- Architect: Freie Planungsgruppe 7, Stuttgart
- Glass: BGT Bischoff Glastechnik AG, Bretten
- Installation: Hestermann GmbH, Mosbach

Object data

- “Filmakademie“ (Academy of movie making).

  Cover of light, air and access openings for

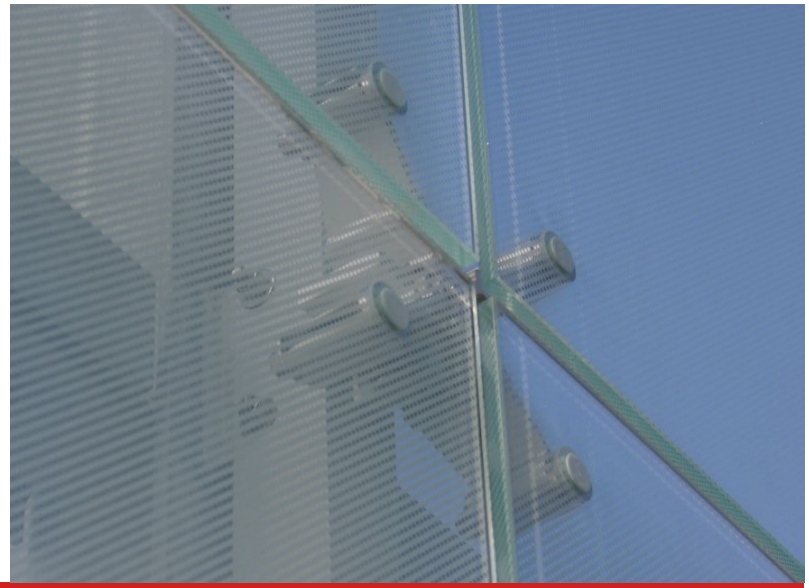
  subterranean parking lot under the courtyard.
- Glazing with fischer glass pointholder FZP-G and

  fischer subframe system Star Solution
- Height of building 4m
- Construction 10/2009

Akademiehof Ludwigsburg
Ludwigsburg / Germany

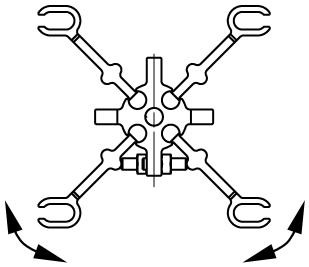
Details / Specials

- Heat strengthened safety glass 10mm
- Regular panel size: 1,2 x 1,2 m
- Steel construction with fischer Star Solution aluminium subframe
- Technical appearance, “looks“ planned by building owner and architect



2-point hoder

4-point hoder



Porsche Museum
Stuttgart / Germany

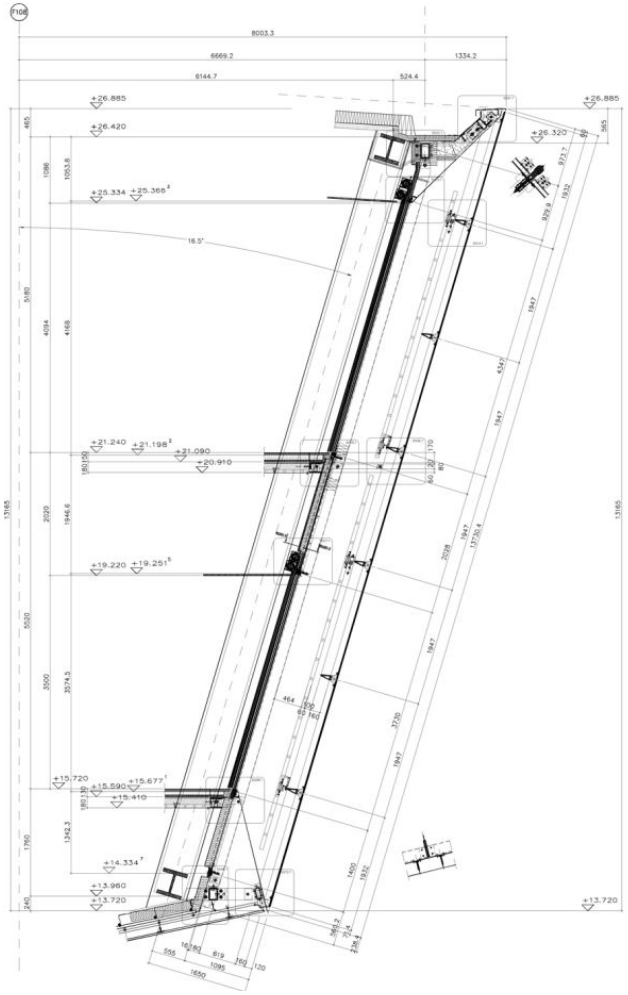
Porsche Museum
Stuttgart / Germany

Companies

- Investor: Dr. Ing. h.c. F. Porsche AG
- Architect: Delugan Meissl
- Glass statics: SuP Ingenieure GmbH
- Glass: Glas Trösch GmbH Nördlingen
- Façade contractor: Rupert App GmbH & Co.

Object data

- Double skin glazing with 16,5° inclination
- Height of building from 17m to 26,5m
- Construction end 12/2008

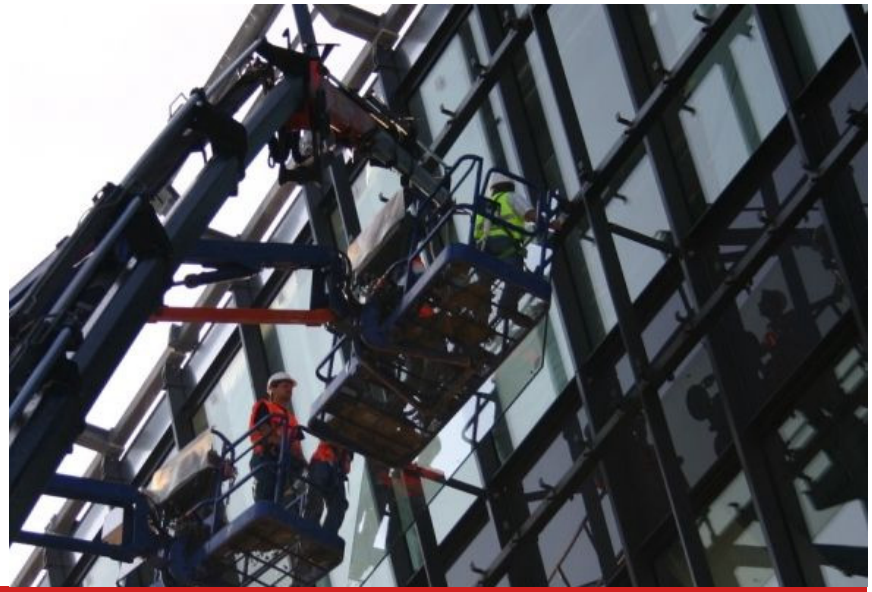


Porsche Museum
Stuttgart / Germany

Details / Specials

- LSG 10/10mm made of HSG

  Laminated safety glass made of heat strengthened glass)
- Max. Panel size: 3,4 x 1,9 m
- 12 FZP-G-Z for LSG per glass panel
- Installation with approval an an individual base (Z.i.E.)



Customer center fischer - Glass balustrade Waldachtal / Germany

Customer center fischer - Glass balustrade Waldachtal / Germany

Companies

- Builder: fischerwerke GmbH & Co. KG
- Architect: Lieb + Lieb Architekten BDA
- Glass statics: SuP Ingenieure GmbH
- Approval certificate: SuP Ingenieure GmbH
- Glass: Glas Trösch GmbH Nördlingen
- Mounting: Schlosserei-Stahlbau Stein

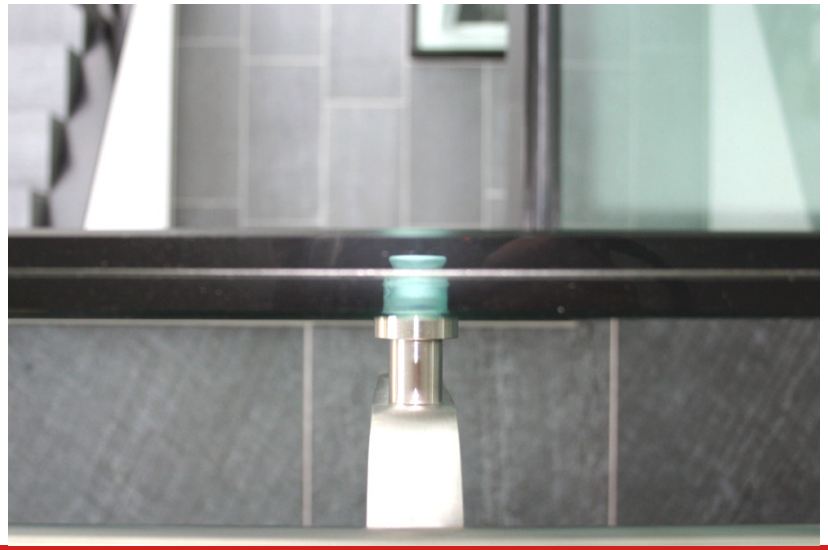
Object data

- Glass balustrade
- Stainless steel handrail fixed with FZP-G-Z in glass

Customer center fischer - Glass balustrade Waldachtal / Germany

Details / Specials

- Laminated safety glass 10/10 mm of toughened glass
- Max. panel size: 1,69 x 1,2 m
- 4 FZP-G-Z per panel, 2 x FZP-G-Z for laminated safety glass and 2 x FZP-G-Z toughened glass
- Application with approval on an individual base (Z.i.E.)
- Glass to prevent from falling (according TRAV, cat. B)
- Pendulum impact test with drop height 700mm

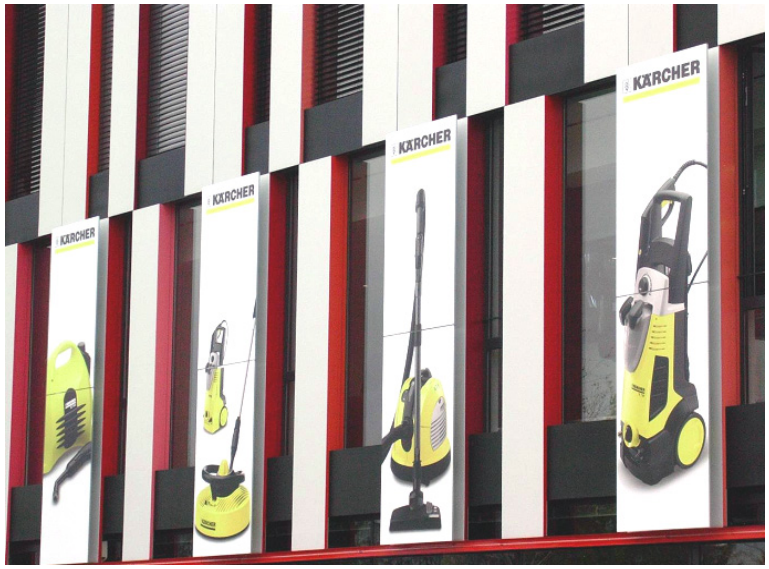


Carl Benz Arena – Advertising glasses
Stuttgart / Germany

Carl Benz Arena – Advertising glasses Stuttgart / Germany

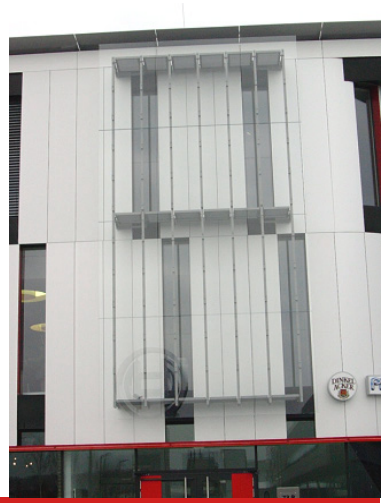
Companies

- Builder: häussler Baumanagement GmbH
- Architect: KBK Architekten
- Statics subframe system: Medzech Ingenieure GmbH
- Glass statics: SuP Ingenieure GmbH
- Glass: Glas Sprinz
- Mounting: App Stahlbau Metallbau



Object data

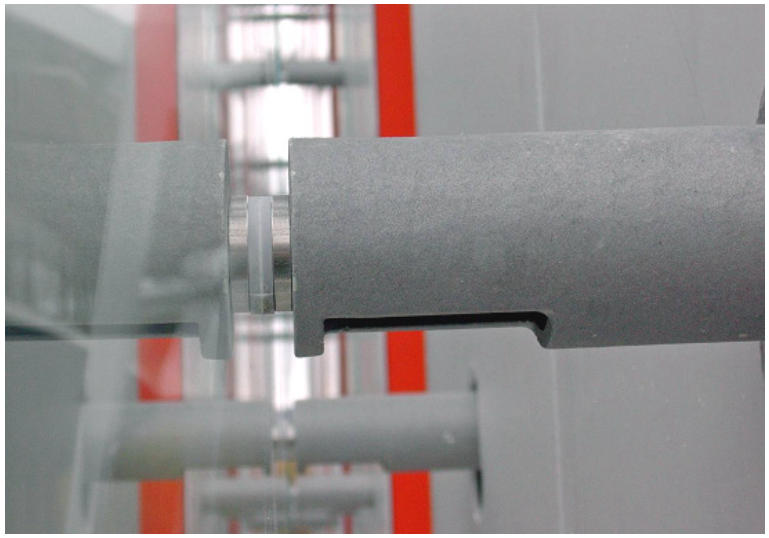
- Curtain-type advertising glasses (printed adhesive foil on glass front surface)



Carl Benz Arena – Advertising glasses Stuttgart / Germany

Details / Specials

- Laminated safety glass 10/8 mm of toughened glass
- Panel sizes:
  - 2,2 x 1,4 m, 6 FZP-G-Z per panel
  - 2,8 x 1,2 m, 9 FZP-G-Z per panel
- Two different types of subframe system
- Subframe system integrated in the facade



Fixing of advertising glasses

Fixing of advertising glasses

Notes of the FZP-G Systems

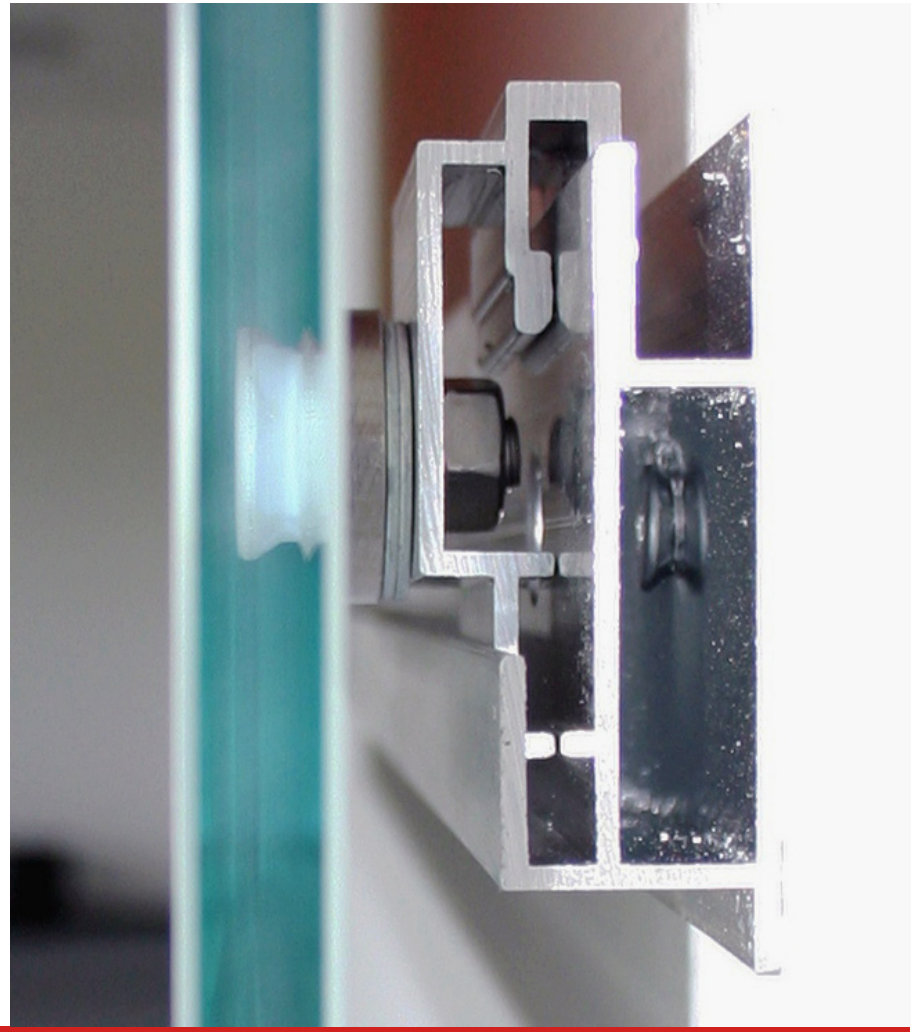
- Mechanical fixing in the glass with undercut technology
- On each other aligned parts of high-quality materials
- Short and discreet point fixing
- No penetration of glass panel

Benefits of the FZP-G Systems

- Easy to clean because persistent glass face at front surface without fixing elements
- Maximum scope for design
- No visible fixing elements (if glass front surface is printed)

Fixing of advertising glasses

Details



Prayersroom The Home Of FIFA
Zürich / Switzerland

Prayersroom The Home Of FIFA Zürich / Switzerland

Companies

- Builder: FIFA
- Architect: Tilla Theus und Partner AG, Zürich
- Statics: Emmer Pfenniger Partner AG, Münchenstein
- Steel building: Delfosse AG, Brugg
- Natural stone: Lorenzi AG, Oberhasli
- Implementation planning: Luchsinger & Partner GmbH, Quarten
- Production glass: Glas Trösch
- Anchorage natural stone: fischer FZP 13x26 M8/6kt/17
- Anchorage glass: fischer FZP 15x17,5 M8/16 G

Object data

- Approx. 63 m² overhead glazing (suspended glass ceiling)
- Approx. 280 m² wall cladding natural stone (ONIX)

Prayersroom The Home Of FIFA Zürich / Switzerland

Details / Specials

- Wall cladding
  - Parallelogram and trapezoid natural stone
  - 4 piece FZP 13x26 M8/6kt/17 per panel
  - Fixed on steel angles
- Overhead glazzing
  - Laminated safety glass 12/10 mm, EUROWHITE
  - 4 piece FZP 15x17,5 M8/16 G per panel
  - fixed on steel angles
  - natural stone disposed on laminated safety glass

Prayersroom The Home Of FIFA Zürich / Switzerland

Details / Specials

- Wall cladding



- Overhead glazzing



Plenarsaal Bayrischer Landtag
Munich / Germany

Plenarsaal Bayrischer Landtag Munich / Germany

Companies

- Utilisation: Plenarsaal bayerischer Landtag
- Builder: Freistaat Bayern
- Architect: Volker Staab Architekten
- Planning glass roof: R + R Fuchs, Ingenieurbüro für Fassadentechnik
- Statics glass roof: Ingenieurbüro Lintl
- Expert´s report: Prof. Dr.-Ing. Ömer Bucak
- Production glass: Hunsrücker Glasveredelung
- Installation glass: Hunsrücker Glasveredelung

Object data

- Approx. 350 m² overhead glazing (suspended glass ceiling)
- Approx. 170 m² wall glazing

Plenarsaal Bayrischer Landtag
Munich / Germany

Details / Specials

- Wall glazing
  - 1,35 x 1,46 m, laminated safety glass 10/8 mm, cauterised
  - 4 pieces FZP 15x15,5 M8/16 G per panel
  - Suspended on brackets
- Overhead glazing
  - 1,32 x 2,70 m, laminated safety glass 12/10 mm, cauterised
  - 6 pieces FZP 15x17,5 M8/14 G per panel
  - Suspended on slats

Plenarsaal Bayrischer Landtag
Munich / Germany

Details / Specials

- Wall glazing



- Overhead glazing



Glass shower
System Glamü

Glass shower
System Glamü

Object information

- Project: fixing of hinges at glass showers with FZP-G
- Customer: Glamü
- Product: OEM-FZP-G with specific size, coluor, form

Notes of the FZP-G Systems

- Mechanical fixing in the glass with undercut technology
- On each other aligned parts of high-quality materials
- Short and discreet point fixing
- No penetration of glass panel

Benefits of the FZP-G Systems

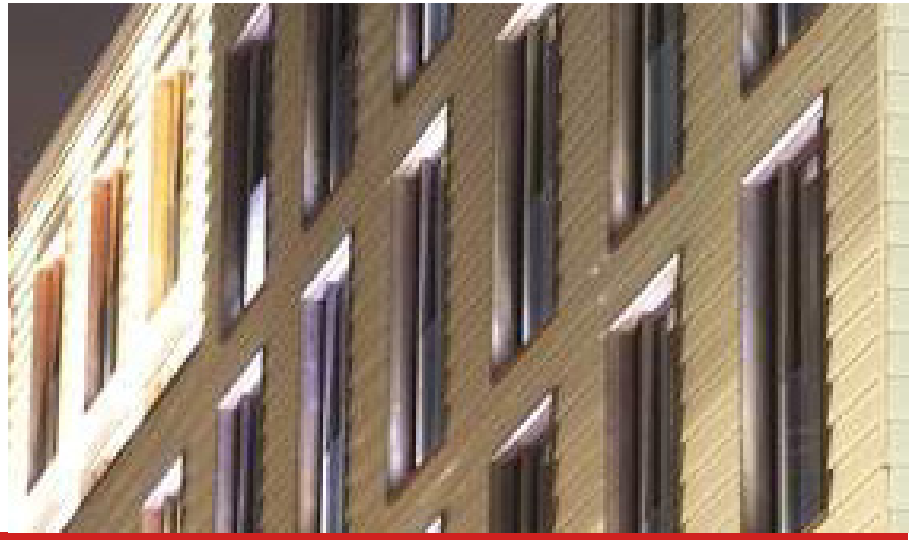
- No problems with impermeability and dirt
- Easy to clean the inner surface of glass – persistent glass face at inner surface of shower
- Maximum scope for design

Neuer Wall 52
Hamburg / Germany

Neuer Wall 52
Hamburg / Germany

Companies

- Builder: RIPA Grundstücksgesellschaft mbH
- Architect: KKPW Architekten
- Facade consultant: Ing.- Büro POP Priedemann, Osmers und Partner
- Statics: framework: IBTechnik, Herr Kirchesch
  glass: Ing.- Büro Bangratz
- General contructor facade: Hansen Metallbau GmbH
- Metal engineering: GEFA-Plan (Planung und Bauleitung)
- Glass: Hero Glas (D)



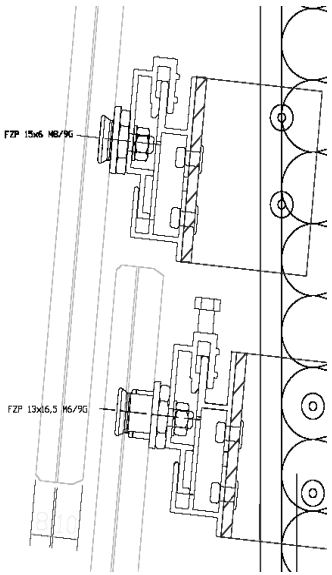
Object data

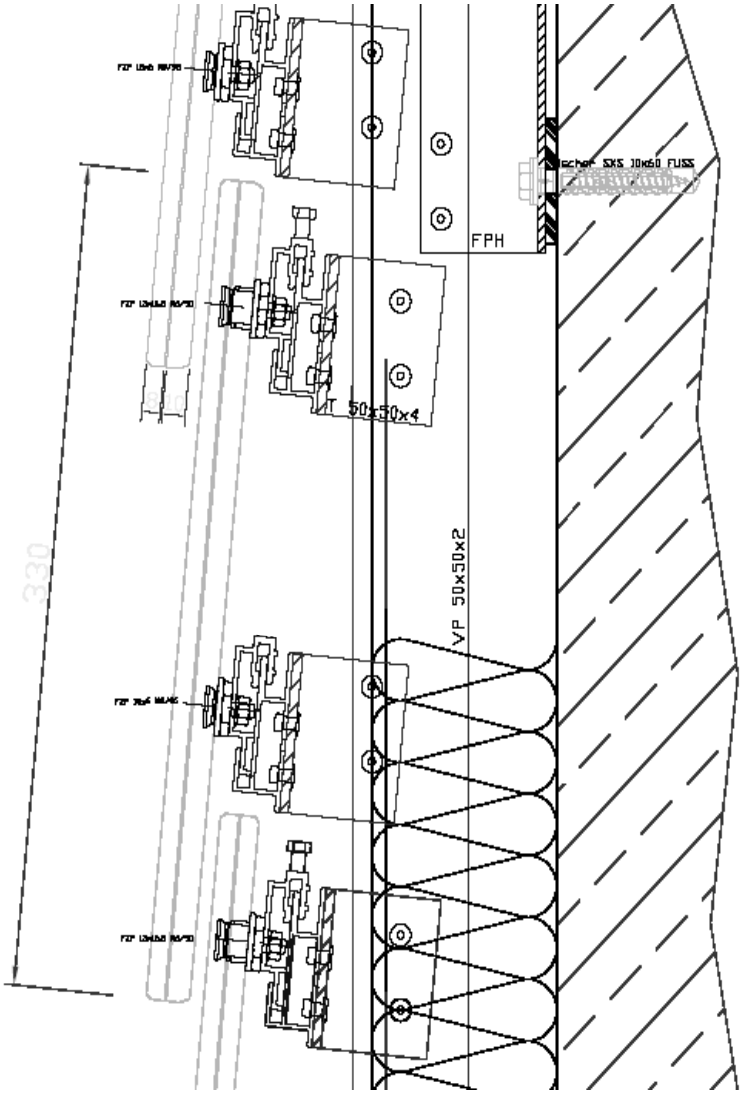
- 750 m² glass shingle facade
- fischer framework SystemOne BSL

Neuer Wall 52
Hamburg / Germany

Details / Specials

- Laminated safety glass 8 / 10 mm of toughened glass, 1175 x 330 mm, on Pos. 2 white enamelled
- Upper glass fitting FZP-G for laminated safety glass
- Lower glass fitting in rear glass (10 mm Glas)
- Thus absolute invisible fixing of the glazing
- Prefabrication of the framework, quick installation on site





Loutec.® Solarwings / Fraunhofer ISE Freiburg / Germany

Loutec.® Solarwings / Fraunhofer ISE Freiburg / Germany

Companies

- Builder: Fraunhofer ISE Freiburg
- Architect: Dissing + Weitling, Copenhagen
- Construction: Saint Gobain Glass Solar, Aachen

Object data

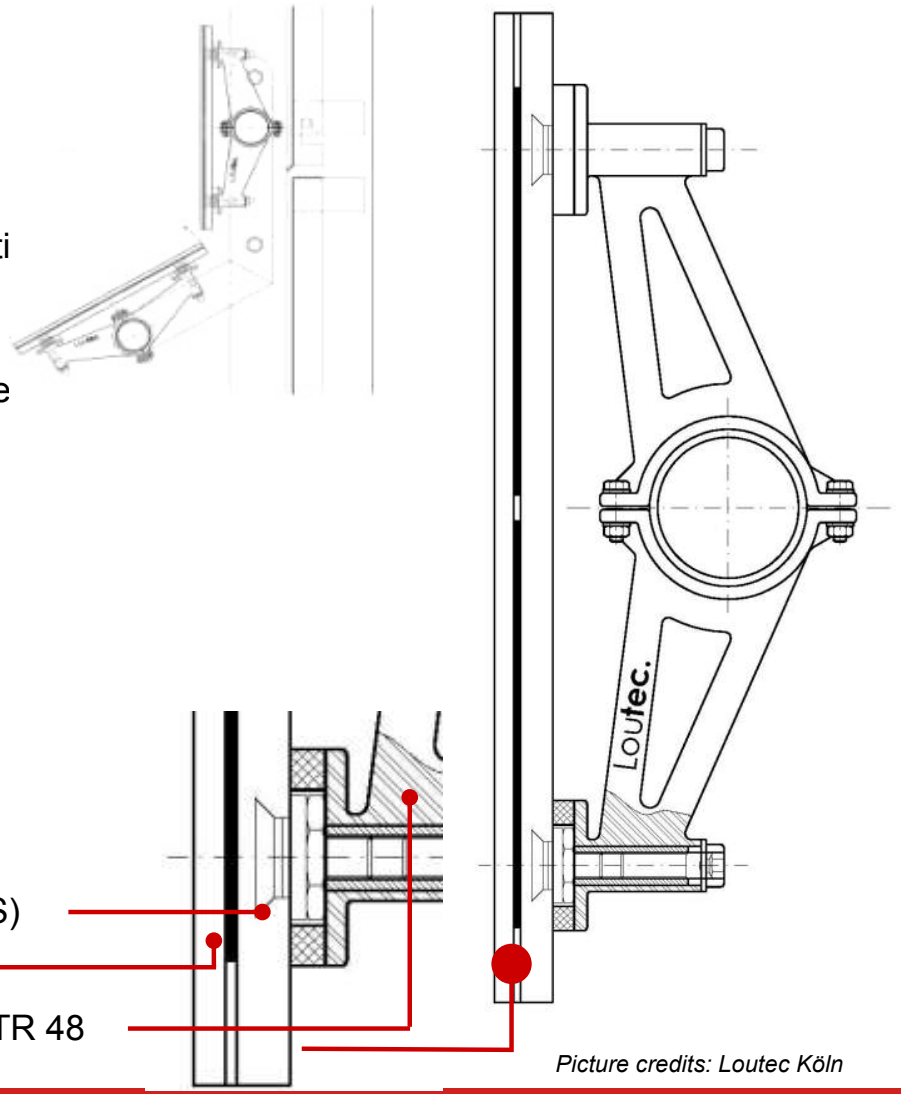
- Photovoltaic installation integrated into facade of the Institute for Solar Energy Systems (ISE)
- Glass fitting Lou**tec**.® Solarwings TR 48, Cologne

Picture credits: Loutec Köln

Loutec.® Solarwings / Fraunhofer ISE Freiburg / Germany

Details / Specials

- Holder for glass panel with focus on geometric form (Design: Winfried Fischer)
- Glass fitting for free to move or fixed panel constructi in different sizes and dimensions
- Anchoring distances of 220, 270, and 300 mm enable glass panel widths up to 750 mm.
- The parts have been repeatedly tested by differnt independant institutes and experts. The component tests have been executed for several approvals and permissions.



Picture credits: Loutec Köln

Photovoltaic installation Kriegerhornbahn (2176m) Lech / Austria

Photovoltaic installation Kriegerhornbahn (2176m) Lech / Austria

Companies

- Builder: Skilifte Lech Ing. Bildstein GmbH, Lech (AUT)
- Architect: Architekturbüro Riemelmoser, Lochau (AUT)
- Solar modules: solarnova, Wedel (D)
- Glass for solar modules: EVG Semco Glasgruppe, Sennfeld (D)
- Glass for facade: glas müller GmbH & Co KG, Frastanz (D)
- Statics glass: A-MTB, Innsbruck (AUT)
- Statics steel construction: rds, Dornbirn (AUT)
- Steel Construction: Josef Martin GmbH, Braz (AUT)
- Installation glass: glas müller GmbH & Co KG, Frastanz (AUT)
- Electric set-up: ATB/TBB, Absam (AUT)

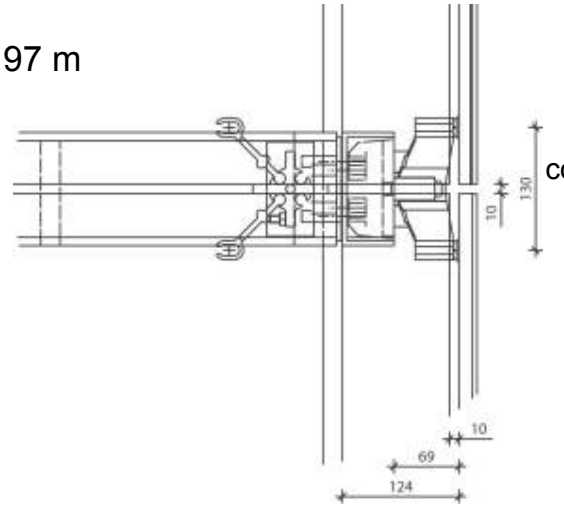
Object data

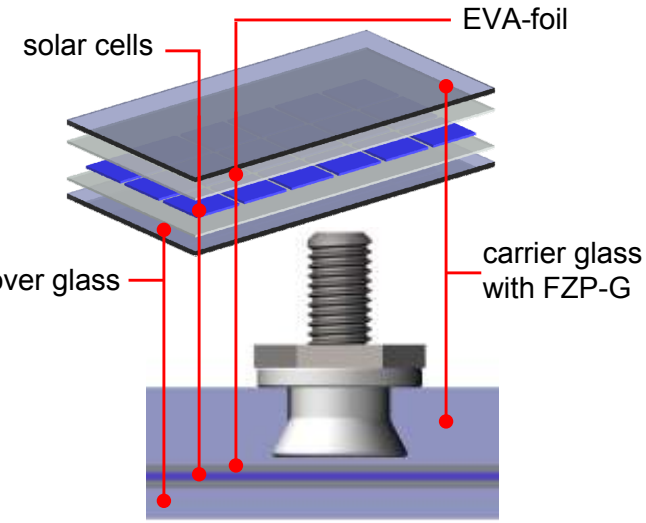
- Output of photovoltaic installation: 12 kW (feed in)

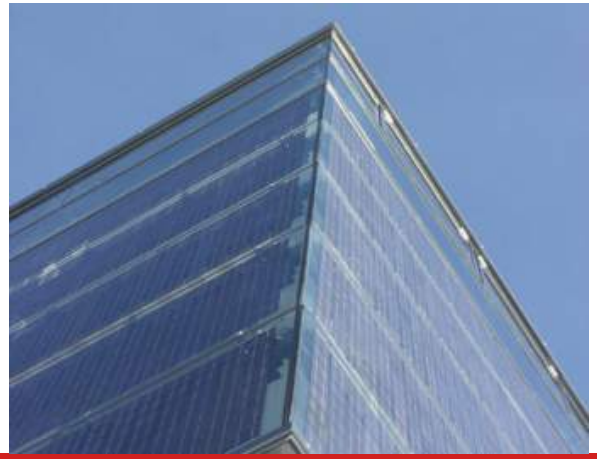
Photovoltaic installation Kriegerhornbahn (2176m) Lech / Austria

Details / Specials

- Framework: fischer StarSolution
- Maximum panel size: 2,43 x 0,97 m
- FZP-G in carrier glass







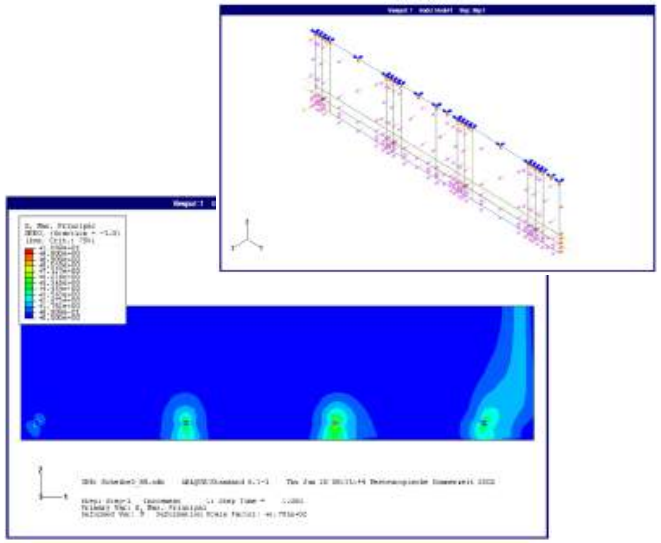
Photovoltaic installation Kriegerhornbahn (2176m) Lech / Austria

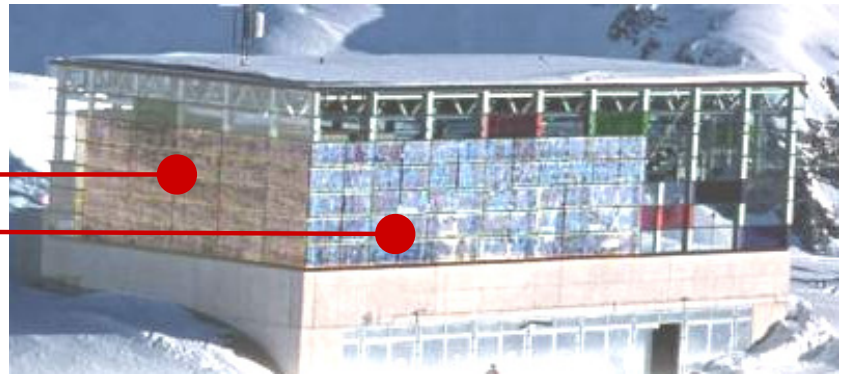
Details / Specials

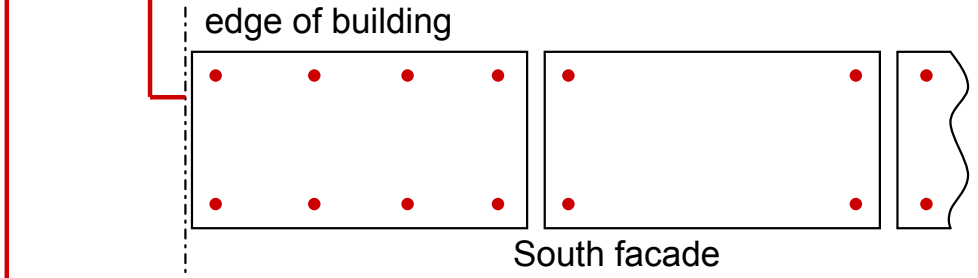
- Wind loads according Austrian standard

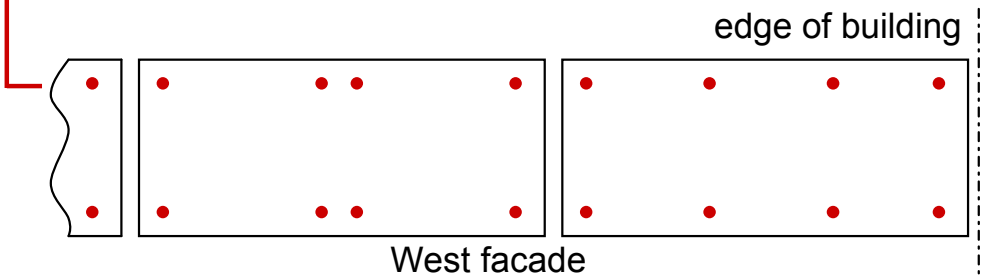
  ÖNORM B 4014-1

- Drafting of an expert‘s report:
  - Basic value v10 = 175 km/h
  - Wind suction max.: -3,16 kN/m² (edge)









Glass bridge, Karstadt department store
Hansa-Carré / Dortmund / Germany

Glass bridge, Karstadt department store Hansa-Carré / Dortmund / Germany

Companies

- Builder: Karstadt Warenhaus AG, Essen (D)
- Architect: Christian F. Heine Architekten, Hamburg (D)
- Statics: Ludwig & Weiler Ingenieure GmbH, Augsburg (D)
- Metal construction: FERNER & REIFER Metallbau GmbH, Brixen (I)
- Tests / reports: FH München / München (D)
- Glass: Saint Gobain (D)

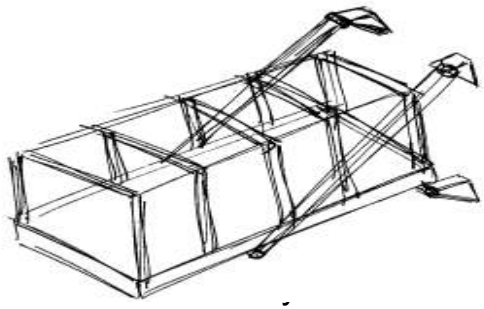
Object data

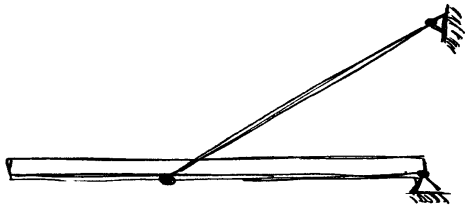
- Town council required highest possible transparancy of building connection.
- Roof, wall, and floor panels in glass

Glass bridge, Karstadt department store Hansa-Carré / Dortmund / Germany

Details / Specials

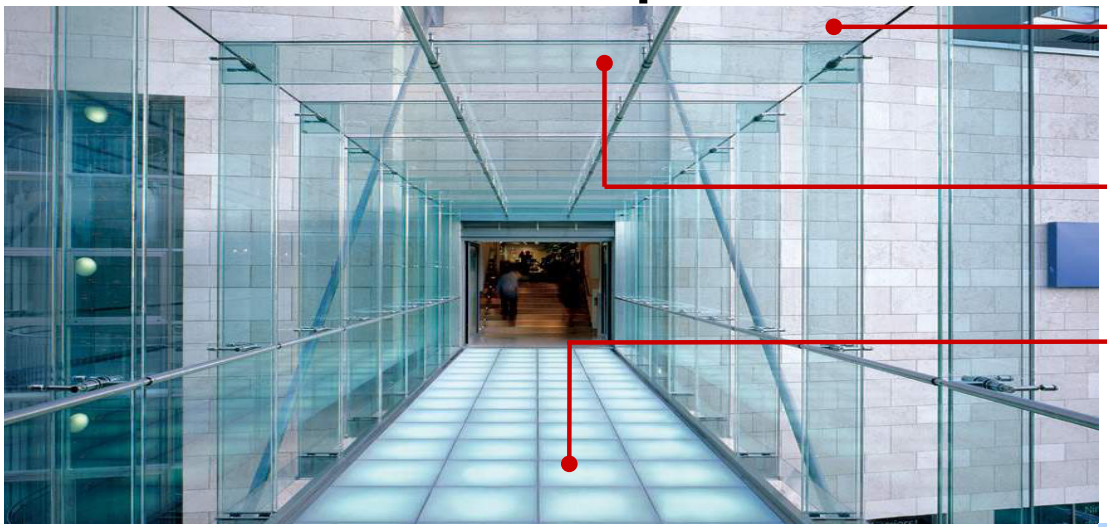
- Static system resembles drawbridge
- Main structure is a framework of welded steel profiles.
- The framework is suspended by two steeltubes attached to the massive concrete building at the top and by two free to move connections on the lower part.
- The protruding steel framework ends 1,5m in front of the old building.
- The gap is brigded by a glass cube.
- The glass panels of the roof, the walls, and the walkable floor are solely coupled by FZP-G anchors.





Glass bridge, Karstadt department store Hansa-Carré / Dortmund / Germany

Details / Specials



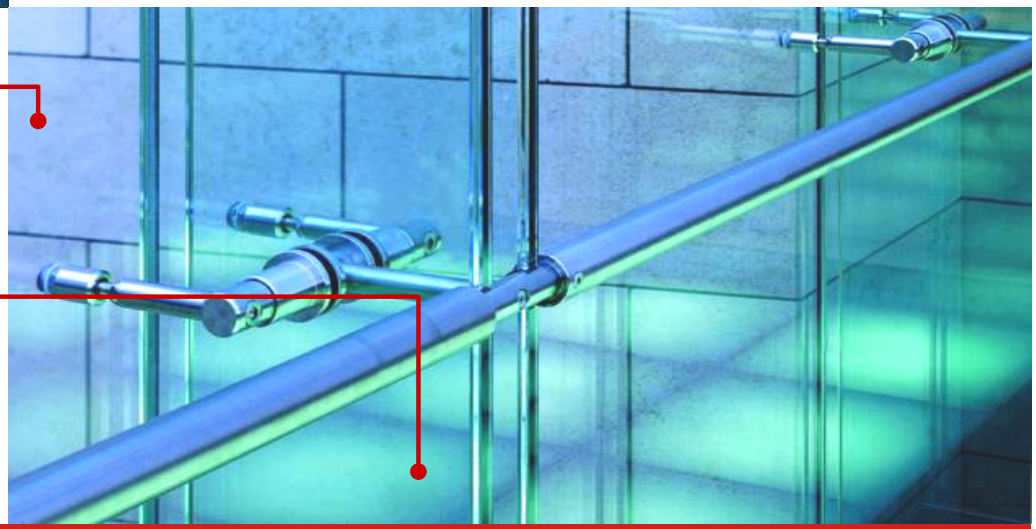
Roof panels:
- 2 x 10 mm HS glass
- 1200 x 3000 mm
- 4 point-holder

Transom panels:
- 2 x 12 mm HS glass
- moveable connected to reinforcement panel

Floor panels:
- 10 mm HS glass with wearout surface
- 19 mm tempered glass, statical effective
- 12 mm HS glass, statical effective
- 600 x 600 mm

Vertical glazing:
- laminated glass of 2 x 10 mm heat strengthened glass
- 1170 x 3160 mm
- Dead load supported by angles on framework
- Wind loads transferred by 4 glass fittings into glass fins

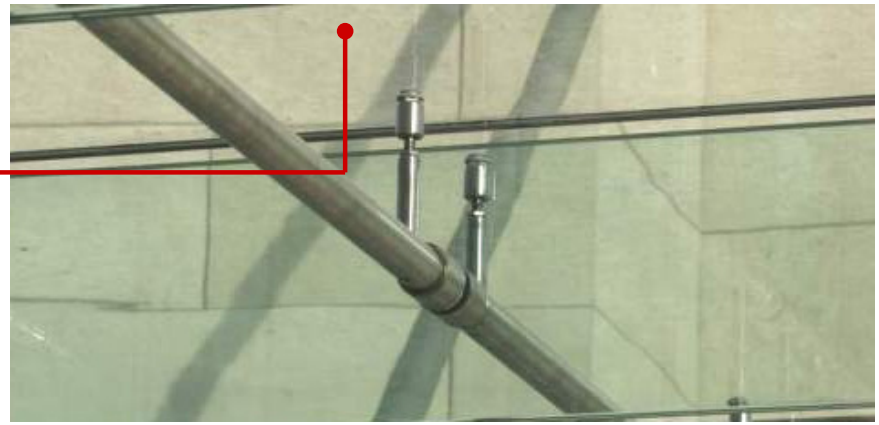
Glass fins:
- 2 x 15 mm tempered glass
- 3170 x 250 mm
- Clamped support of glass fins on framework

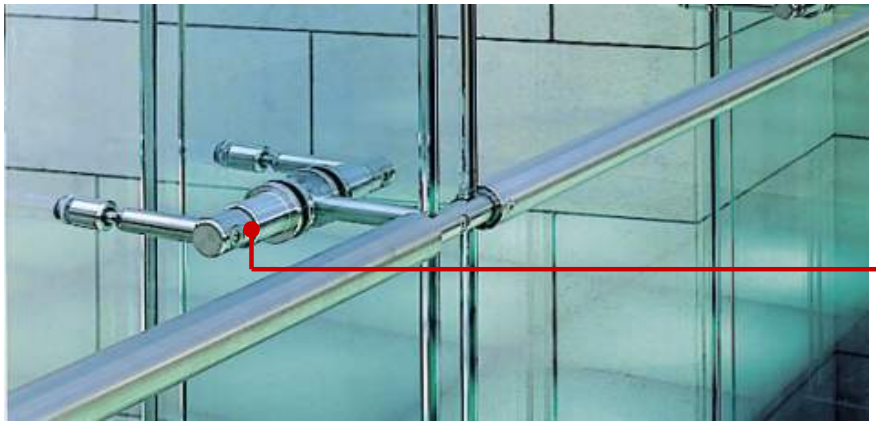


Glass bridge, Karstadt department store Hansa-Carré / Dortmund / Germany

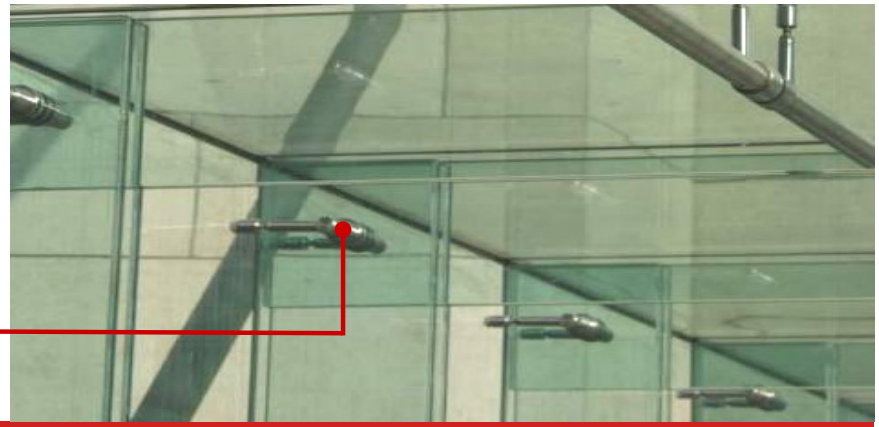
Details / Specials

Connection of roof panel to framework





Connection wall panels to glass fin



Connection of glass fin and transom panel

Century House Westminster Bridge Road
London / Great Britain

Century House Westminster Bridge Road London / Great Britain

Companies

- Builder: Pearce Construction
- Architect: Pearce Group
- Facade: Metal UK Ltd.

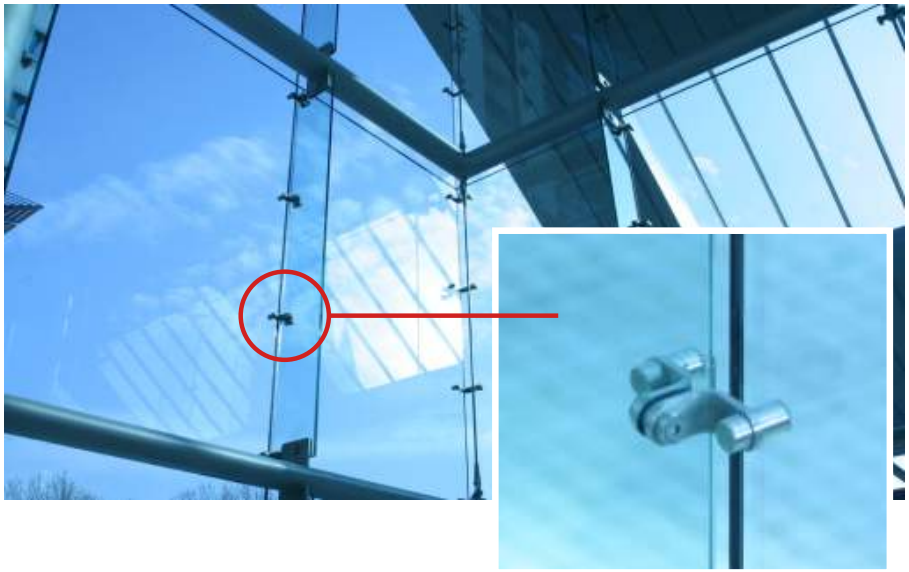
Object data

- Residential building Westminster Bridge Road, Century House
- Entrance hall and staircasecladded in glass

Century House Westminster Bridge Road London / Great Britain

Details / Specials

- Glazing:
  - 2800 mm x 1800 mm
  - 10 mm heat strengthened glass
  - 8 FZP-G undercut anchors per panel
  - Joints: 10 mm
- Reinforcement with glass fins
  - 2800 mm x 300 mm
  - 10 mm heat strengthened glass



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fischer
FIXING SYSTEMS