butech

ventilated facade

PORCELANOSA Grupo

The facade is one of the most characteristic elements in any type of building since it is virtually the only part that can be seen from the outside. That is why its design and construction are so important.

Butech presents in this catalog, specially prepared for architecture professionals, our wide range of façade systems adaptared to most exigent needs of any architectural project. Always using a careful selection of Grupo PORCELANOSA ceramics.

butech
PORCELANOSA Grupo

Butech, born in 2001 within Grupo PORCELANOSA, has had the clear objective since its creation of keeping the balance between the constant evolution of the design in Grupo PORCELANOSA's ceramics and installation techniques.
Its role is focused on the development of tools and products that let us obtain the maximum aesthetic andfunctional performance in the installation of ceramics.

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Experience, global presence

World leader in the installation of ceramic and solid surface facades.

With over 1.500.000 m^2 installed all around the world, Butech is the absolute global leader in the installation of ceramic panels. Butech is synonymous of quality, efficiency, and guarantee of success with over 5.000 employees, and logistics centers around the world.

Leading the way in technical solutions, innovating in systems, and a continued commitment to developing new tools that enable today's architects to carry out the projects of the future.

Centralcon Building Shopping Mall and Residential Building, Shenzen, China · KRION VF System
Architect : Peddle Thorp · Photography: Salva Méndez

Architecture at its finest

Technically, the building's envelope contributes decisively to the architectural ensemble's energy efficiency.

Architecture is in a continuous evolution process. So much so that new trends are constantly emerging, both in project design and in materials and construction solutions, which make architecture look toward new horizons on an ongoing basis. Among the most distinctive aspects of any building, the facade takes on an important role, not just for its aesthetic power and visual impact on any city's skyline. Technically, the building's envelope contributes decisively to the architectural ensemble's energy efficiency.

Technical support

Personalized and permanent technical support to all designers in the development of the best facade solutions for their projects.

Made up of technicians with experience throughout the world in all facade systems, Butech's technical office offers personalized and permanent technical support to all designers in the development of the best facade solutions for their projects.

PORCELANOSA Grupo has an engineering subsidiary for the development of technical solutions and construction of projects in which ceramics or KRION® (PORCELANOSA Grupo's Solid Surface) are the principal elements. The technical office researches new uses of ceramics in Architecture and develops new building systems for ventilated facades.

The Clare Building, Manhattan, New York, U.S.A.
VF System with concealed clips
Architect: Manuel Glas Architects · Photography: Imagen Subliminal

Quality and sustainability

Butech's ventilated facades provide a significant improvement in the facade's thermal behavior, reducing the incidence of solar radiation on the enclosure by 80%.

PORCELANOSA Grupo is at the forefront in terms of production, R&D, and technical innovation in the ceramics industry. Grupo PORCELANOSA offers high technology products, with high-end technical and aesthetic features, with unbeatable quality standards.

The FV STON - KER® ventilated facade system is a reliable system included in the Agence Qualité Construction's C2P green list, and which has obtained positive technical certifications such as the Avis Technique CSTB n ° 02/15-1700 issued by the Secretariat of the Commission des Avis Techniques, the Spanish Technical Suitability Document DIT 530 of the Instituto Eduardo Torroja IETcc the BBA Agreement Certificate 10/4775 in the United Kingdom, the Florida Product Approval FL9364, and the EMI A-758/2006 certificate in Hungary. The installation of this system, present on the market for 16 years, is more frequent every day both in renovations and new buildings. Butech has evaluated the energy efficiency of the STON-KER® ventilated facade through a thermal characterization study carried out by the CIDEMCO Institute.

With potential for using in new construction and renovations, Butech's ventilated facades provide a significant improvement in the facade's thermal behavior, reducing the incidence of solar radiation on the enclosure by 80%, allowing for an easy continuous installation of the thermal insulation, which lets us eliminate thermal bypasses and achieve an energy efficiency improvement in general.

The commitment to the use of recycled materials in our ceramics, combined with the recycling levels in our structures, allow us to collaborate in securing the highest levels of LEED certification.

Zamasport, Manhattan Headquarters, Novara, Italia.
System FV KRION K-Fix
Architect: Frigerio Design Group · Photography: Mario Frusca

Guarantee, success, support

Related to the undisputed quality of PORCELANOSA products, with the confidence of working alongside Grupo PORCELANOSA. Guarantee of success.

PORCELANOSA Showroom, New York, U.S.A.

VF Porcelain panel

Ventilated facade system with final porcelain panel covering.

It differs from other systems in the use of a dual fixing system: a chemical one using high-performance polyurethane putty and a mechanical one using stainless steel clips that ensure the union of the porcelain panels and the facade's metal substructure.

PORCELANOSA Grupo's rectified porcelain panel panels are characterized by very low water absorption, lower than 0.1% as per UNE-EN ISO 10545-3, manufactured by dry pressing at about 450 kg/cm^2, production by single firing at maximum temperature of 1220 °C and back-meshed with fiberglass mesh to prevent fragments from falling in case of breakage. In the case of ventilated facades with concealed clips, they are supplied with side slots for their fixing to the facade structure.

The metallic structure of the ventilated facade includes the following:

- Mechanical anchors adaptated to the type of existing facade substrate.
- Aluminium L-shaped brackets adapted to the cavity span.
- Lacquered aluminum vertical profiles on which the porcelain panels are installed.
- Stainless steel clips to fix the ceramic panel to the vertical profiles.
- Self-drilling joint screws between vertical vertical profiles and aluminum brackets.

The metal structure of the ventilated facade is made of AW 6005A aluminum, while clips and anchors are manufactured in AISI 304 stainless steel.

Certifications and technical testing

Spain
DIT 530/11 from the Instituto Eduardo Torroja of Madrid.

France
Avis Technique CSTB No. 02/15-1700 issued by the Secrétariat de la Comission des Avis Techniques

USA
ICC
(ICC-ES Evaluation Report ESR-3343)

USA
FL # 9364 / 20391 / 21906
Florida building code approved

Agrément Certificate
No 10/4775

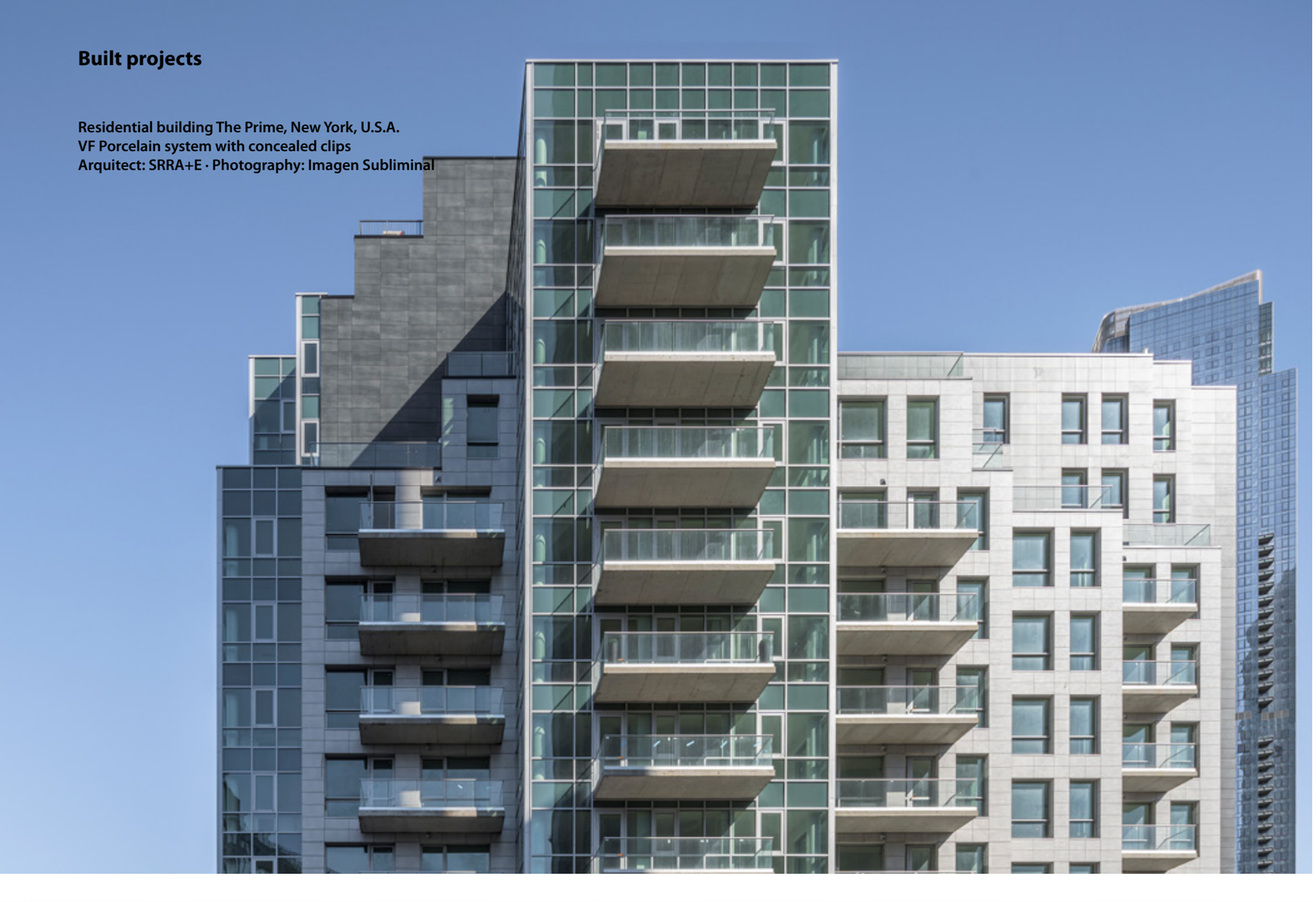
United Kingdom
BBA Agreement Certificate 10/4775 in the United Kingdom

United Kingdom
WINTECH Building Envelope Testing Report No R12764

Residential building The Filaments, Wandsworth, United Kingdom
VF Porcelain system with concealed clips
Architect: Rolfe Judd · Photography: Alex Keane, Aa Creative

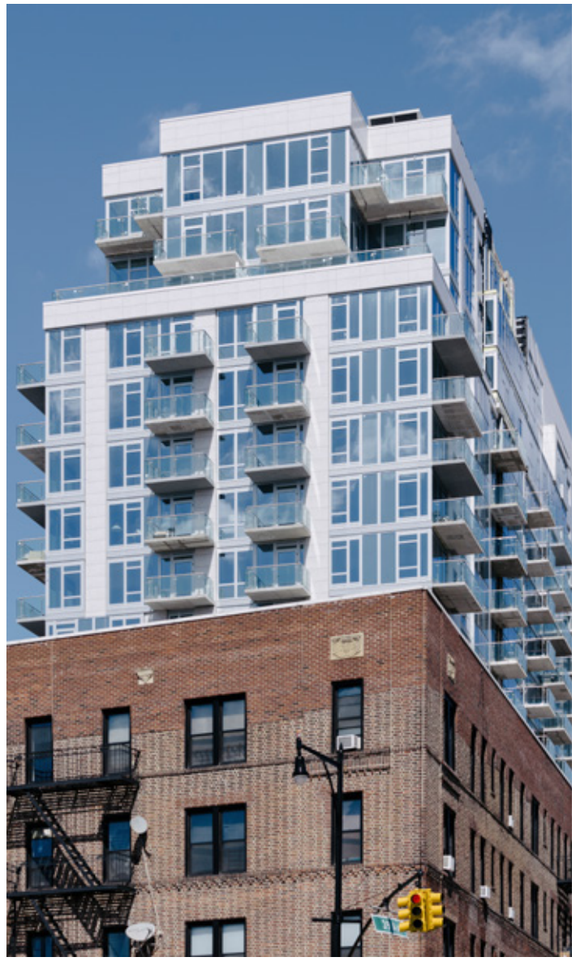
Built projects

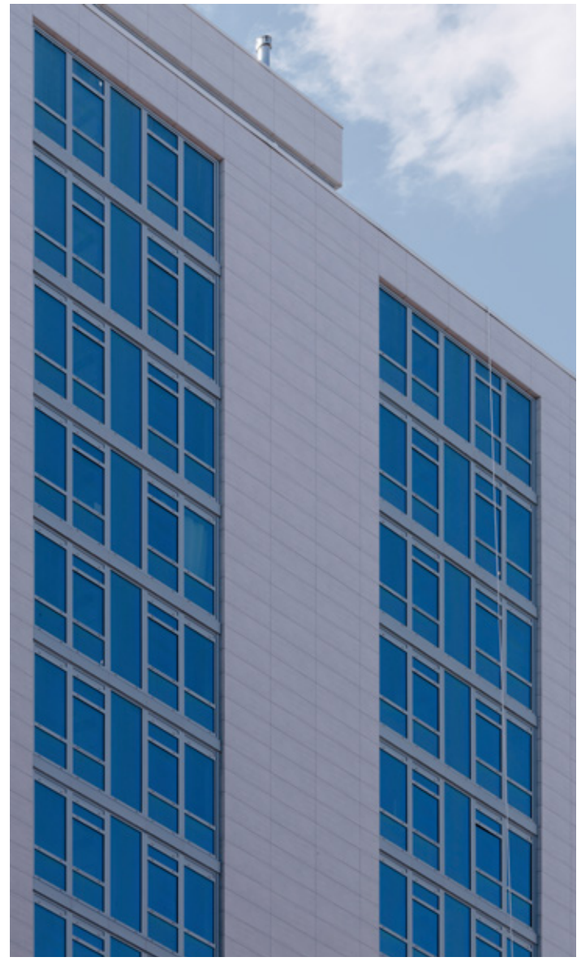
Residential building The Prime, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: SRRA+E · Photography: Imagen Subliminal



Built projects

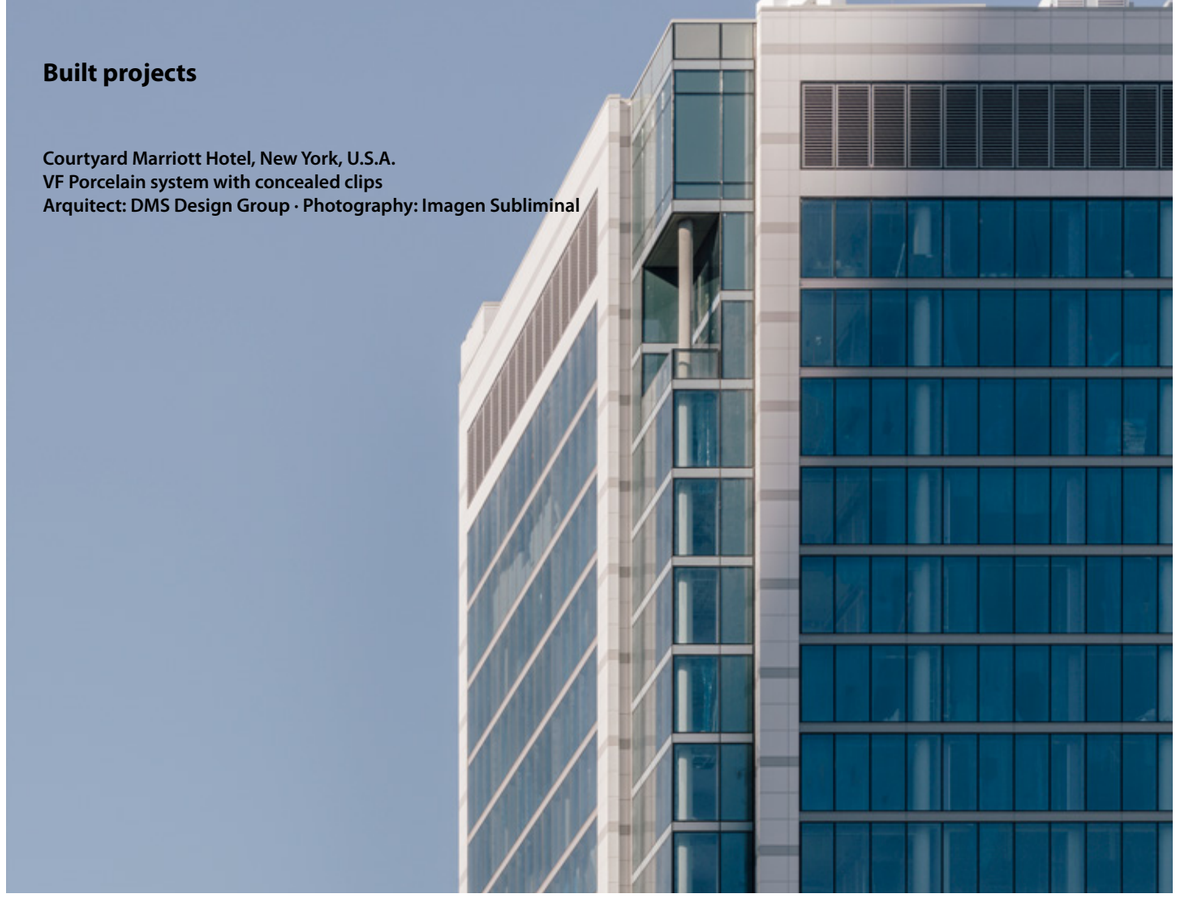
Residential building Tangram NB3, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: Margulies Hoelzli Architects · Photography: Imagen Subliminal

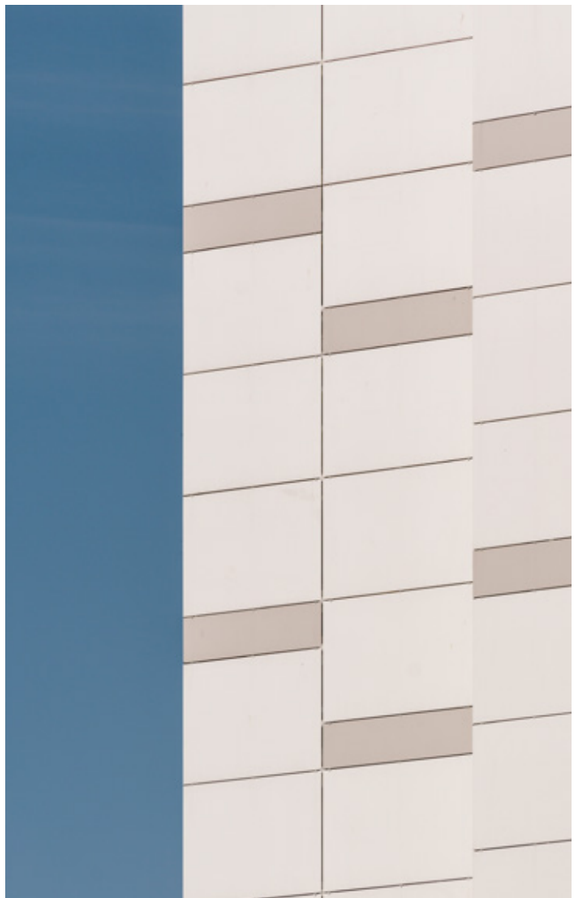




Built projects

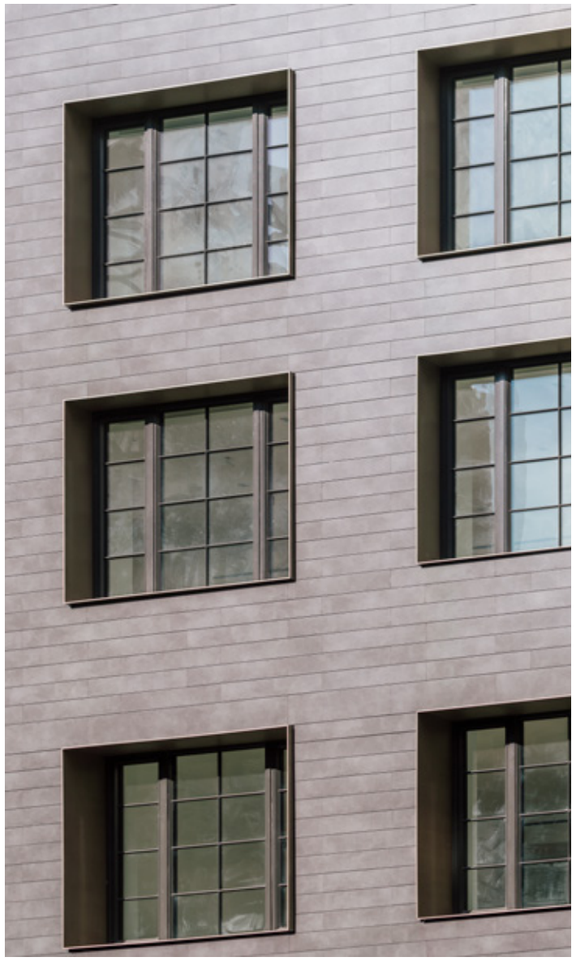
Courtyard Marriott Hotel, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: DMS Design Group · Photography: Imagen Subliminal





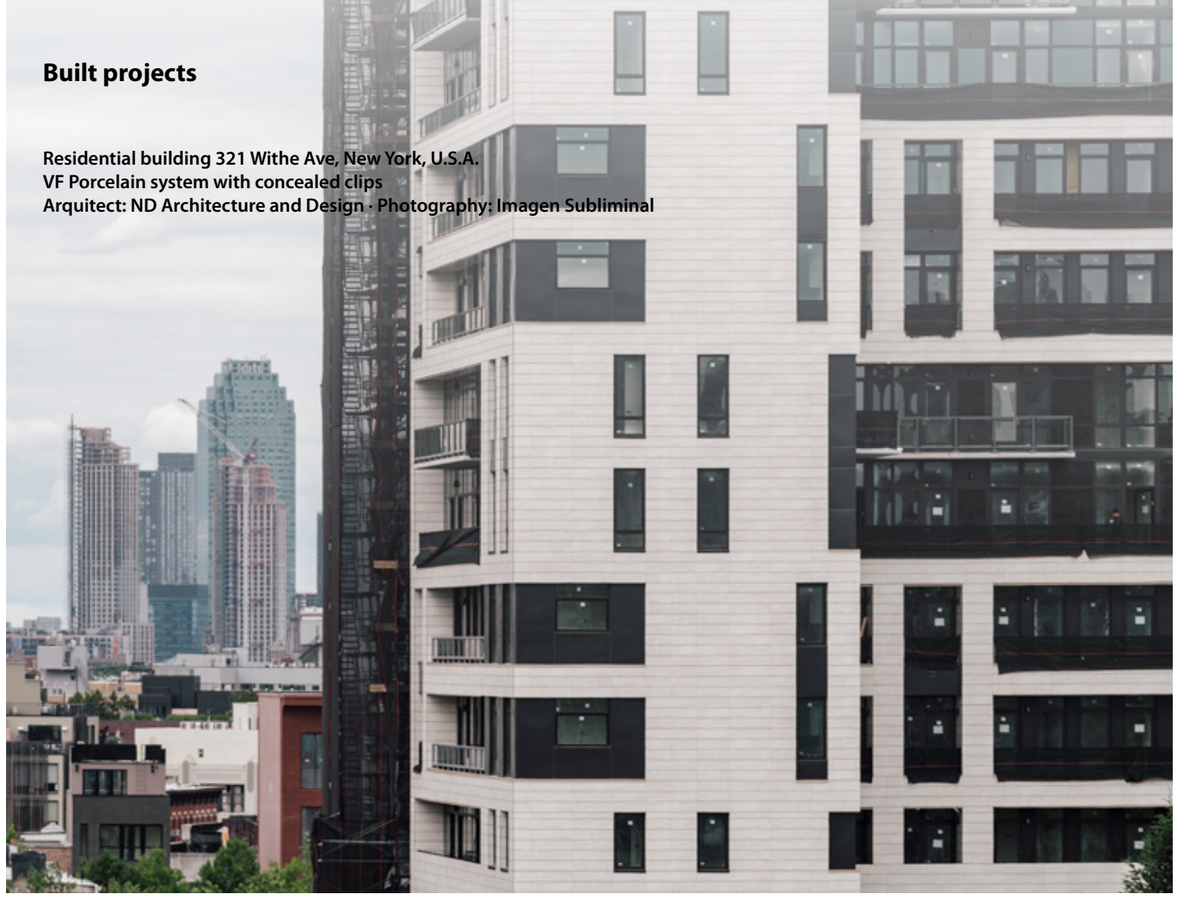
Built projects

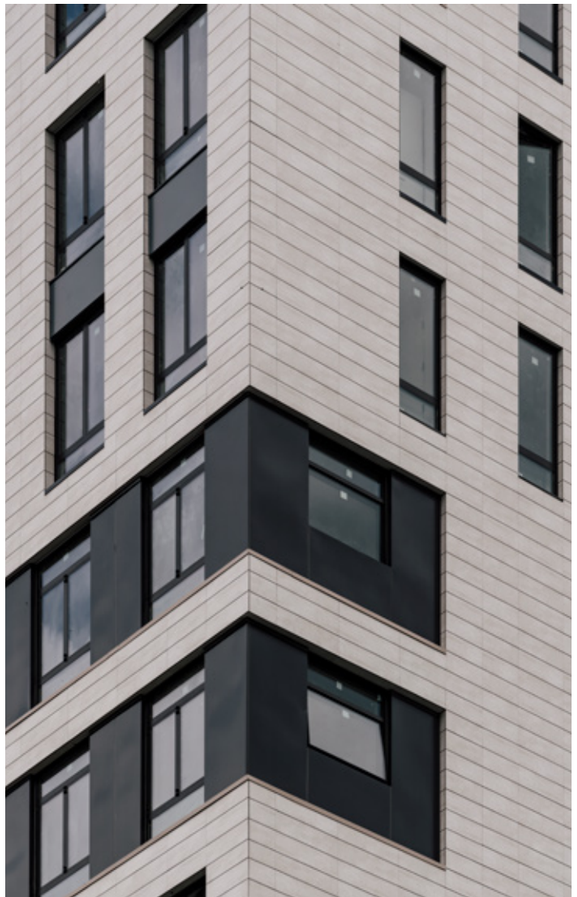
Residential building Dorian Chelsea, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: Rogers Partners · Photography: Imagen Subliminal



Built projects

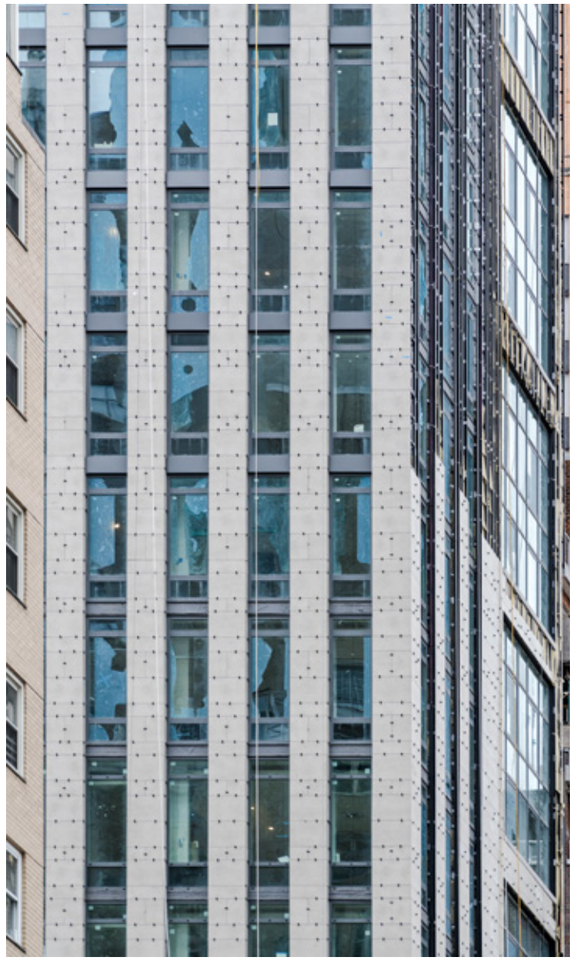
Residential building 321 Withe Ave, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: ND Architecture and Design · Photography: Imagen Subliminal

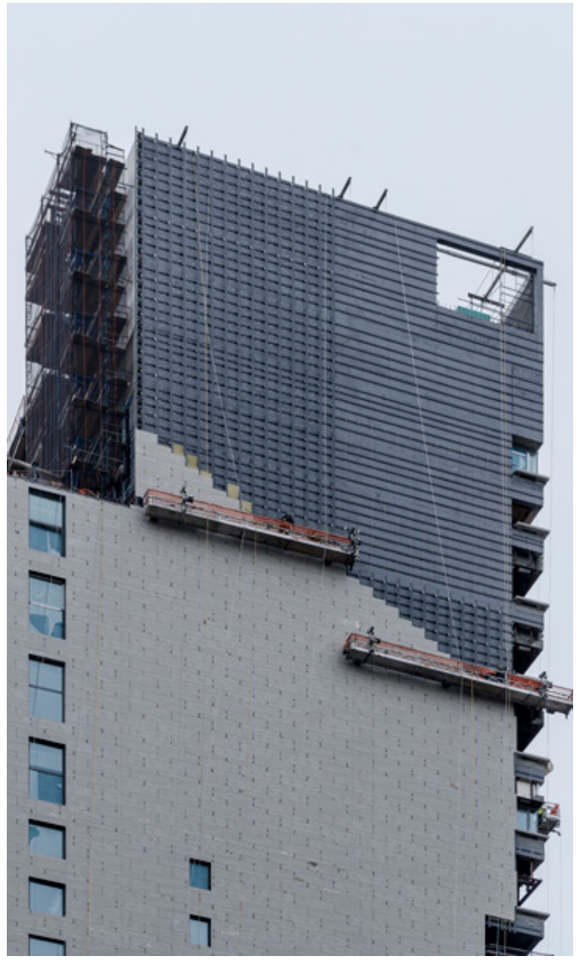




Built projects

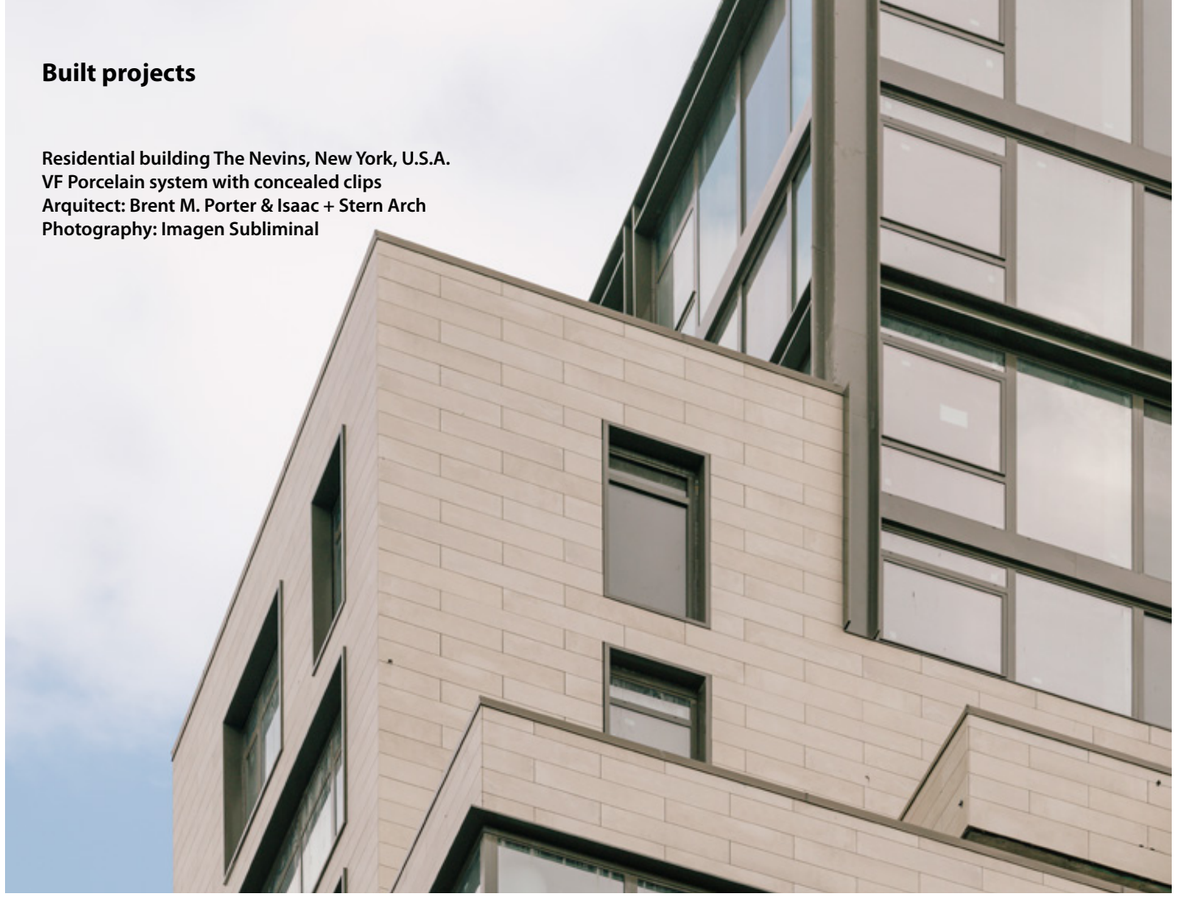
Residential building The Leyton, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: Manuel Glas Architect · Photography: Imagen Subliminal

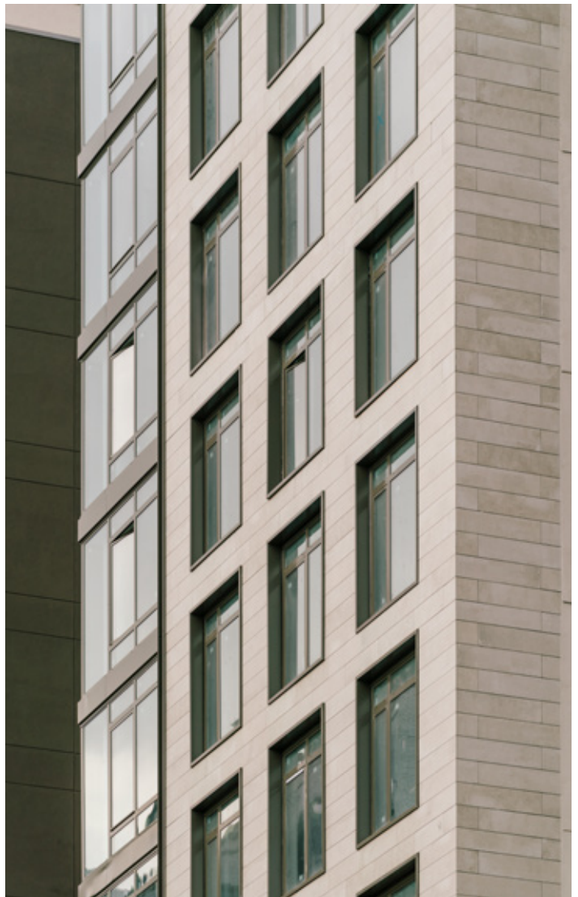




Built projects

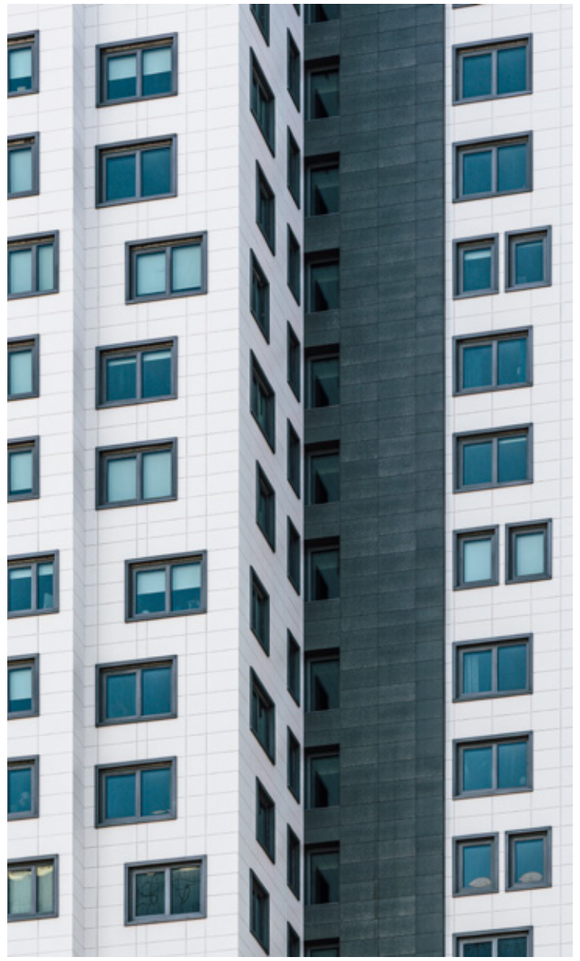
Residential building The Nevins, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: Brent M. Porter & Isaac + Stern Arch
Photography: Imagen Subliminal

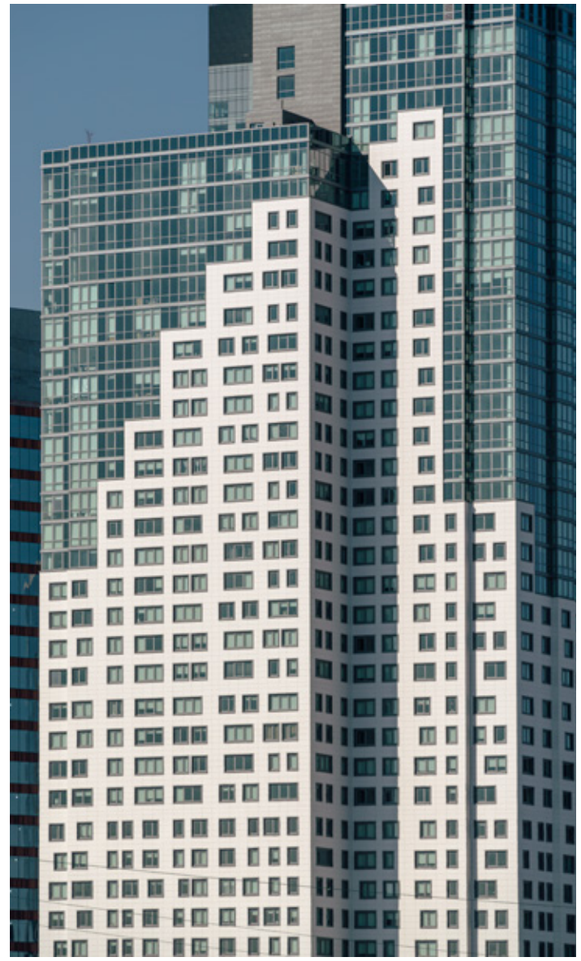


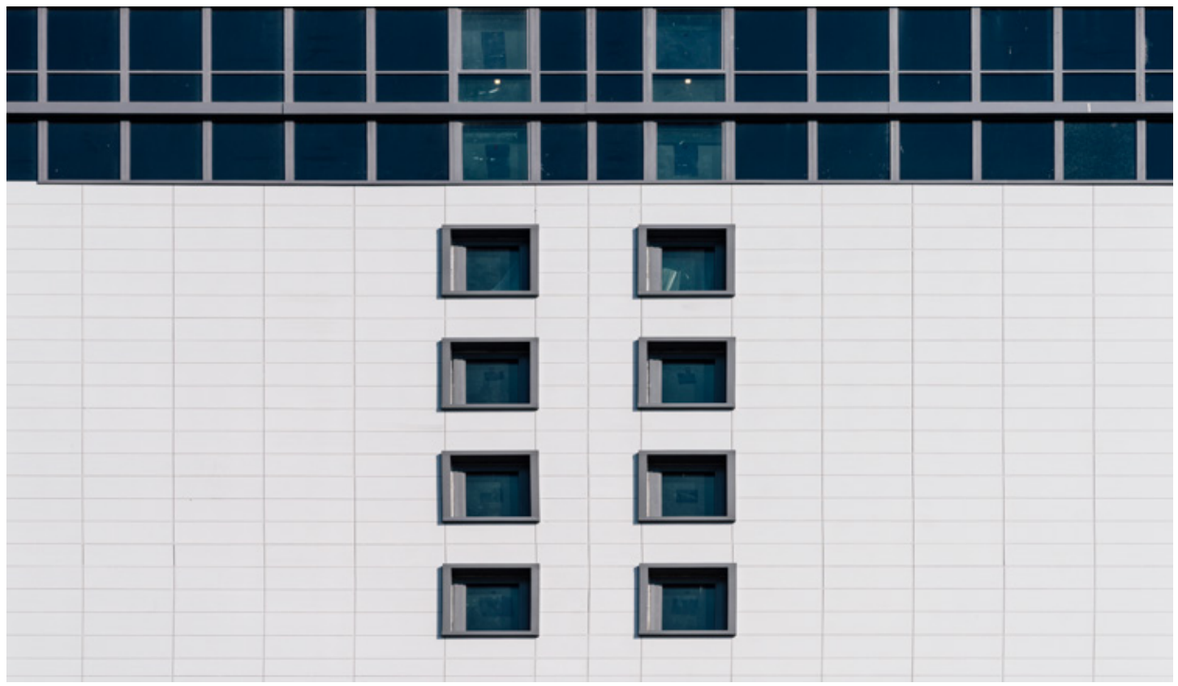


Built projects

Residential building Alta LIC Towers, New York, U.S.A.
VF Porcelain system with concealed/visible clips
Arquitect: The Stephen B. Jacobs Group PC · Photography: Imagen Subliminal







Built projects

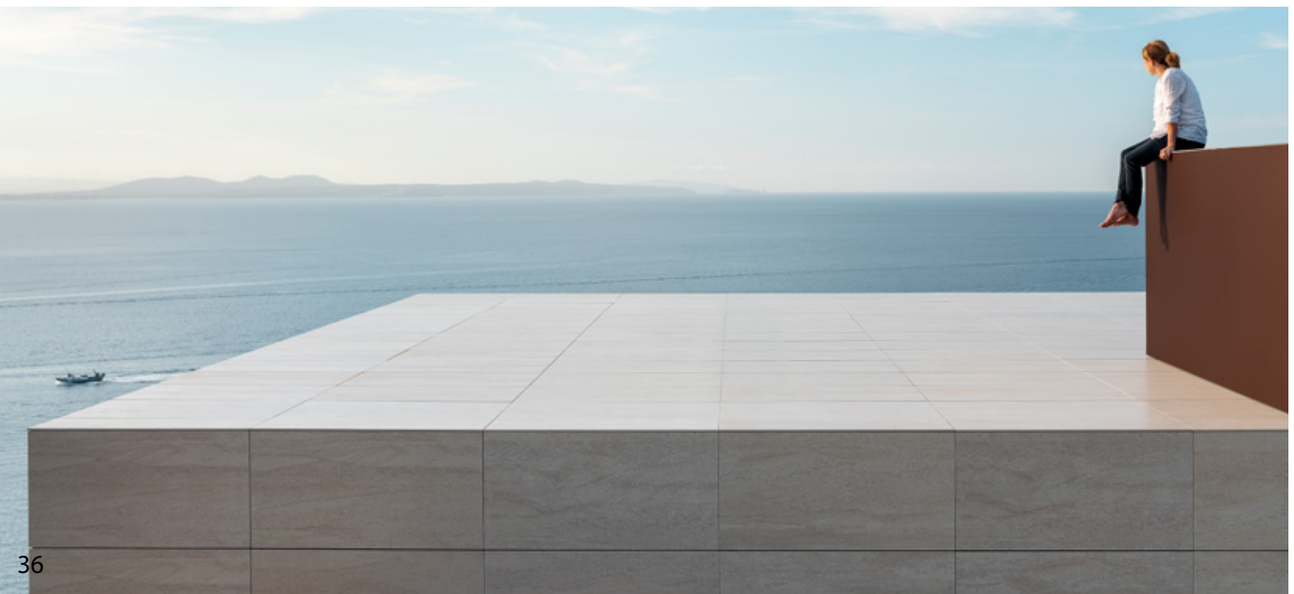
Residential building The Clare, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: Manuel Glas Architects · Photography: Imagen Subliminal

Built projects

Residential complex La Finca - LGC3, Pozuelo de Alarcón, Spain
VF Porcelain system with concealed clips
Arquitect: La Finca Real State · Photography: Alex del Río

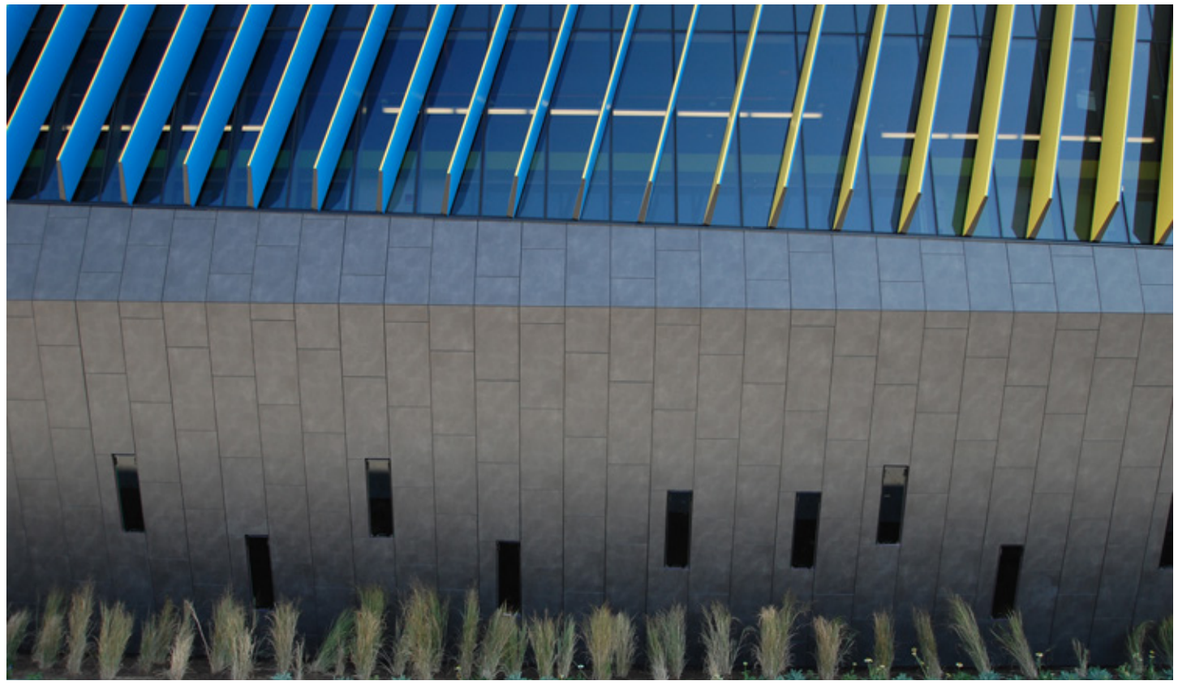
Built projects

Single-family home Villa SRT, Alt Empordà, Spain
VF Porcelain system with concealed clips
Arquitect: Ilan i Culell Arquitectura · Photography: Simón García /ARQFOTO



Built projects

Multipurpose building NEIU El Centro, Chicago, New York, U.S.A.
VF Porcelain system with concealed clips
Arquitect: JGMA

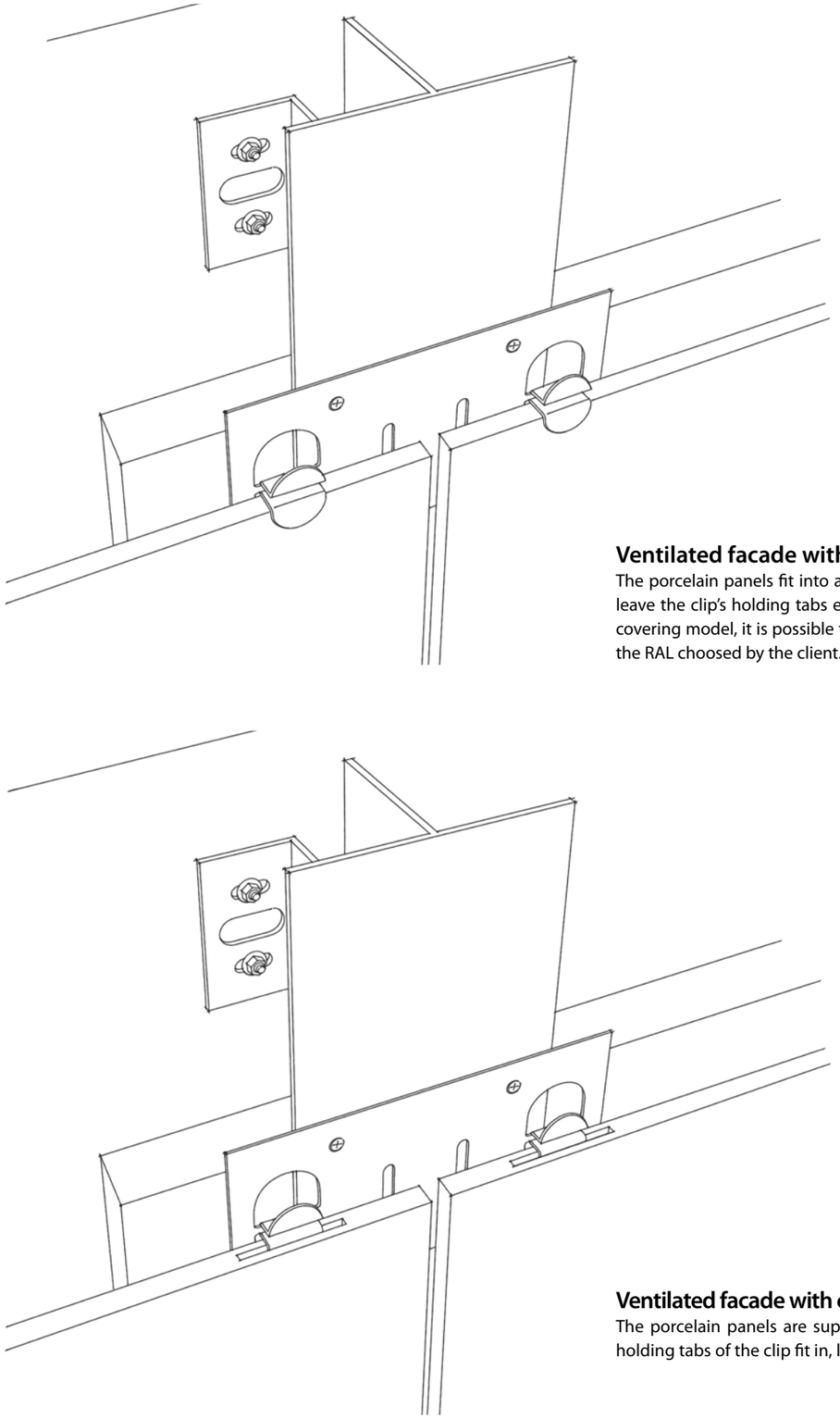


Built projects

Thermes de Balaruc Les Bains, France
VF Porcelain system with concealed clips
Arquitect: DHA Architectes Urbanistes et AMG Architectes
Photography: Henri Comte

Facade types

Depending on the porcelain panel fixing system to the facade structure, we can define two types of facade:

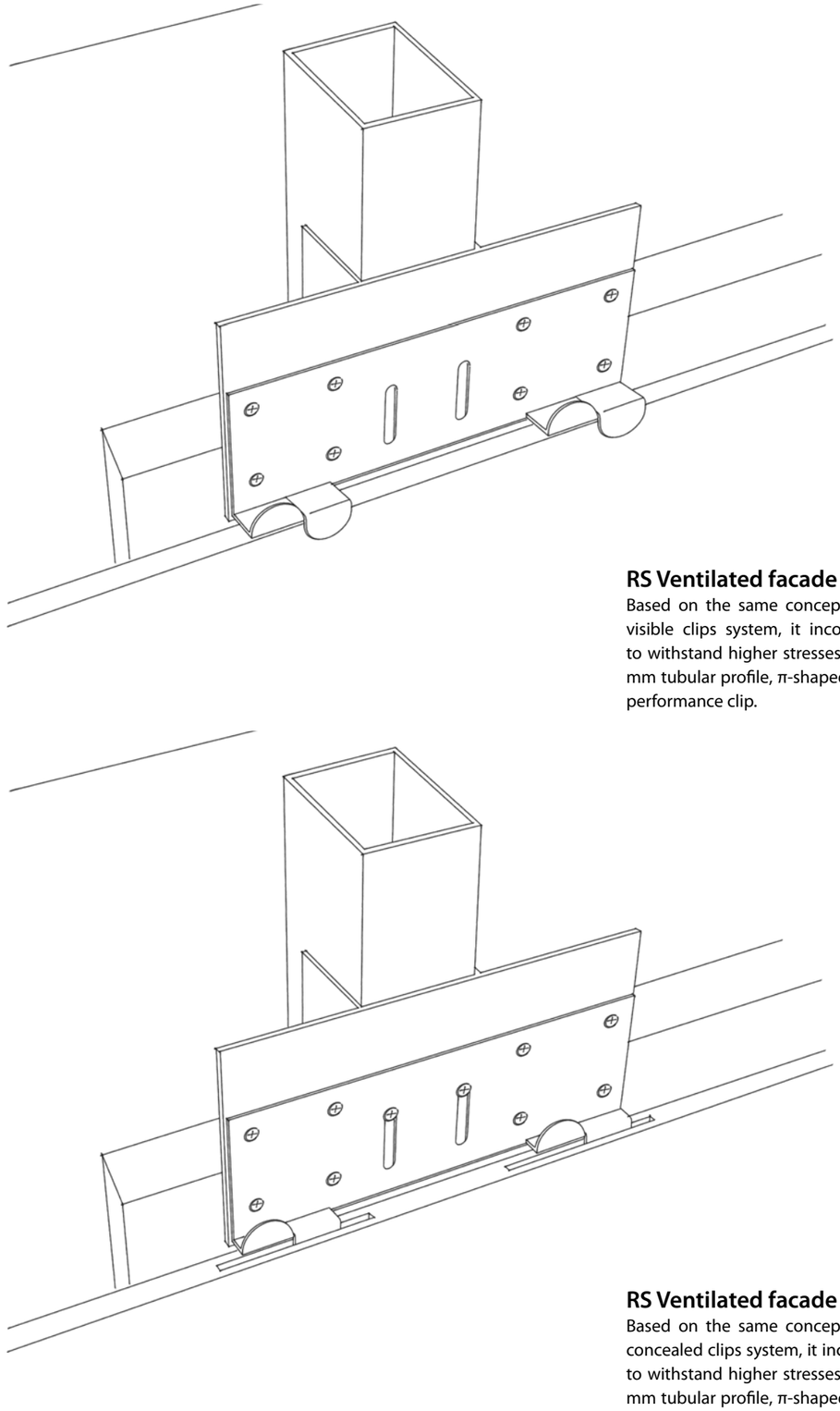


Ventilated facade with visible clips.

The porcelain panels fit into a stainless-steel clip so that they leave the clip's holding tabs exposed. Depending on the wall covering model, it is possible to lacquer the clips according to the RAL choosed by the client.

Ventilated facade with concealed clips.

The porcelain panels are supplied with side slots where the holding tabs of the clip fit in, leaving them concealed.



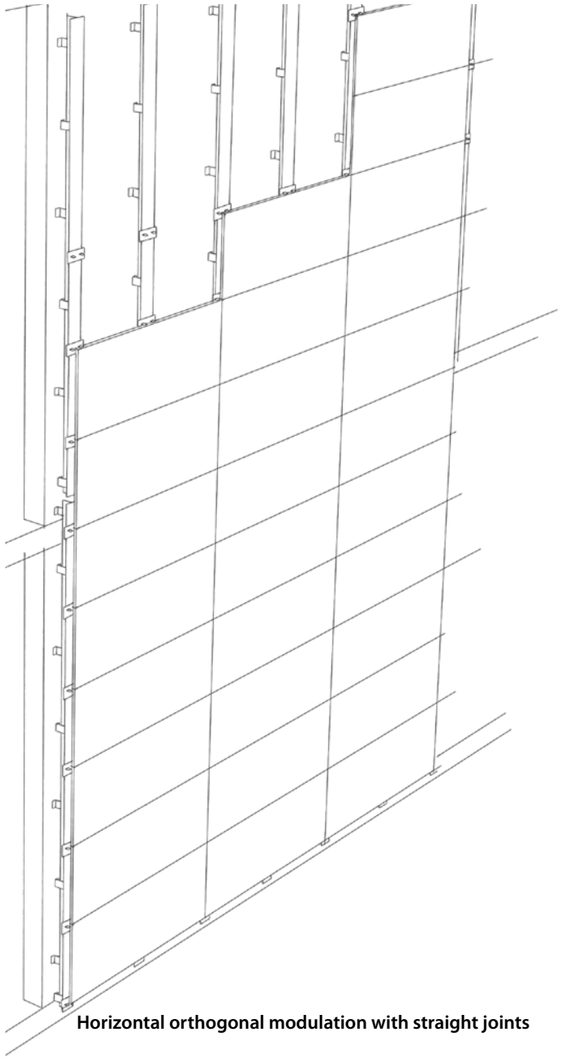
RS Ventilated facade with visible clips.

Based on the same concept as the ventilated facade with visible clips system, it incorporates a reinforced structure to withstand higher stresses: new L-shaped bracket, 60 x 40 mm tubular profile, π-shaped reinforcing element, and high-performance clip.

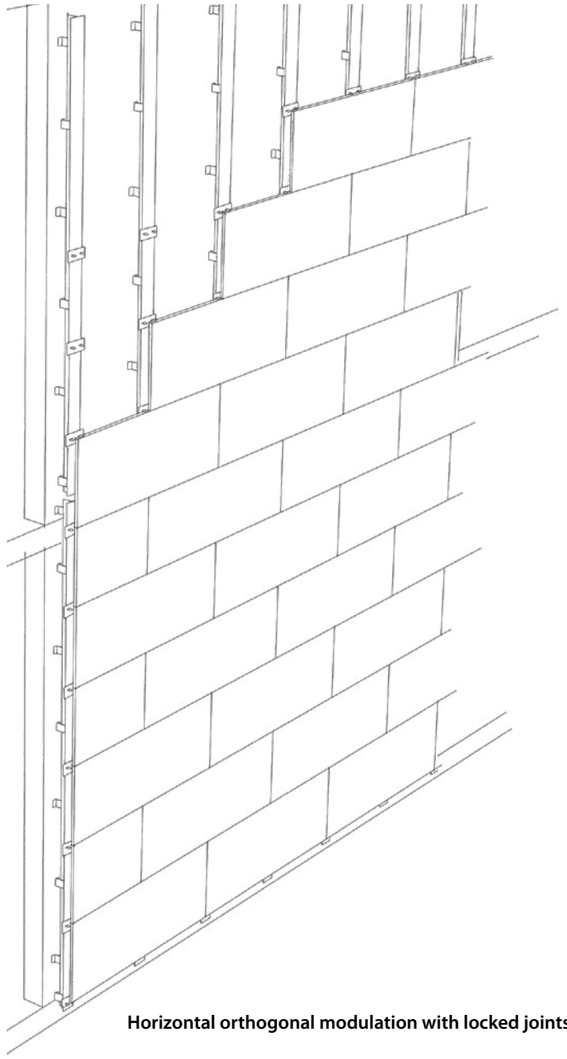
RS Ventilated facade with concealed clips.

Based on the same concept as the ventilated facade with concealed clips system, it incorporates a reinforced structure to withstand higher stresses: new L-shaped bracket, 60 x 40 mm tubular profile, π-shaped reinforcing element, and high-performance clip.

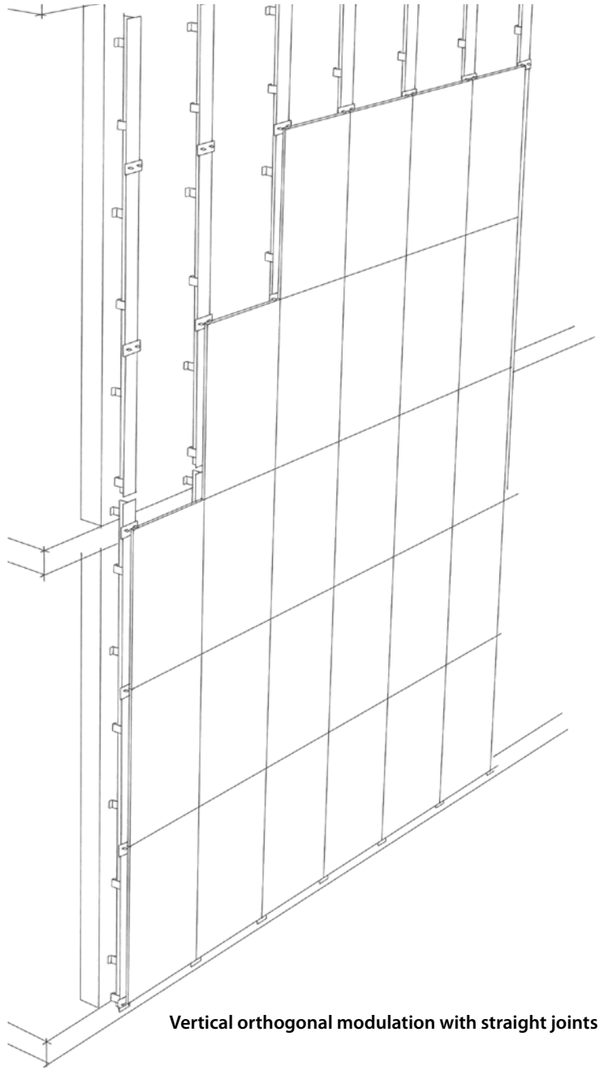
Characteristics



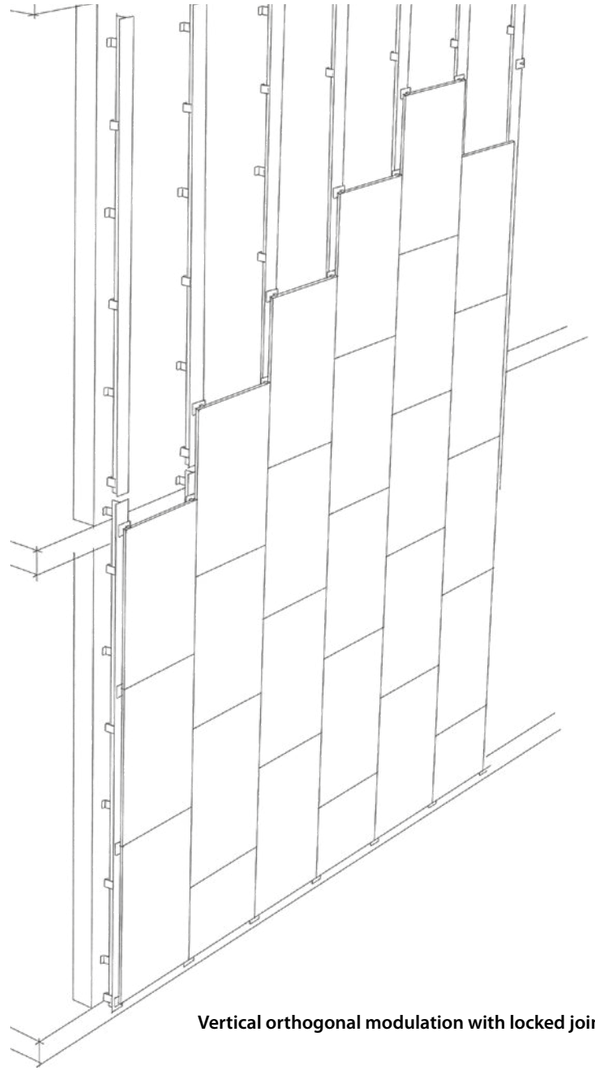
Horizontal orthogonal modulation with straight joints



Horizontal orthogonal modulation with locked joints



Vertical orthogonal modulation with straight joints



Vertical orthogonal modulation with locked joints

Facade structure.

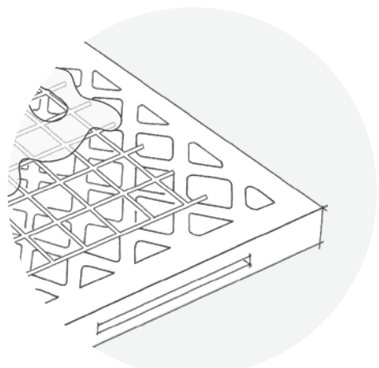
Main characteristics:

- Facade anchoring direct to the building structure.
- Applicable to most structure and enclosure types used in construction.
- Minimum distance between support and facade: 80 mm.
- Structure consisting of only vertical profiles.
- Structure for very light facade: less than 5 kg/m^2.
- Dual chemical and mechanical fixing system; complete safety.

Modulation of the facade.

Main characteristics:

- Modulation on one plane and leveled with the facade.
- Horizontal or vertical orthogonal modulation.
- Modulation with straight or locked joints.
- Horizontal installation joints between 5 and 8 mm wide.
- Vertical installation joints starting at 1 mm wide.
- Option of installing with tilted overlap pattern.



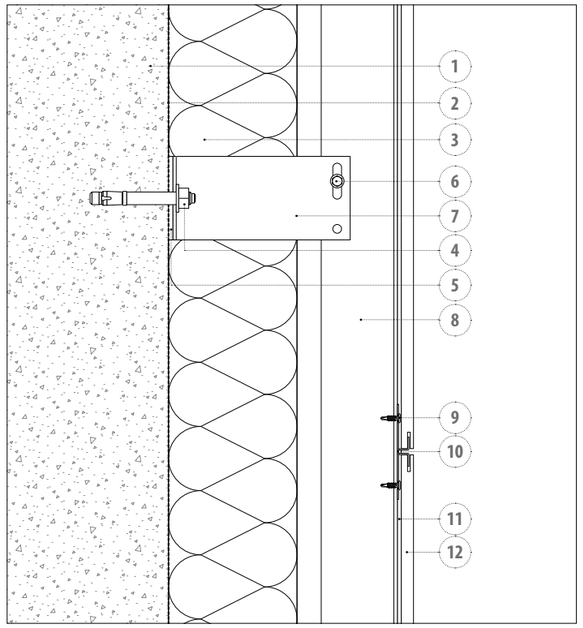
Porcelain panels.

Main characteristics:

- Exclusive design of PORCELANOSA Grupo.
- Wide range of panel formats: from 297 x 596 mm to 596 x 1800 mm.
- High mechanical resistance: breaking strength greater than 2000 N, as per UNE-EN ISO 10545-5.
- Back -meshed panels to prevent the fall of fragments in case of breakage.
- Weather resistant; the appearance of the panels remains unchanged with the passing of time.
- Easy to clean in the case of paint stains or graffiti.

These drawings are only sketches of tile modulation examples. For technical details of these façade systems, have a look the construction details at the next pages.

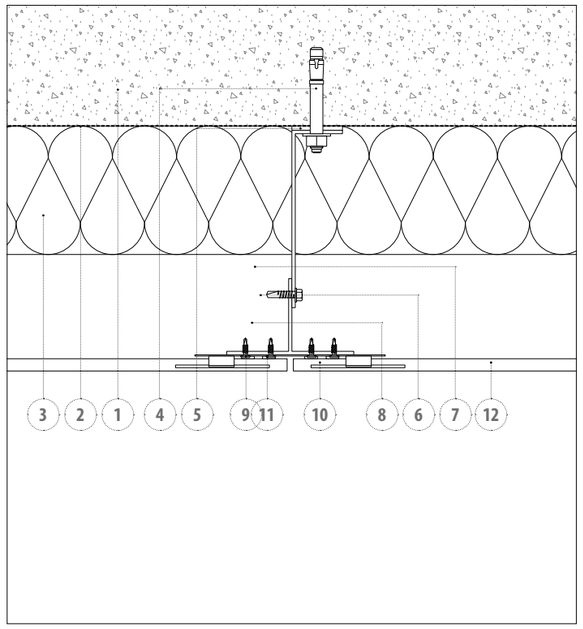
Construction details · Concealed clip system



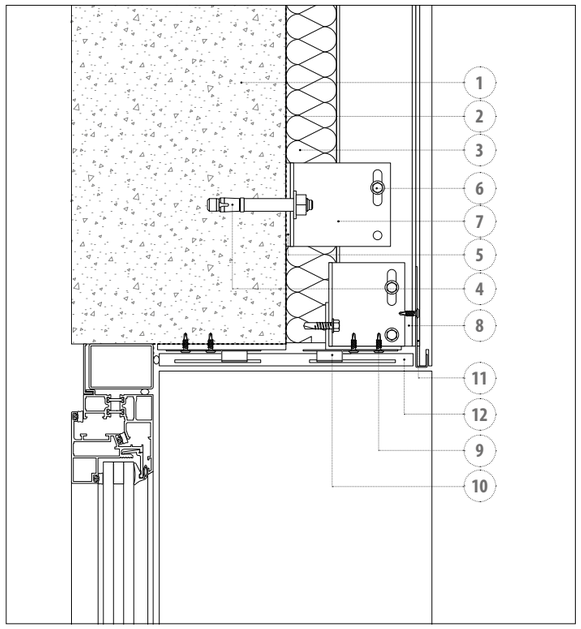
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Aluminum T-shaped upright
9. Self-drilling screw
10. Concealed clip
11. Polyurethane putty
12. Porcelain panel

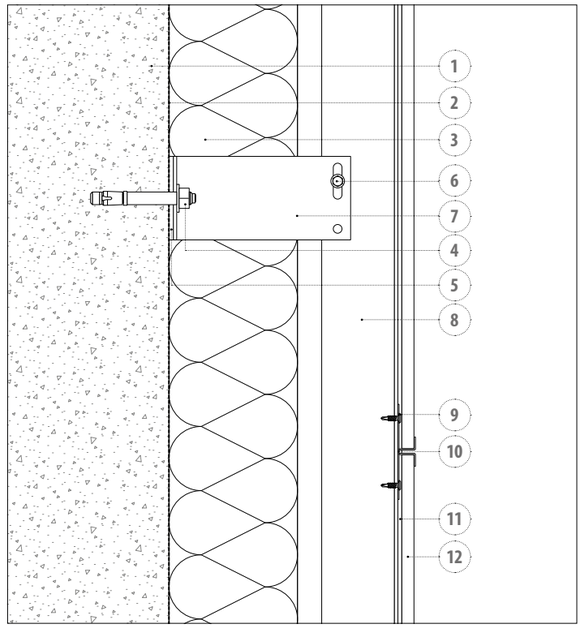


Horizontal cross-section



Lintel

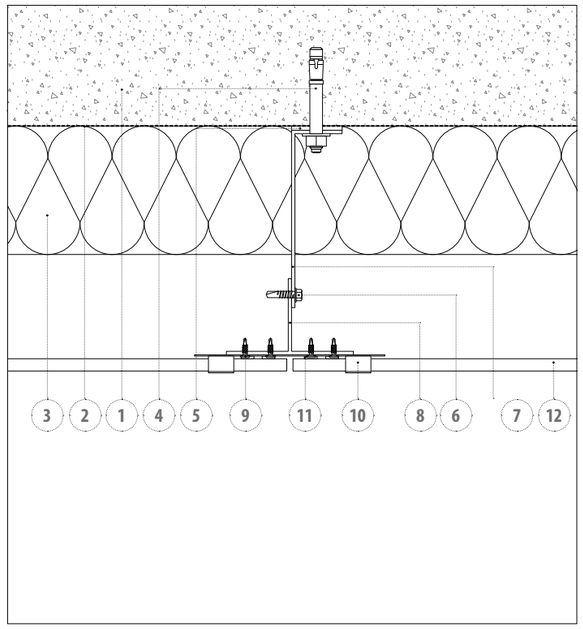
Construction details · Visible clip system



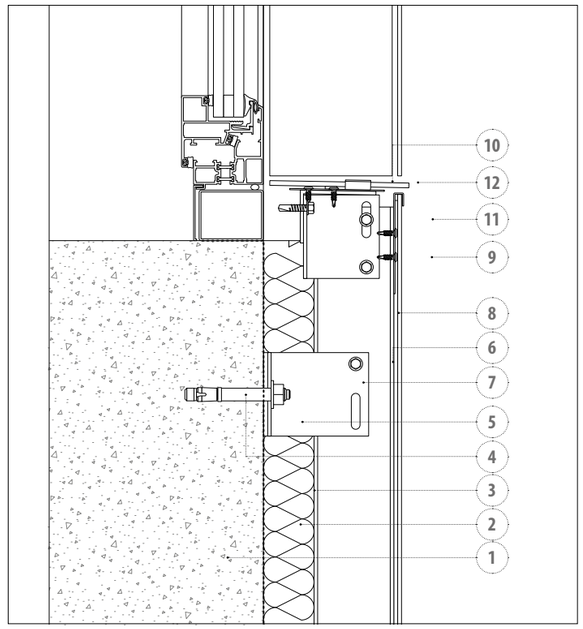
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Aluminum T-shaped upright
9. Self-drilling screw
10. Visible clip
11. Polyurethane putty
12. Porcelain panel

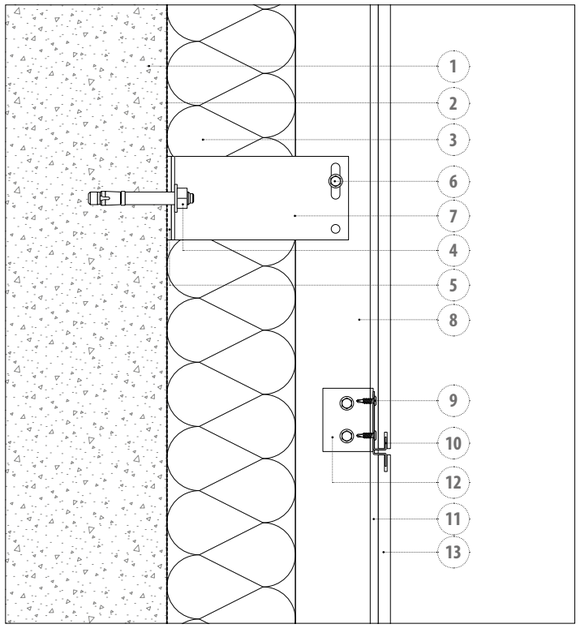


Horizontal cross-section



Sill

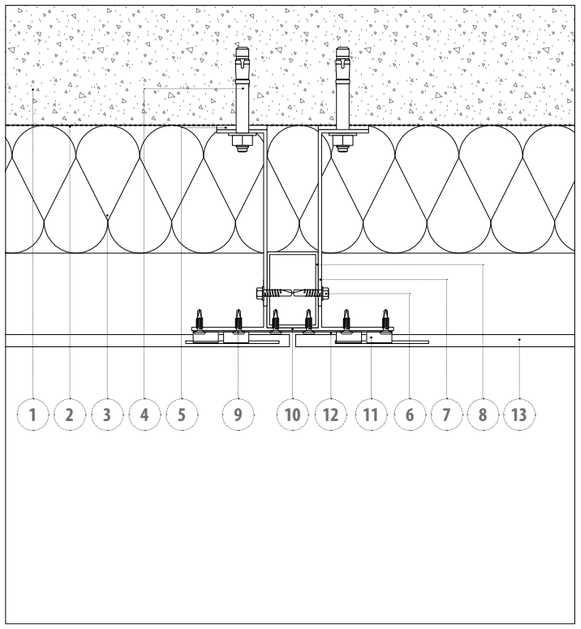
Construction details · RS system with concealed clip



Vertical cross-section

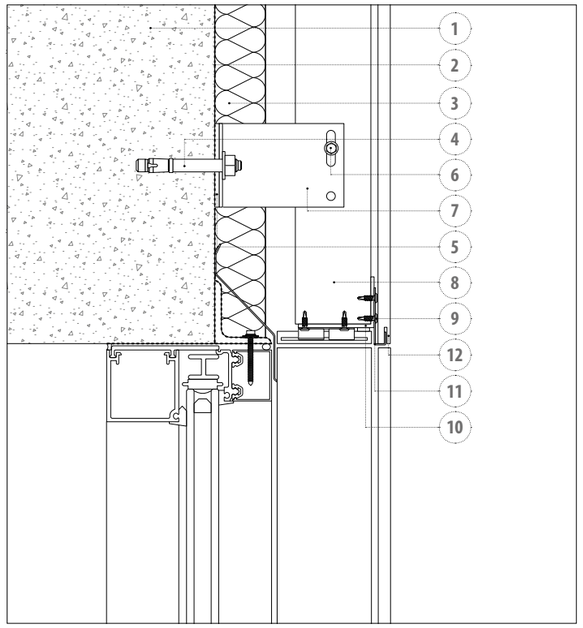
Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Vertical aluminum tubular profile
9. Self-drilling screw
10. π-shape reinforcement piece
11. High performance concealed clip
12. Polyurethane putty
13. Porcelain panel



Horizontal cross-section

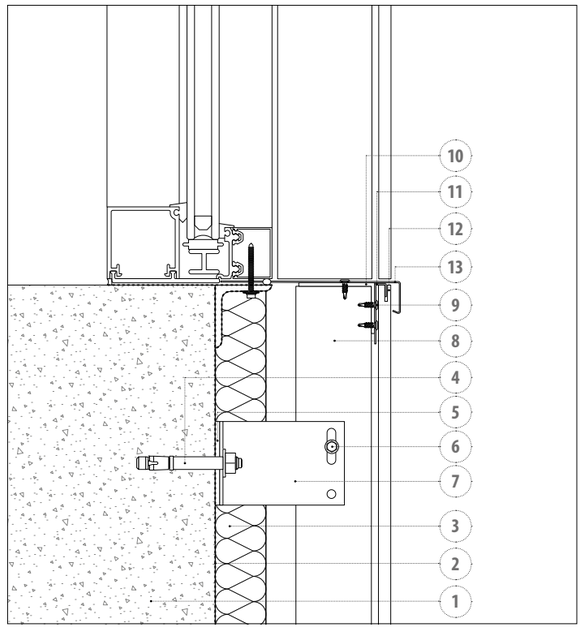
Construction details · RS system with concealed clip



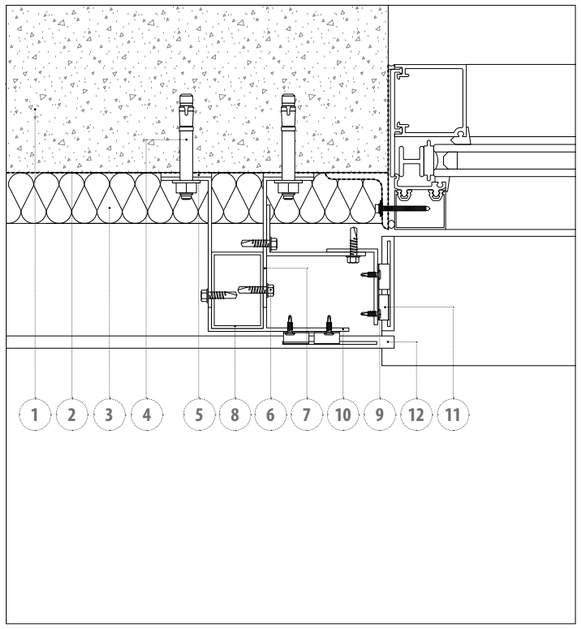
Lintel

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Vertical aluminum tubular profile
9. Self-drilling screw
10. π-shape reinforcement piece
11. High performance concealed clip
12. Porcelain panel
13. Metal window casings



Sill



Jamb

FV XLIGHT / XTONE

Ventilated facade system using XLIGHT/ XTONE porcelain stoneware.

It differs from other methods due to its double anchorage system: one is chemical, using a high-performance polyurethane filler, and the other is mechanical using stainless steel clips that ensure the bonding of porcelain stoneware to the metallic structure of the facade.

URBATEK XLIGHT porcelain stoneware plates are characterised by their large size, measuring up to 1500 mm x 3000 mm and 6 mm thick; very low water absorption, less than 0.1%, in accordance with UNE-EN ISO 10545-3; and are reinforced at the back with a fibreglass mesh that prevents fragments from falling in the event of breakage. The pieces used in XLIGHT ventilated facades with hidden anchorage are supplied fixed to a metal substructure that allows them to be fixed on to the building structure.

Metallic structure of the ventilated facade

- Mechanical anchors adaptated to the type of existing facade substrate.
- Aluminium L-shaped brackets adapted to the cavity span.
- Vertical aluminium profiles onto which the porcelain stoneware pieces are fitted.
- Stainless steel clips to fix the ceramic panel to the vertical profiles.
- Self-drilling screws to connect vertical profiles and aluminium brackets.

The metallic structure of the ventilated facade is made of AW 6005A aluminium, while clips and anchors are manufactured.

- Anchoring the facade directly to the building support.
- Minimum (Build-up) distance of 80 mm between support and facade.
- Very light facade substructure: less than 5 kg/m^2.
- Dual chemical and mechanical anchorage system; full safety.
- Planar modulation with horizontal or verical layout. With straight or locked joints.
- Horizontal joints of 5 0r 8 mm. Vertical joints from 1mm width.
- Wide range of ceramic panels format: from 1200 mm x 2500 mm to1500 mm x 3000 mm.
- Mesh in case of breakage of the pieces to prevent fragments from falling in the event of breakage.
- Resistance to climate: the aspect of the ceramic panels remains the same with the pass of time.
- Easy to clean in case of painting marks or graffiti.

Certifications and technical testing

Spain

Resistance to wind pressure and suction 13/7157-2977.

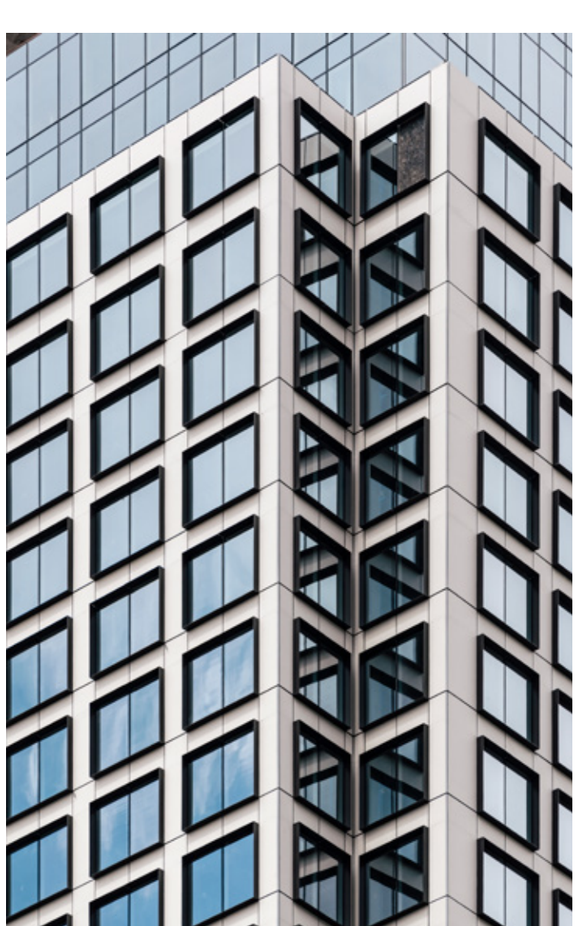
Impact resistance 13/6955-923.

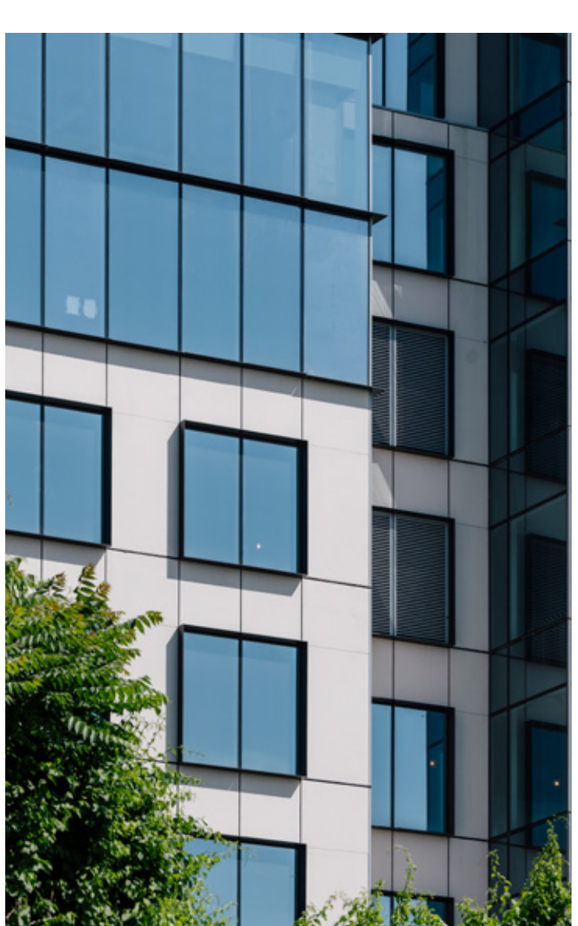
Wind load, impact, and water permeability testing by the Vinci Technology Centre laboratory.

Residential building Hudson 36, New York, U.S.A.
VF Porcelain system with concealed clips
Architect: Ismael Leyva Architects · Photography: Imagen Subliminal

Built projects

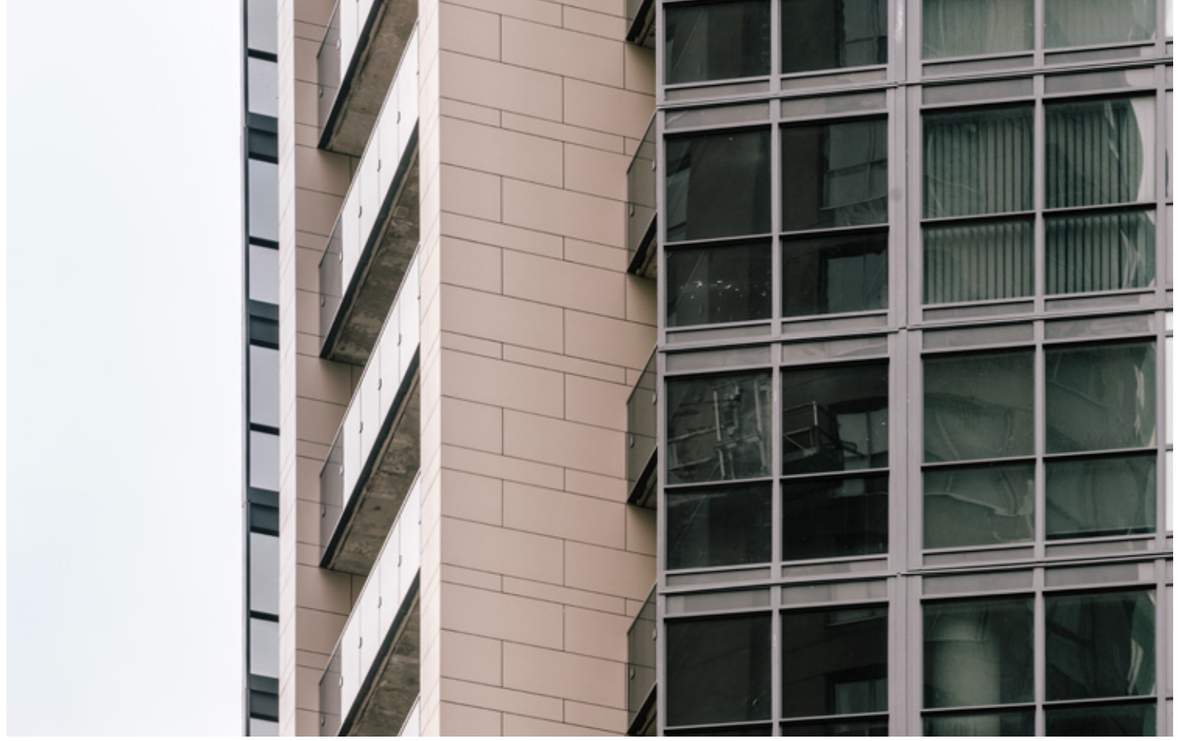
Residential building Hudson 36, New York, U.S.A.
VF XLIGHT Porcelain system with concealed clips
Architect: Ismael Leyva Architects · Photography: Imagen Subliminal





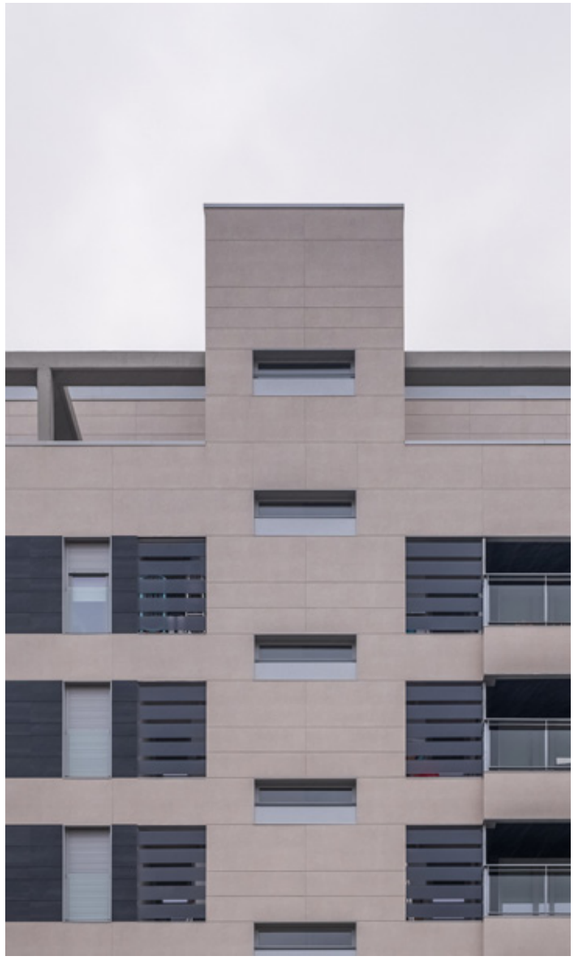
Built projects

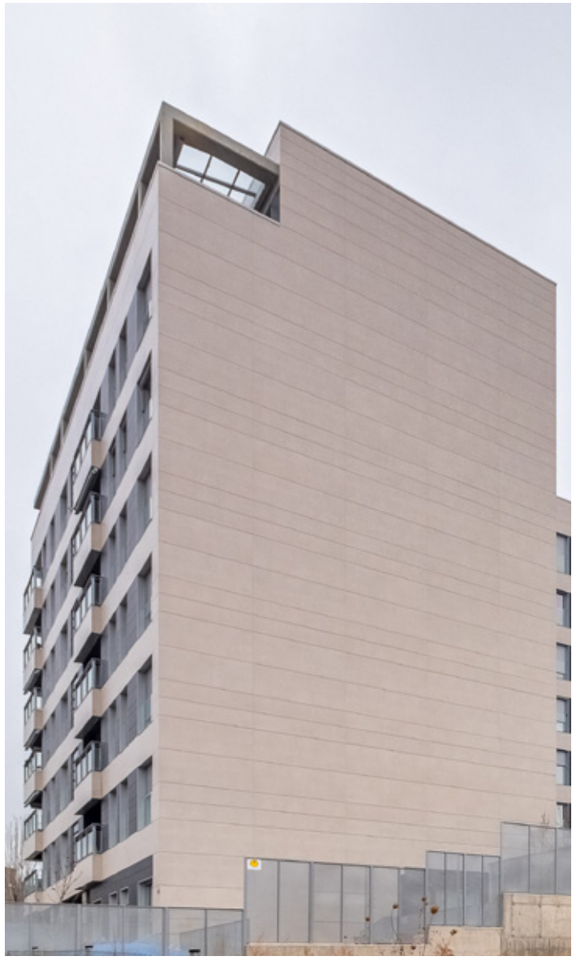
Residential building One The Explanade, Toronto, Canada
VF XLIGHT Porcelain system with concealed clips
Arquitect: Page+Steele Architects · Photography: Imagen Subliminal



Built projects

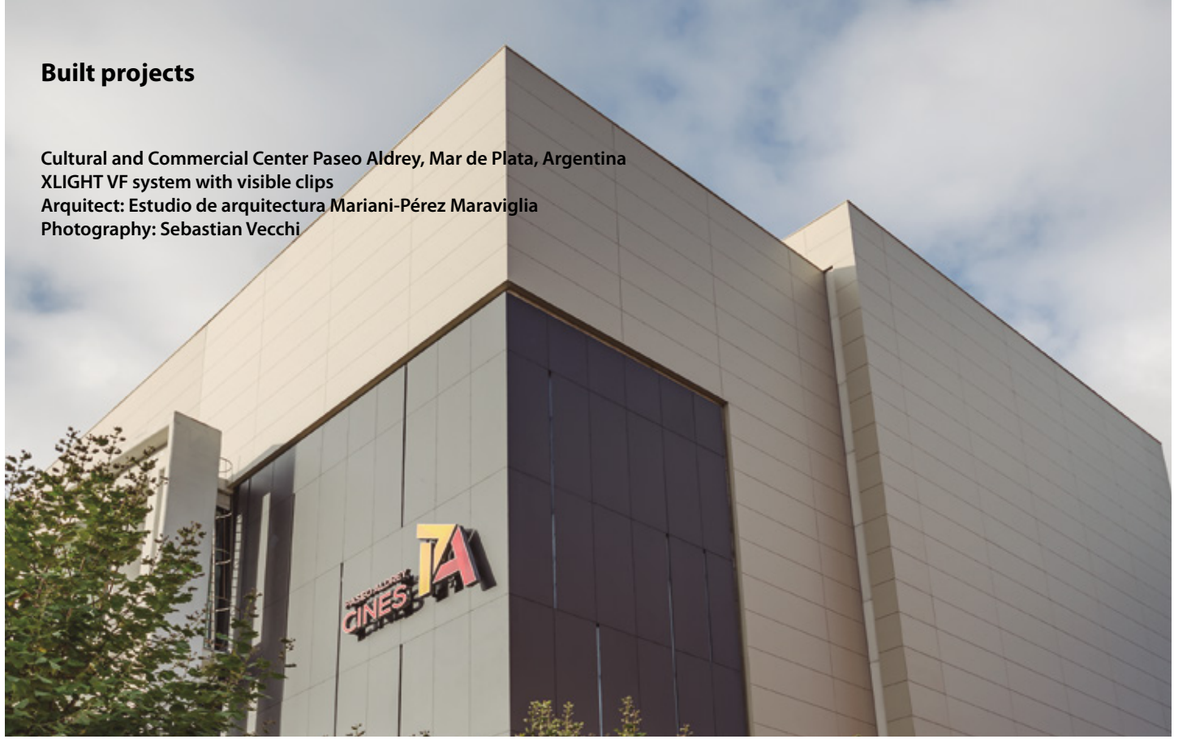
Residential building Residencial Nexia, San Sebastián de los Reyes, Spain
XLIGHT VF system with concealed clips
Arquitect: EM&A Espinosa de los Monteros & Arquitectos Asociados SLP · Photography: Luzestudio





Built projects

Cultural and Commercial Center Paseo Aldrey, Mar de Plata, Argentina
XLIGHT VF system with visible clips
Arquitect: Estudio de arquitectura Mariani-Pérez Maraviglia
Photography: Sebastian Vecchi

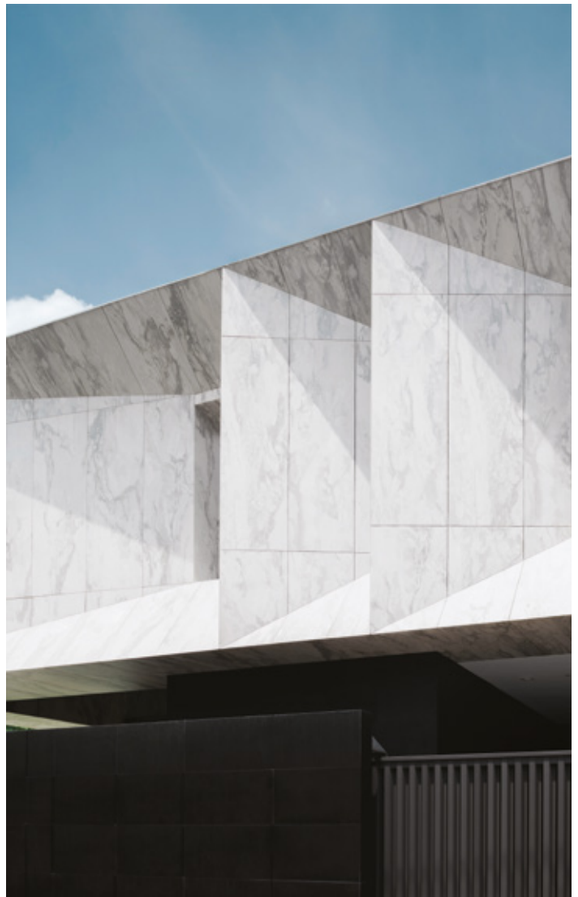


Built projects

Single-family home Bueno, Algemesí, Spain
VF Porcelain system with concealed clips
Arquitect: Chiralt Arquitectos · Photography: Eva Pérez

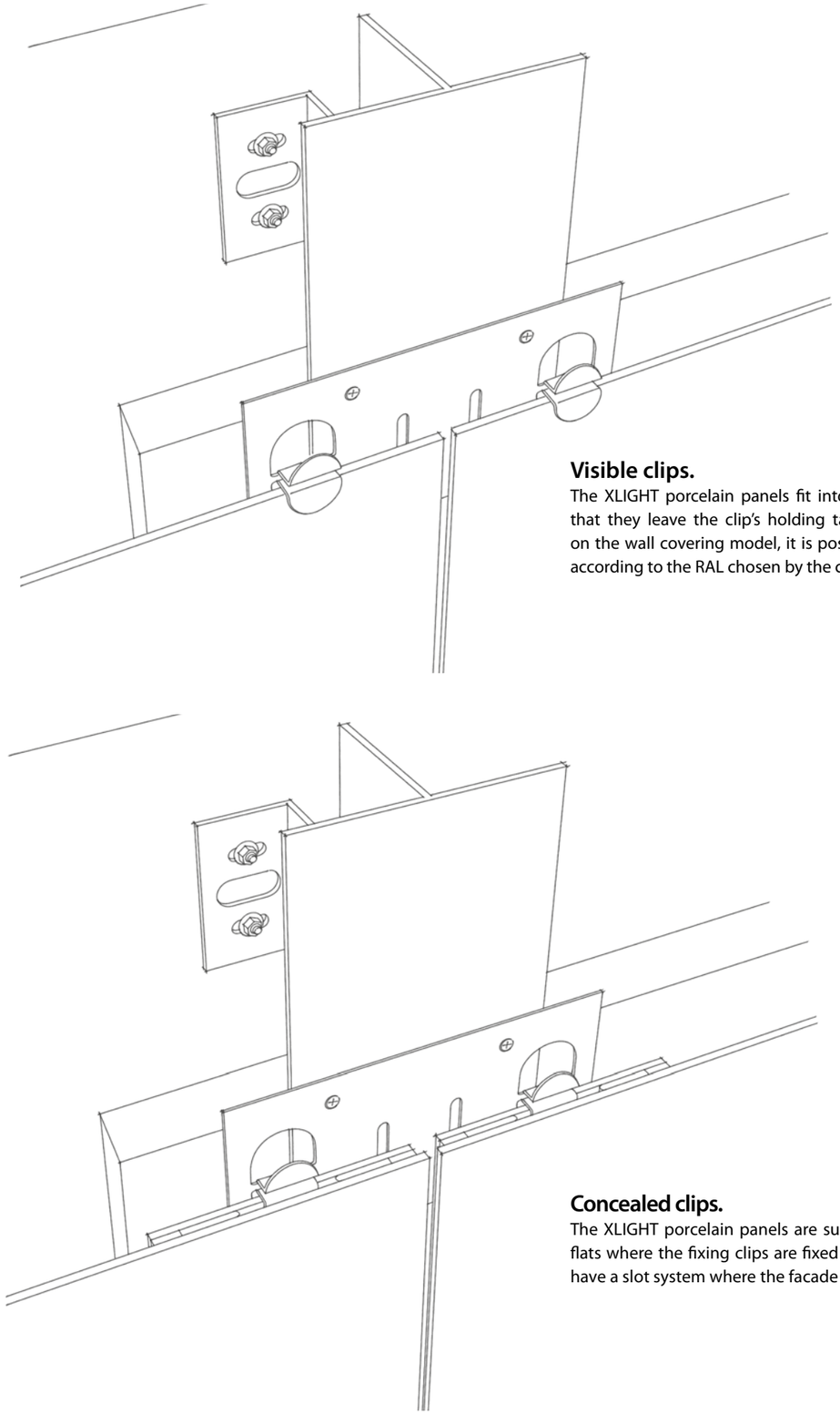
Built projects

Single-family home Marble House, Ratchadapisake Road, Bangkok
VF Porcelain system with concealed clips
Arquitect: Openbox Architects · Photography: Wison Tungthunya



Facade types

Depending on the type of fixing we can define two types of façade system:

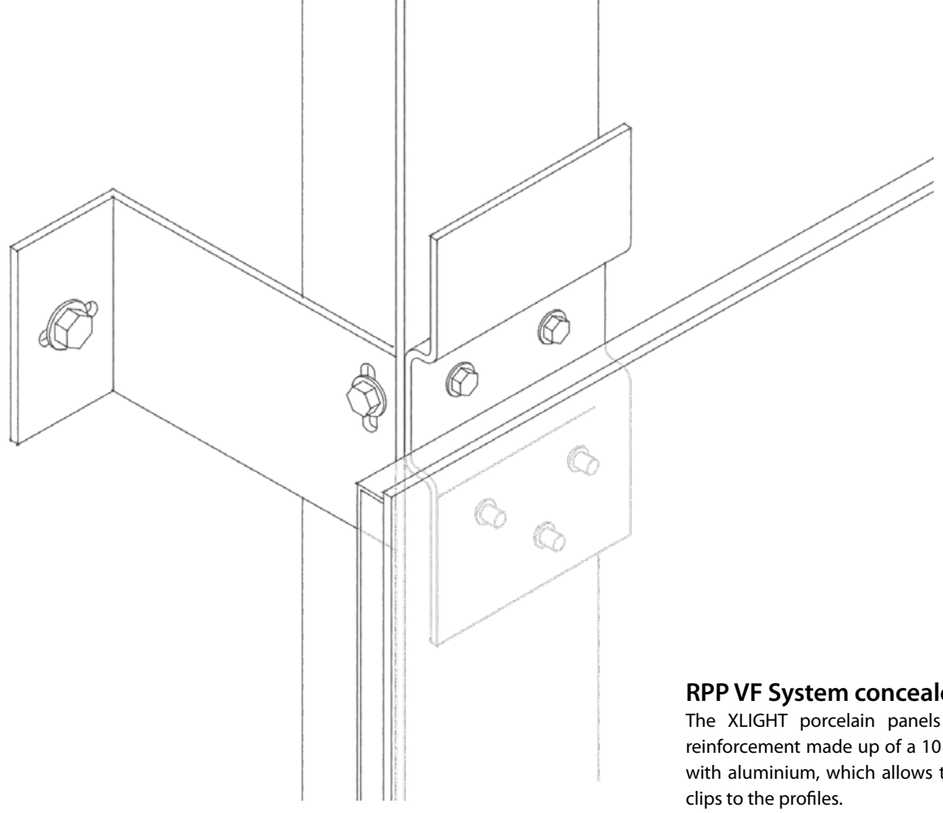


Visible clips.

The XLIGHT porcelain panels fit into a stainless-steel clip so that they leave the clip's holding tabs exposed. Depending on the wall covering model, it is possible to lacquer the clips according to the RAL chosen by the client.

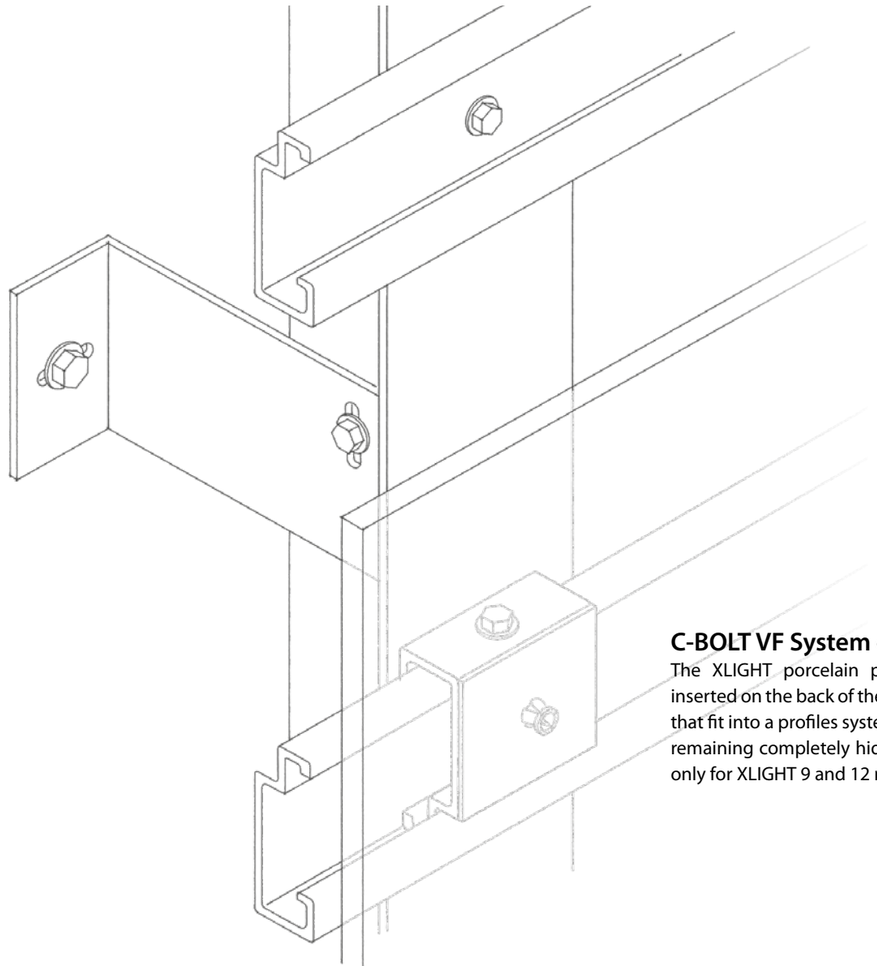
Concealed clips.

The XLIGHT porcelain panels are supplied attached to metal flats where the fixing clips are fixed to the uprights. The flats have a slot system where the facade clip tabs fit into.



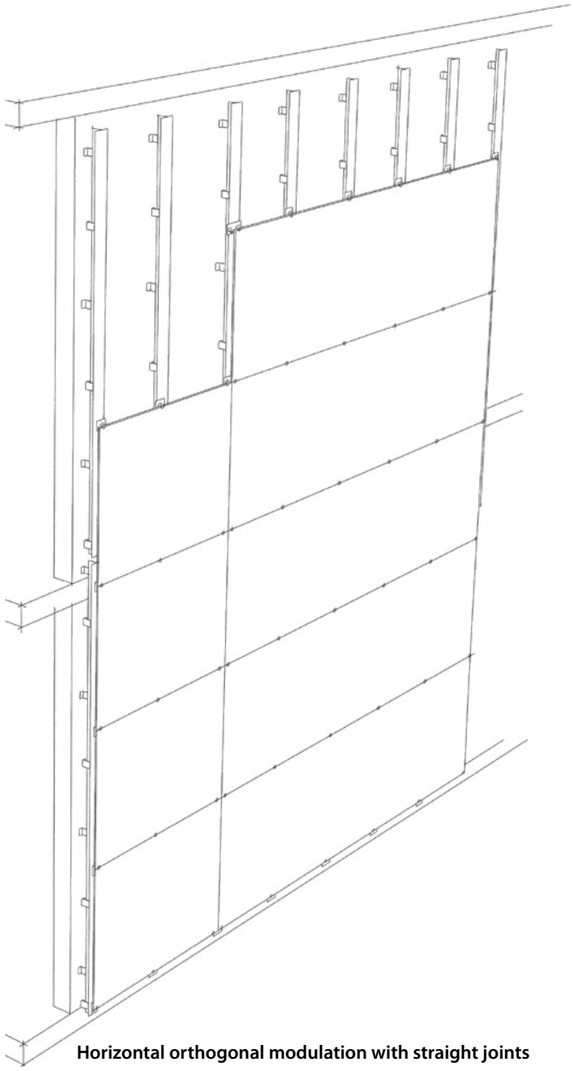
RPP VF System concealed clips.

The XLIGHT porcelain panels are supplied with a back reinforcement made up of a 10 mm thick PET panel covered with aluminium, which allows the fixing of the fixing plates clips to the profiles.

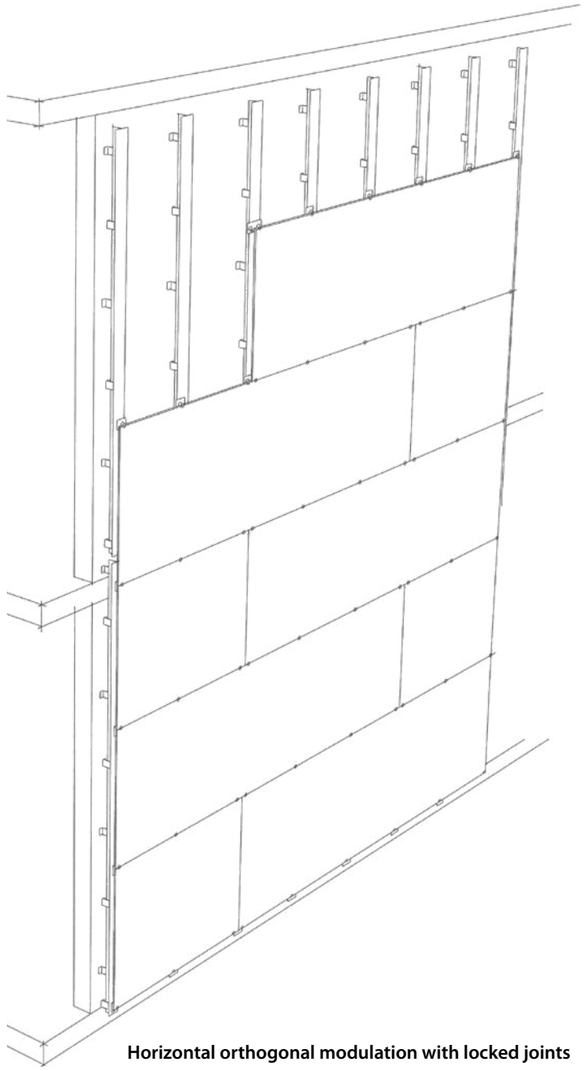


C-BOLT VF System concealed clips.

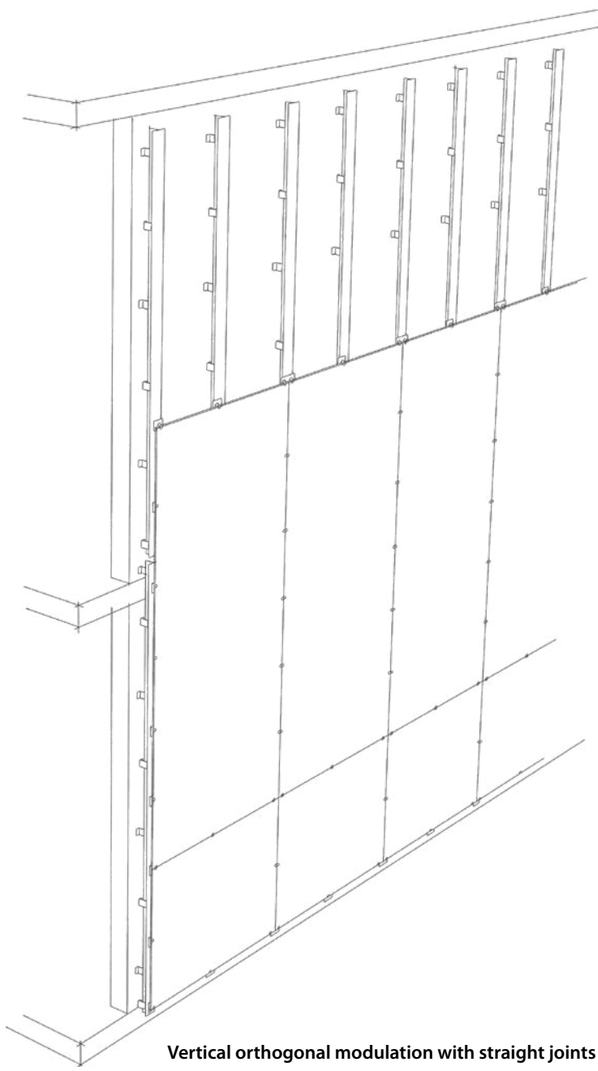
The XLIGHT porcelain panels are supplied with anchors inserted on the back of the pieces through expandable screws that fit into a profiles system attached to the facade structure, remaining completely hidden from view. This system is valid only for XLIGHT 9 and 12 mm thick panels.



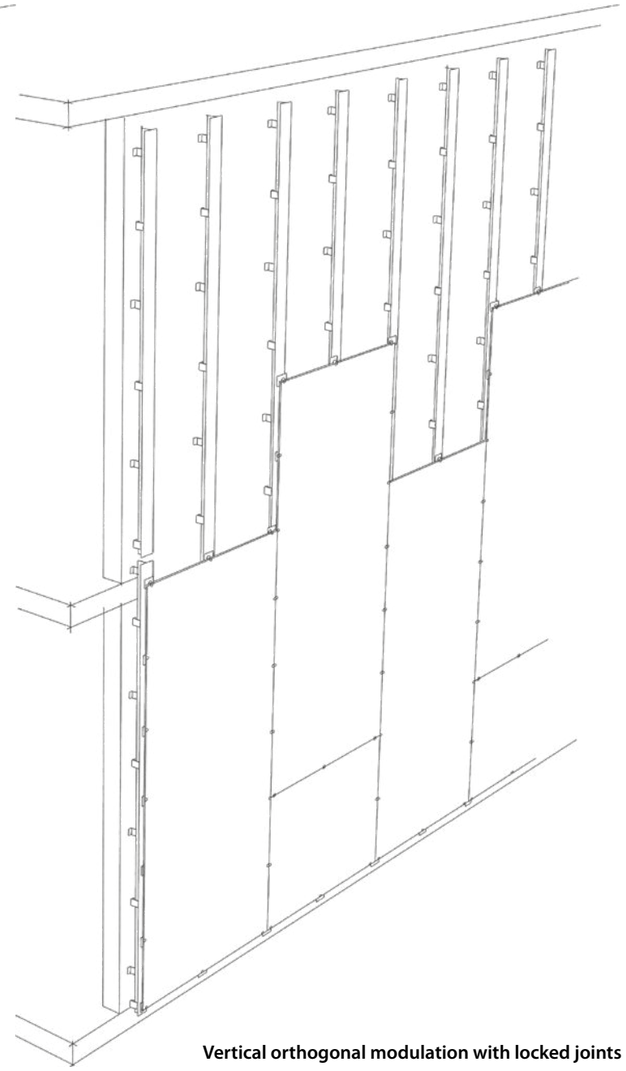
Horizontal orthogonal modulation with straight joints



Horizontal orthogonal modulation with locked joints



Vertical orthogonal modulation with straight joints



Vertical orthogonal modulation with locked joints

Facade structure.

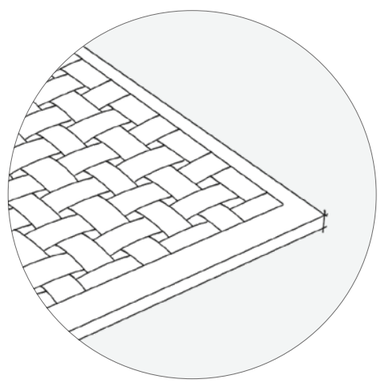
Main characteristics:

- Facade anchoring direct to the building structure.
- Applicable to most structure and enclosure types used in construction.
- Minimum distance between support and facade: 80 mm.
- Structure consisting of only vertical profiles.
- Structure for very light facade: less than 5 kg/m^2.
- Quick assembly.

Modulation of the facade.

Main characteristics:

- Reduced presence of installation joints.
- Modulation on one plane and leveled with the facade.
- Horizontal or vertical orthogonal modulation.
- Modulation with straight or locked joints.
- Horizontal installation joints between 5 and 8 mm wide.
- Vertical installation joints starting at 1 mm wide.



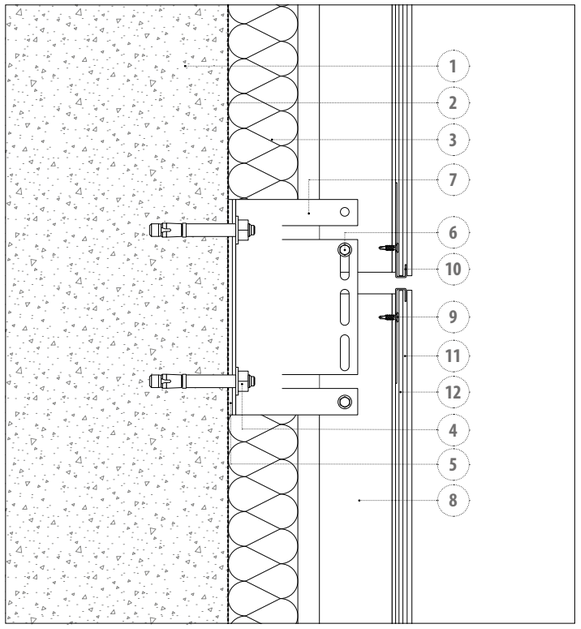
XLIGHT panels.

Main characteristics:

- Exclusive design of PORCELANOSA Grupo.
- Large format: up to 1000 x 3000 mm in the XLIGHT lines.
- Minimum thickness for XLIGHT panels: 3.5 mm.
- In the case of XLIGHT, extremely light panels: 9 - 12 kg/m^2.
- Back -meshed panels to prevent the fall of fragments in case of breakage.
- Weather resistant; the appearance of the panels remains unchanged with the passing of time. Resistant to paint stains or graffiti.
- In the case of XLIGHT facade with exposed clip, excellent price/m^2

These drawings are only sketches of tile modulation examples. For technical details of these façade systems, have a look the construction details at the next pages.

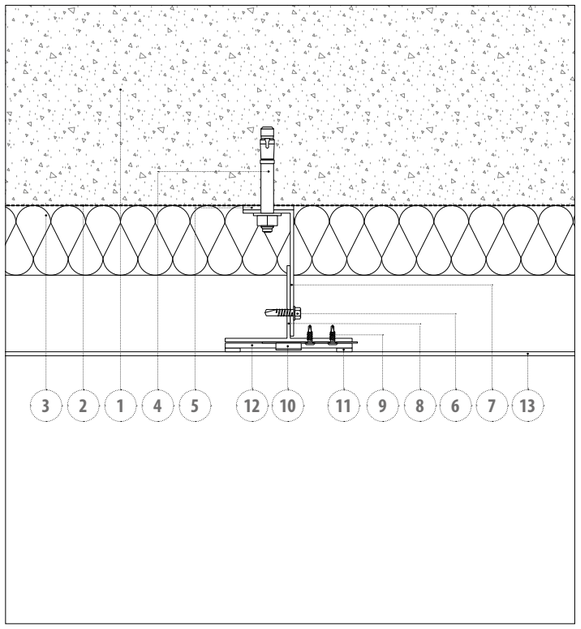
Construction details · Concealed clip system



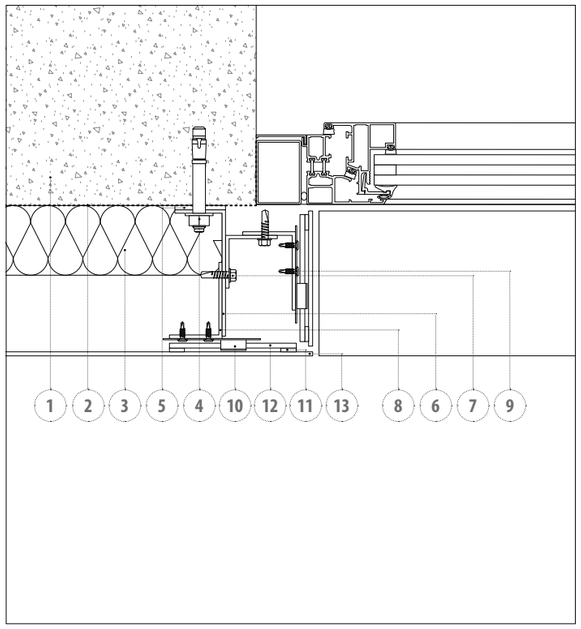
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. L-shaped aluminum bracket
8. Aluminum T-shaped vertical profile
9. Self-drilling screw
10. Concealed clip
11. Polymer adhesive
12. Aluminum plate (flat)
13. XLIGHT

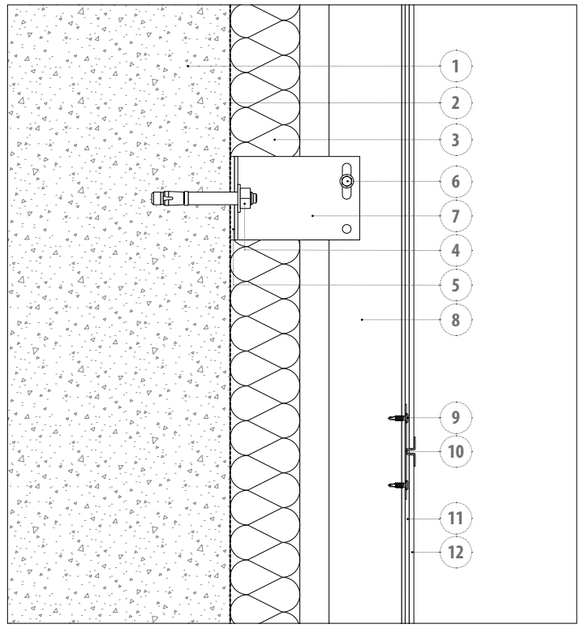


Horizontal cross-section



Lintel

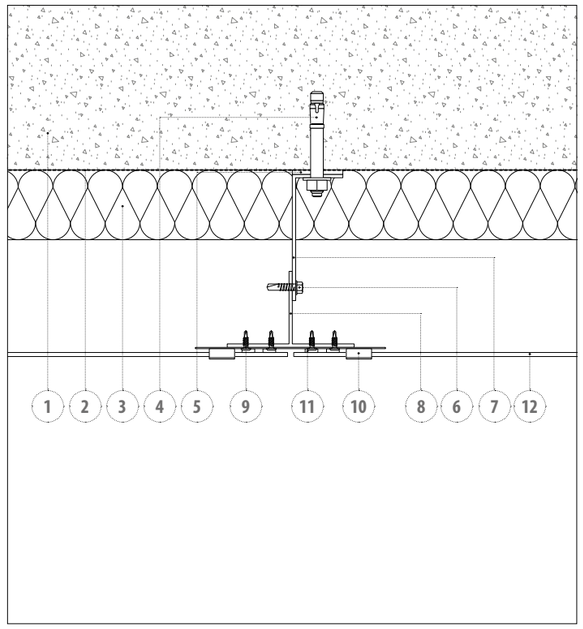
Construction details · Visible clip system



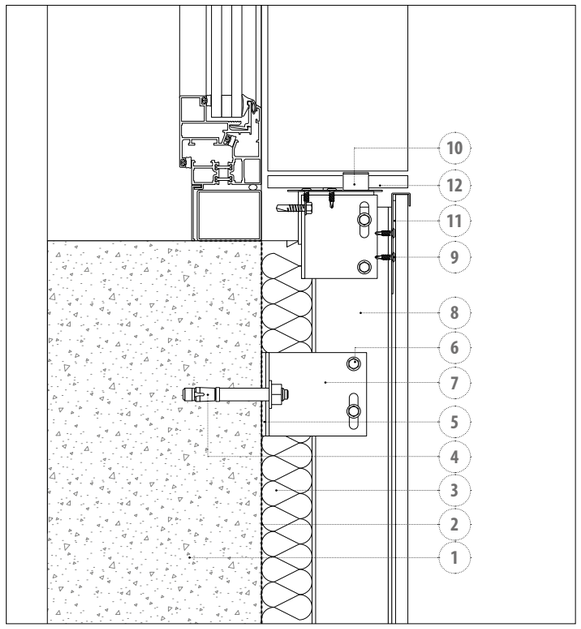
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. L-shaped aluminum bracket
8. Aluminum T-shaped vertical profile
9. Self-drilling screw
10. Visible clip
11. Polymer adhesive
12. XLIGHT

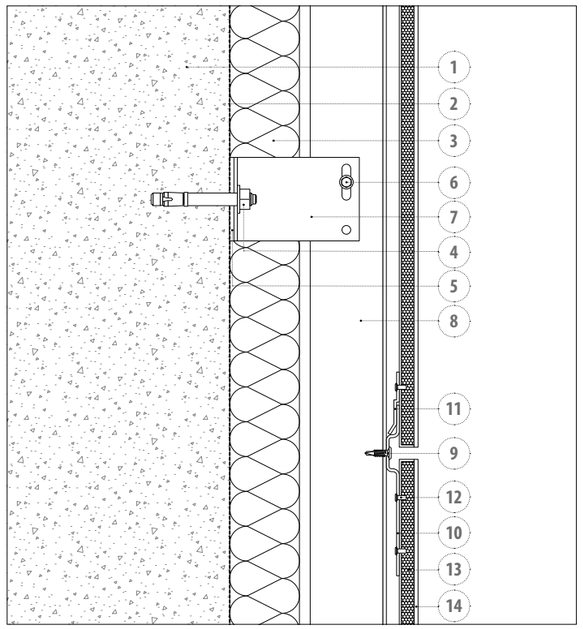


Horizontal cross-section



Sill

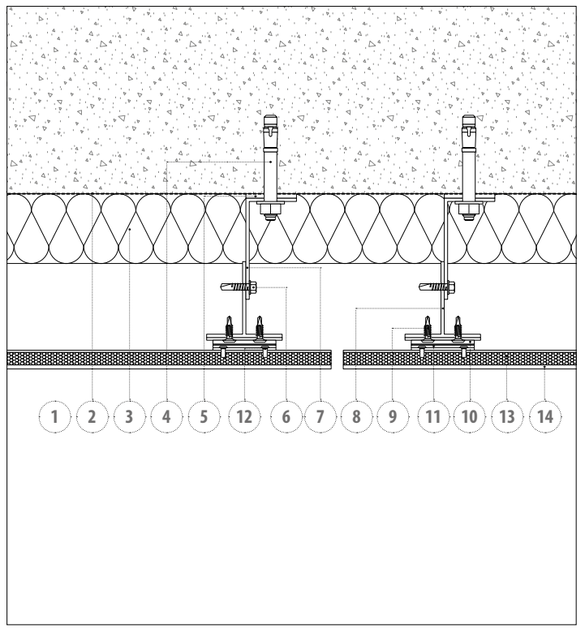
Construction details · RPP concealed clip system



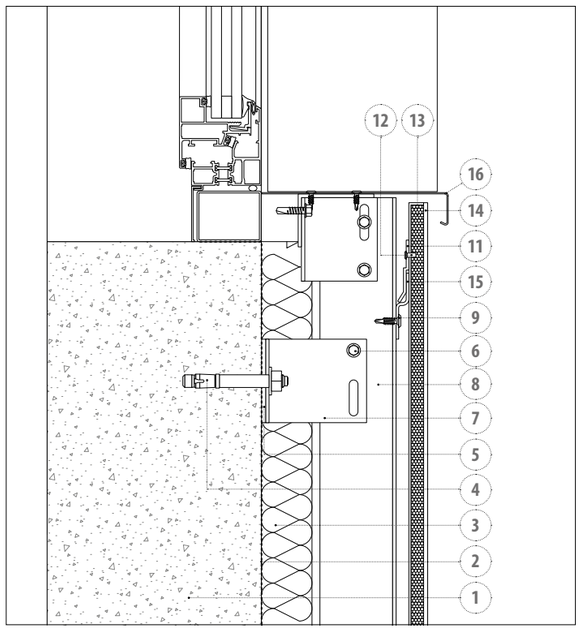
Vertical cross-section

Elements of the system:

1. Concrete wall
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Vertical aluminum tubular profile
9. Self-drilling screw
10. K-Bolt main fixing clip
11. K-Bolt secondary fixing clip
12. Attachment Rivet
13. PET panel
14. XLIGHT
15. K-bolt fixing clip
16. Metal window return

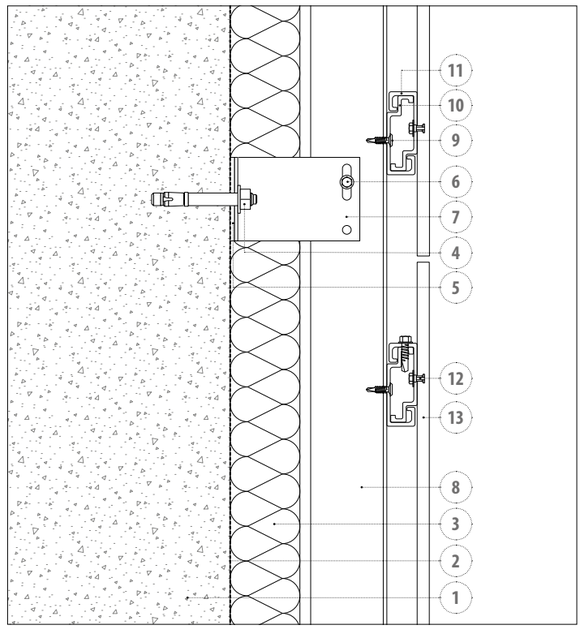


Horizontal cross-section



Sill

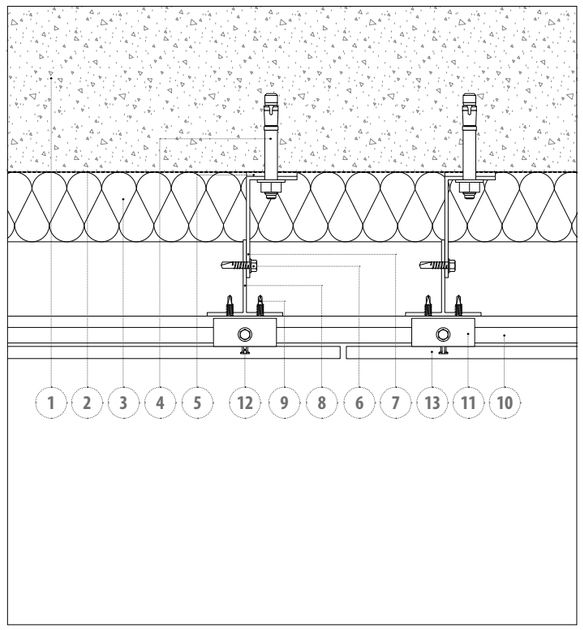
Construction details · C-BOLT concealed clip



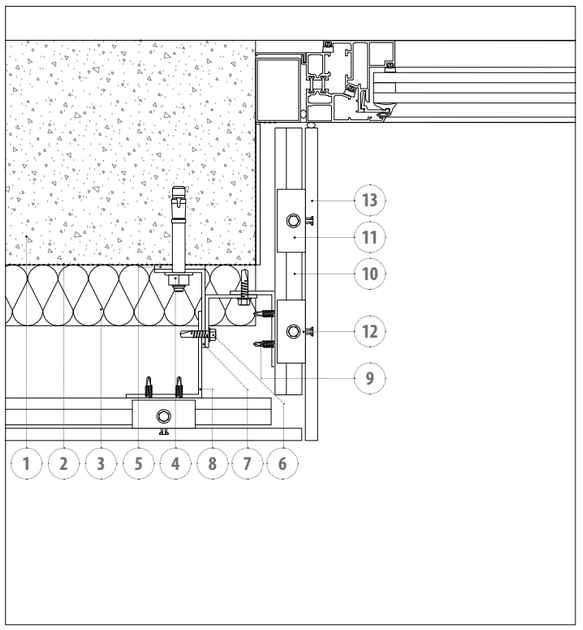
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum spacer
8. Vertical aluminum tubular profile
9. Self-drilling screw
10. C-Bolt main fixing clip
11. C-Bolt secondary fixing clip
12. C-Bolt screw
13. XTONE



Horizontal cross-section



Jamb

VF KRION

Ventilated facade system with a final covering consisting of KRION® Solid Surface panels. It is characterized by a dual chemical and mechanical fixing system between the solid surface panel and the aluminum structure.

This cladding of type of facade consists of KRION® panels attached with BUTECH profiles.

This high-performance solid surface, composed by two-thirds of ATH, alumina trihydrate, and a low percentage of acrylic resins, has an excellent performance against fire and UV radiation, which allows its application for uses such as facades.

KRION®'s technical characteristics, such as its compact, uniform, and bright nature, the possibility of transforming it by cutting, pasting, machining, injection, or thermo-curving, along with the possibility of surface polishing, allows for the creation of all kinds of shapes as well as panels up to 16 m^2 depending on weather conditions. It is a perfect material for all types of Contemporary Architectural projects.

KRION® panels are delivered machined for mechanical fixing to the facade structure. Depending on the project they can be can be engraved, back-lit, and combined with signs and lighting.

The metallic structure of the ventilated facade includes the following elements:

- Facade to enclosure mechanical anchors depending on the type of substrate.
- Aluminum L-shaped spacers, which determine the chamber between the enclosure and the ceramic covering.
- Aluminum uprights on which the KRION® panels are installed.
- Stainless steel self-drilling joint screws between vertical uprights and aluminum spacers.
- Stainless steel metal clips for fixing KRION® panel to the uprights.

The metal structure of the ventilated facade is made of AW 6005A aluminum, while the mechanical clips are manufactured in AISI 304 stainless steel.

Certifications

Member of EOTA
www.eota.eu

ETA-17/0387

QB QUALITÉ POUR LE BÂTIMENT

France
AT-2.2/14-1624_V1

CENTRE FOR WINDOW AND CLADDING TECHNOLOGY

United Kingdom
2018/73
2018/74

Florida dbpr Department of Business & Professional Regulation

USA
FL#21546

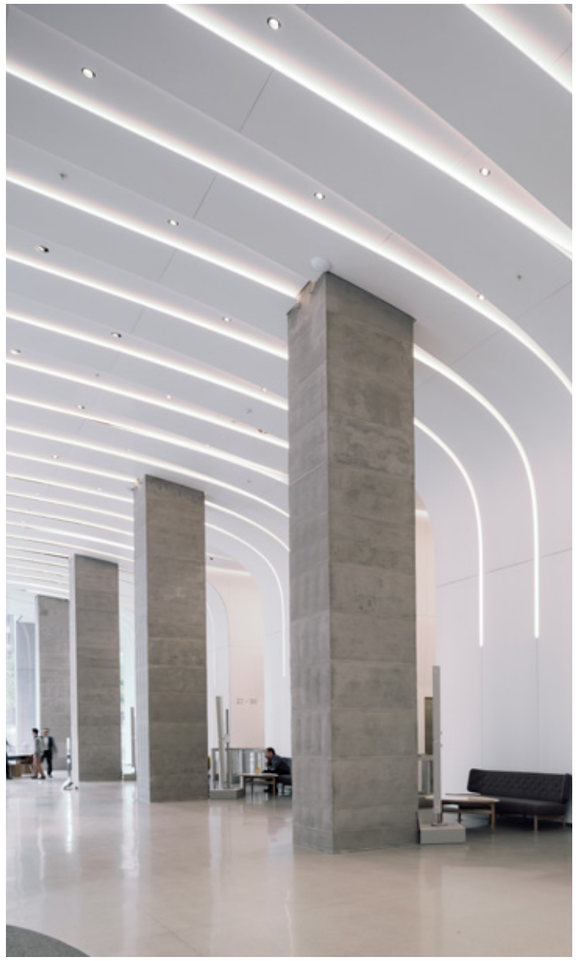
Office building Diagonal 525, Barcelona, Spain
KIRON K-FIX VF system
Arquitect: Sanzpont Arquitectura · Photography: David Cardelús

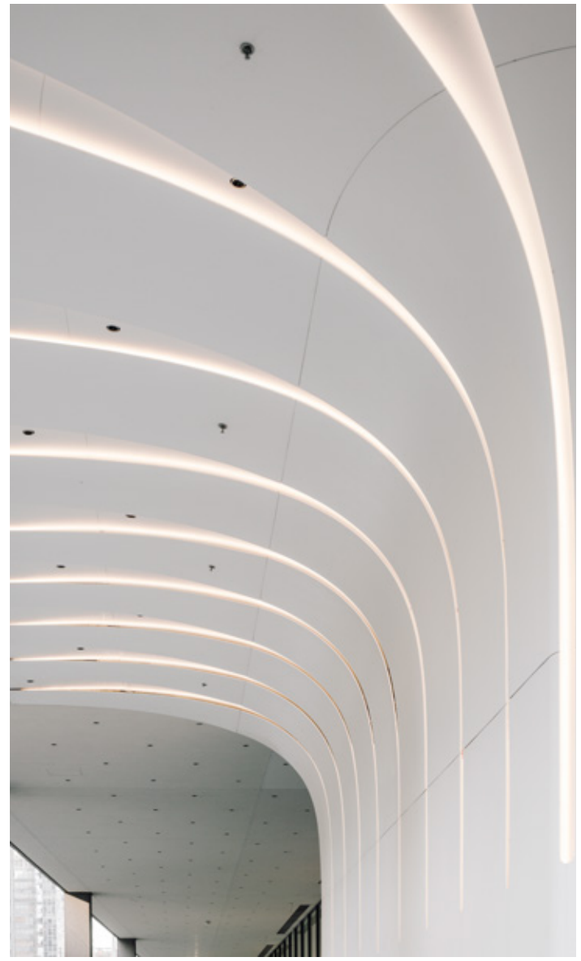
Built projects

Office building Diagonal 525, Barcelona, Spain
KIRON K-FIX VF system
Arquitect: Sanzpont Arquitectura · Photography: David Cardelús

Built projects

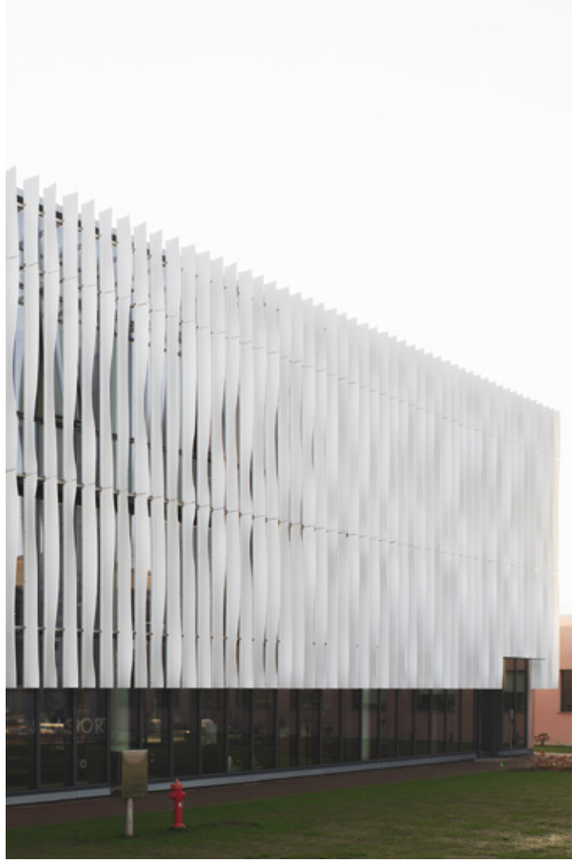
Mercantile Exchange CME Center, Chicago, U.S.A.
KIRON K-FIX VF system
Arquitect: Krueck + Sexton Architects · Photography: Imagen Subliminal

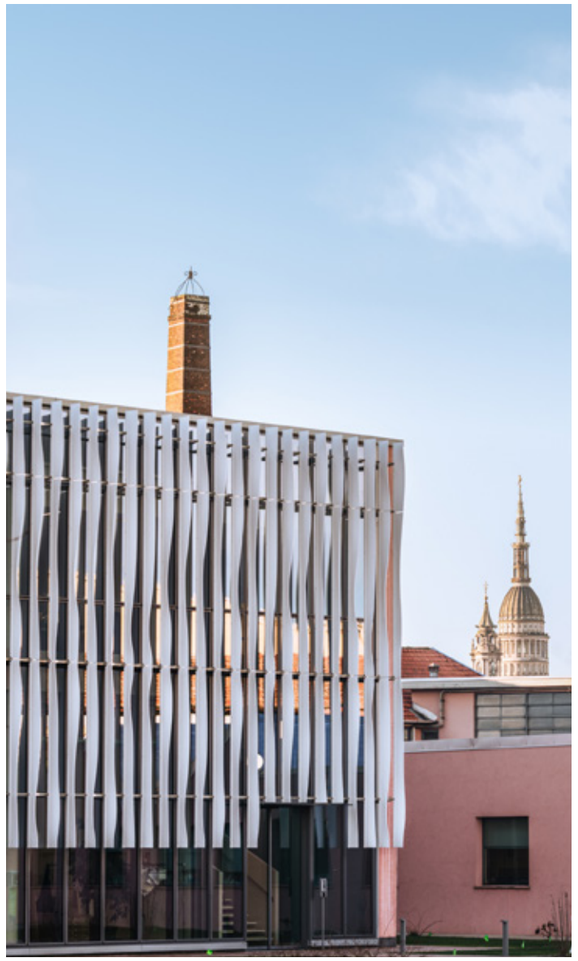




Built projects

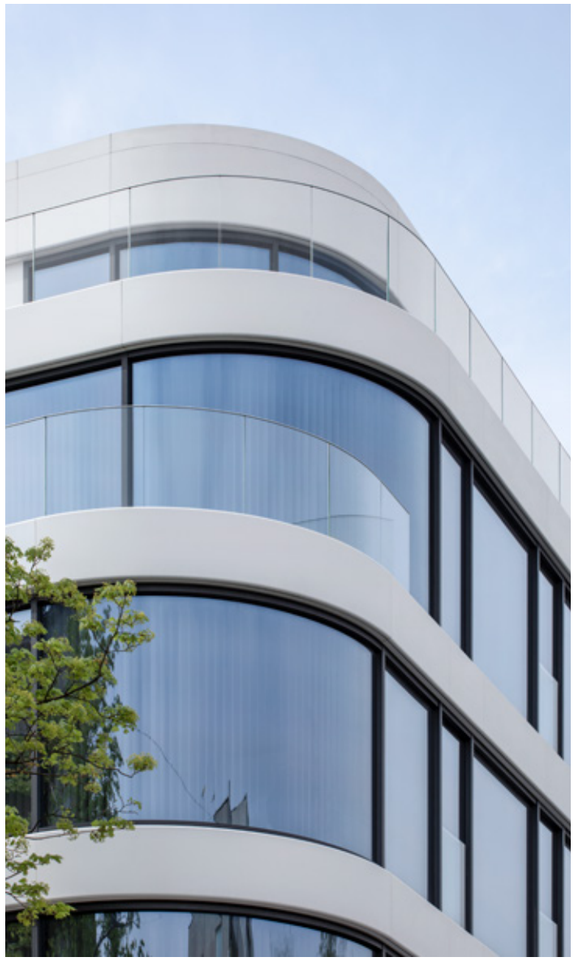
Office building Zamasport Headquarter, Novara, Italy
Système FV KRION K-FIX
Arquitect: Frigelio Desing · Photography: Mario Frusca





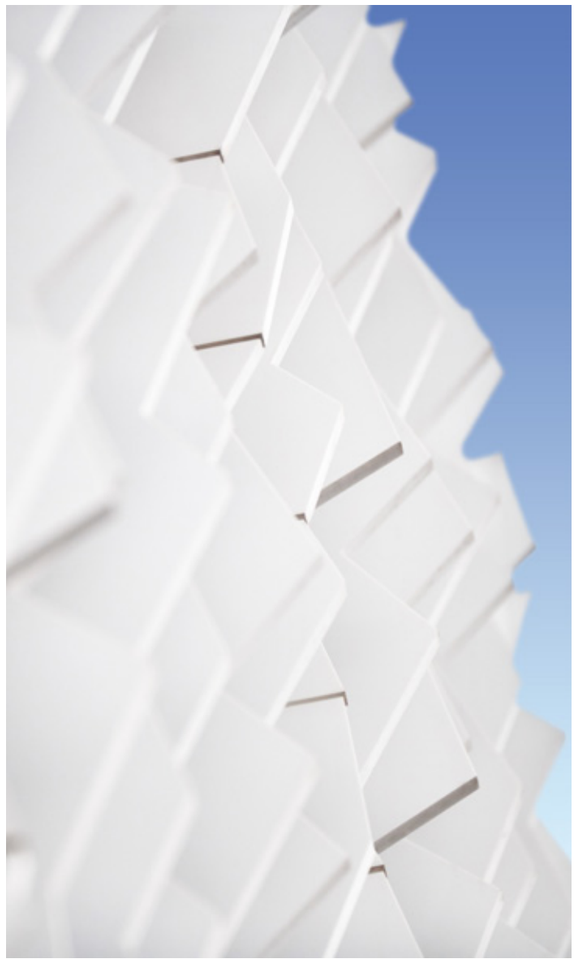
Built projects

Office building BG Agro, Varna, Bulgaria
KIRON K-BOLT VF system
Arquitect: STARH · Photography: Dian Stanchev



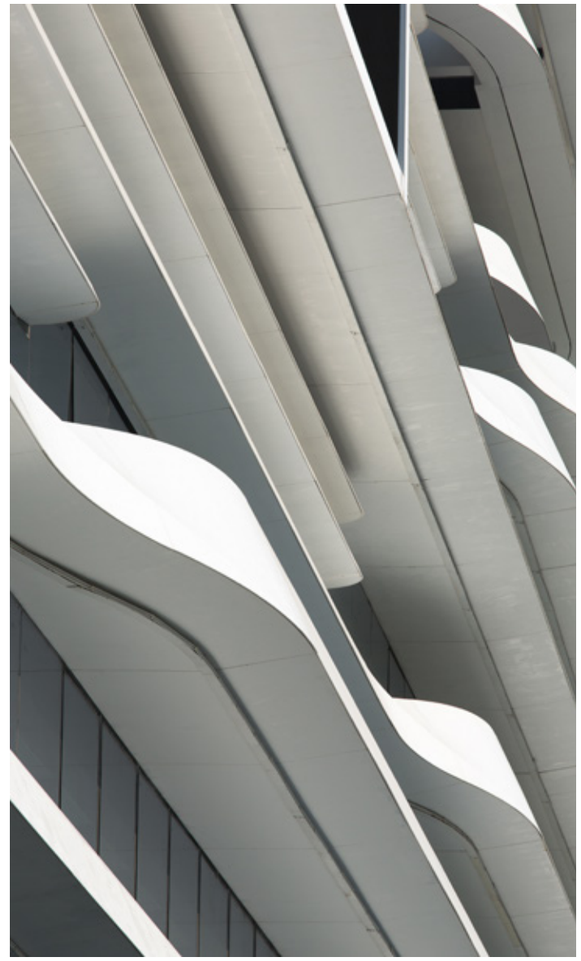
Built projects

Office building La Fiduciaire, Bordeaux, France
Système FV KRION K-FIX
Arquitect: Nicolas Ragueneau & Antoine Roux · Photography: Stéphane Adam



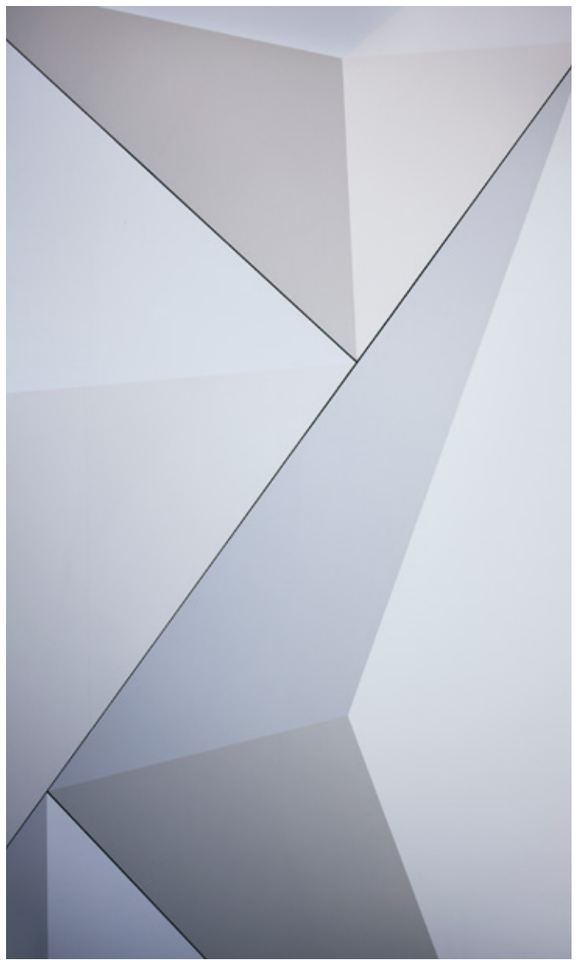
Built projects

Residential Building and Commercial Center Centralcon Building, Shenzhen , China
KIRON K-FIX VF system
Arquitect: Zhao Guo Xing - Peddle Thorp Architects · Photography: Salva Méndez



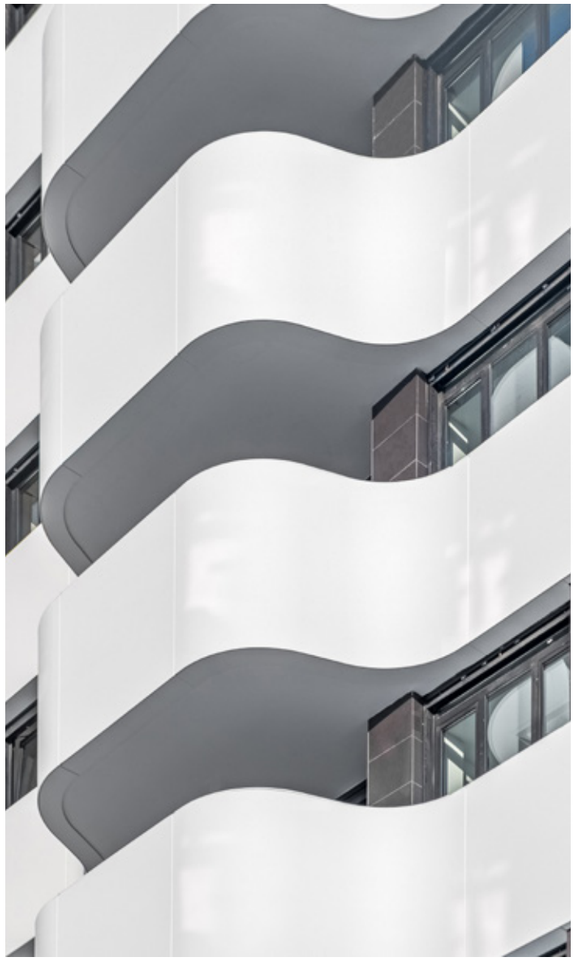
Built projects

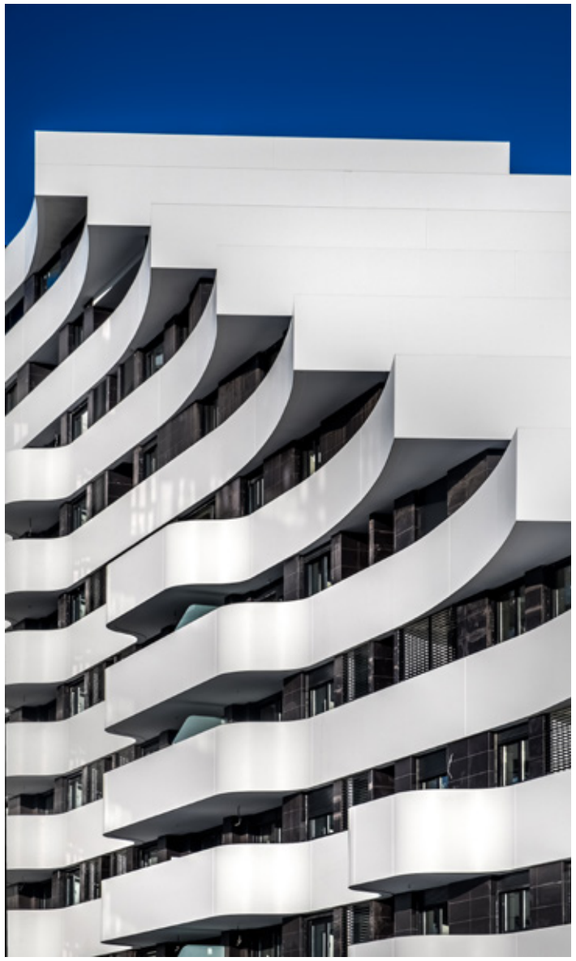
Ibiza Corso Hotel & Spa, Ibiza, Spain
KRION K-FIX VF system
Arquitect: José María García Sánchez · Photography: Alex del Río



Built projects

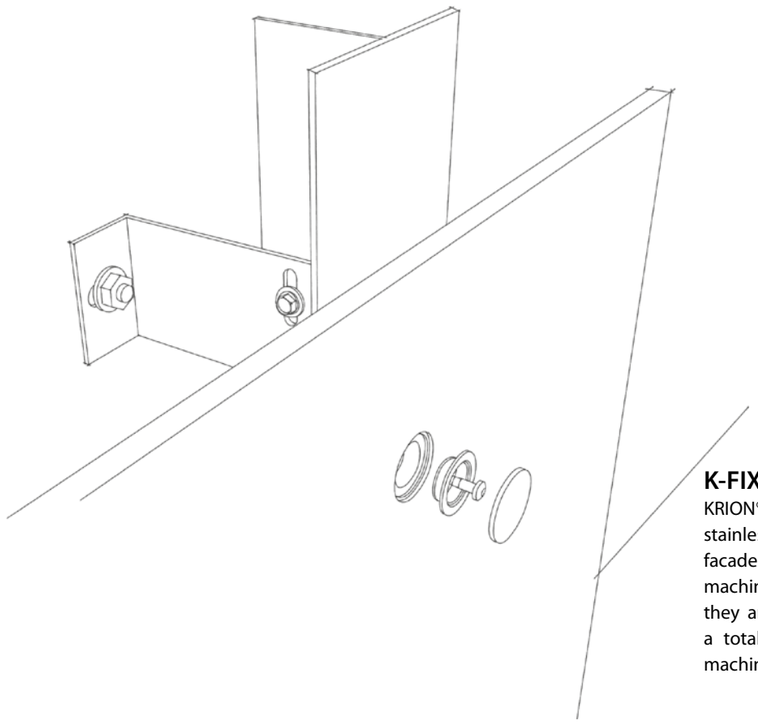
Residential building Terrazas del Lago, Madrid, Spain
KIRON K-FIX VF system
Arquitect: Estudio de Arquitectura Morph · Photography: Luzestudio





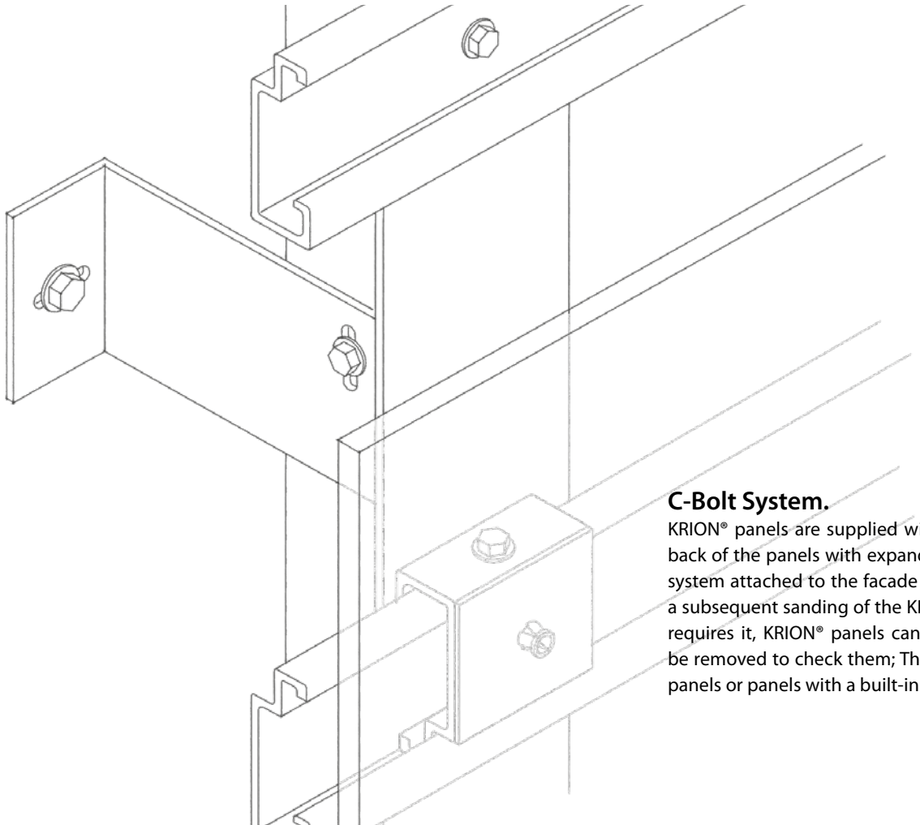
Facade types

Depending on the KRION® panel fixing system to the facade structure, we can define two types of facade:



K-FIX System.

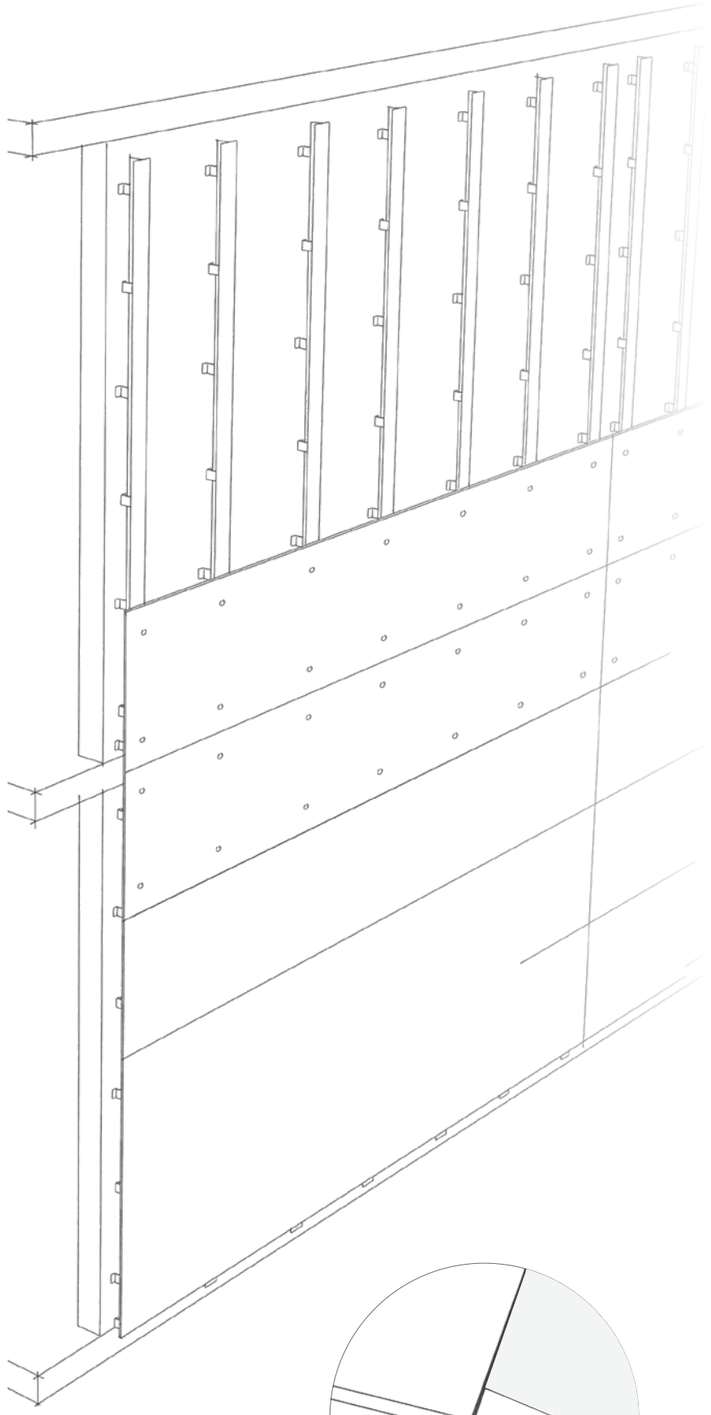
KRION® panels are supplied with circular drillings where stainless steel metal caps are screwed to attach them to the facade structure. Once the KRION® panel is attached, the machined parts are covered with caps from the same material, they are bonded on and finally polished on-site, producing a totally smooth and uniform surface without a trace of machining.



C-Bolt System.

KRION® panels are supplied with metal clips fastened to the back of the panels with expandable screws that fit into a clip system attached to the facade structure. There is no need for a subsequent sanding of the KRION® panels and if the project requires it, KRION® panels can be fastened so that they can be removed to check them; This is very important on back-lit panels or panels with a built-in lighting system.

Characteristics



Facade structure.

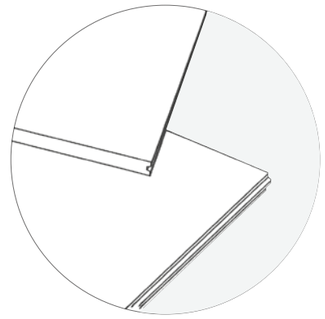
Main characteristics:

- Facade anchoring direct to the building structure.
- Applicable to most structure and enclosure types used in construction.
- Structure consisting of only vertical profiles.
- Structure for very light facade: less than 5 kg/m^2
- It allows for 3D facade designs and cantilevered pieces.
- Dual chemical and mechanical fixing system; complete safety.

Modulation of the facade.

Main characteristics:

- Large joint-free areas, depending on the location and the design of the project, up to 6000 x 3670 mm.
- Total freedom in the facade design, including curved shapes.
- Modulation at as many levels as needed. Potential for 3D or cantilevered facades.
- Possibility of engraving, cutting, or perforating panels according to design.
- Excellent material to combine with signage and lighting systems.
- Different types of open joint between panels, reducing the visual impact of the joints.



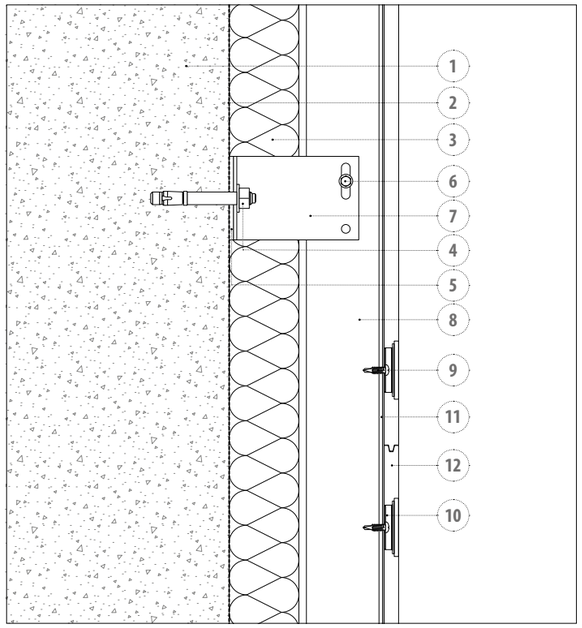
KRION® panels

Main characteristics:

- Acrylic stone, uniform throughout its thickness, compact, pore-free, and with high mechanical resistance.
- Intense brightness and purity of color.
- Unlike other materials such as ceramics, this material is transformable and machinable following the design and project.
- Weather resistant; the appearance of the panels remains unchanged with the passing of time.
- Fire-resistant.
- Antibacterial.

These drawings are only sketches of tile modulation examples. For technical details of these façade systems, have a look the construction details at the next pages.

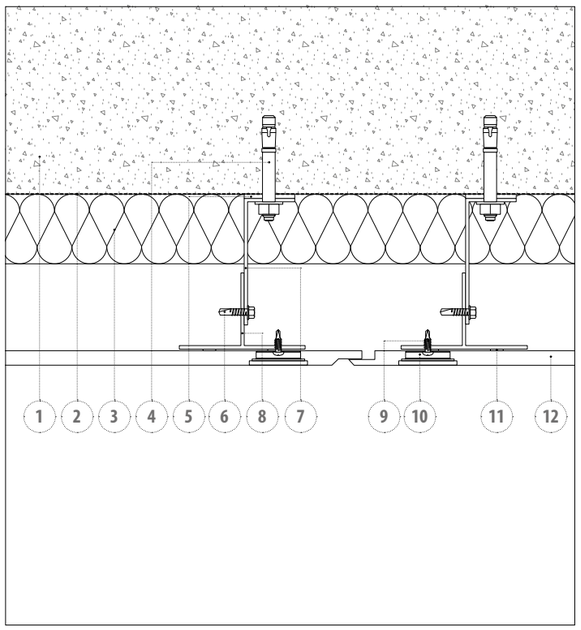
Construction details · K-FIX Concealed clips



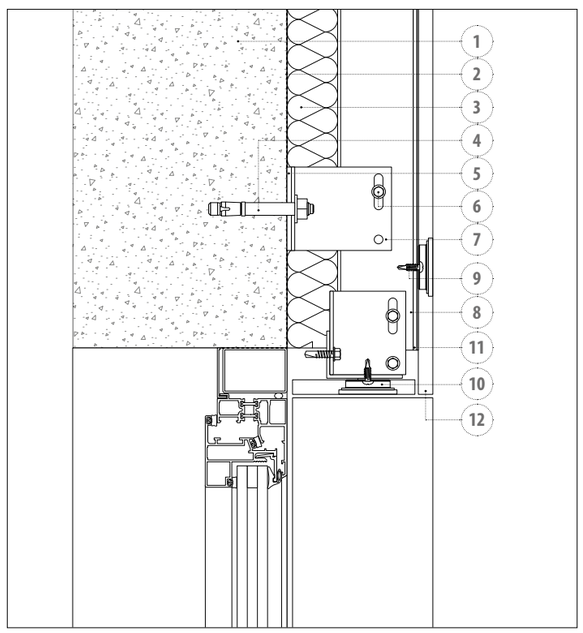
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Aluminum T-shaped vertical profile
9. Self-drilling screw
10. Aluminium fixing clip
11. Polyurethane putty
12. KRION®

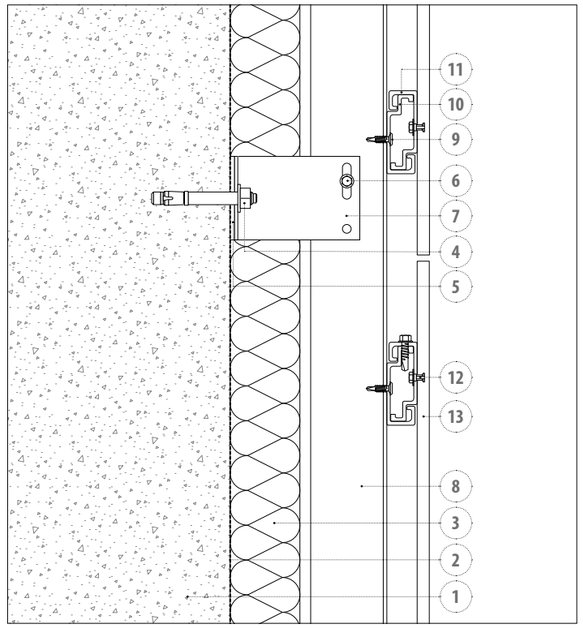


Horizontal cross-section



Lintel

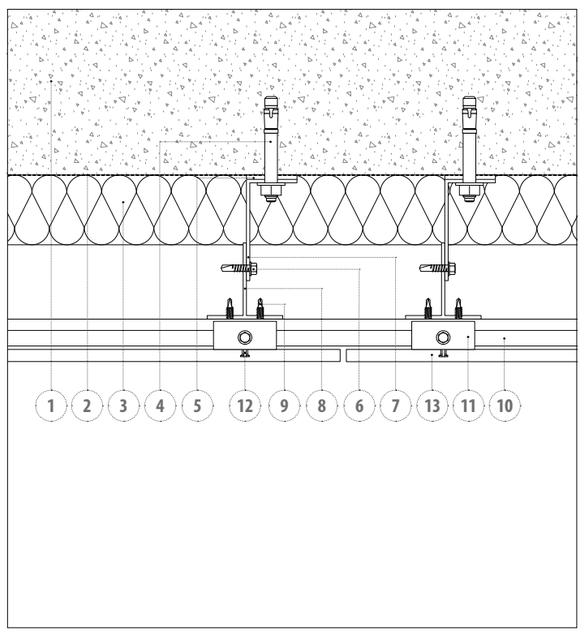
Construction details · C-BOLT Concealed clips



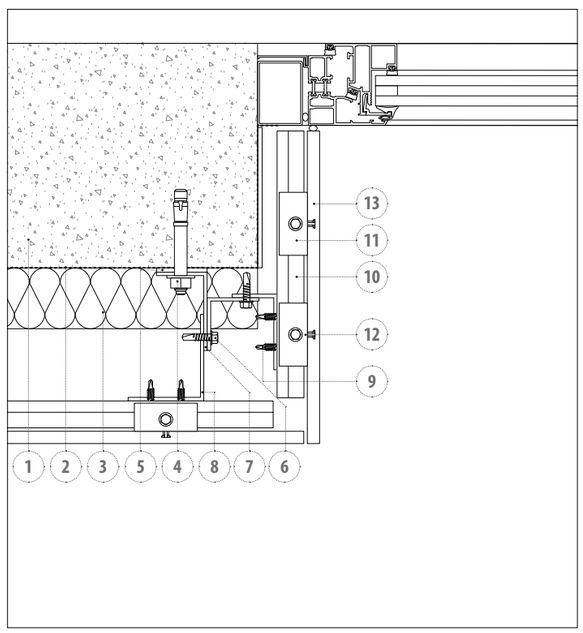
Vertical cross-section

Elements of the system:

1. Concrete support
2. Waterproofing sheet
3. Thermal insulation
4. Anchor for concrete
5. Thermal break
6. Stainless steel self-drilling screw
7. Secondary L-shaped aluminum bracket
8. Vertical aluminum tubular profile
9. Self-drilling screw
10. C-Bolt main fixing clip
11. C-Bolt secondary fixing clip
12. C-Bolt screw
13. KRION®



Horizontal cross-section



Jamb

MODFACADES

Innovative lightweight facade construction system, which due to the quickness of its installation and its contribution to the building's energy efficiency, make it a system that adds value to the finished product, for a price lower than traditional construction.

The system is made up of one outer cement panel and an inner core consisting of two 8 and 4 cm thick insulation layers, thus achieving the highest energy efficiency performance for your building. This facade system lets us build the enclosure and the facade wall covering at the same time, which reduces construction times.

The facade panels are supplied from the factory with built-in XTONE, KRION®or Porcelain panel wall covering, as well as the openings for windows and other facade elements. The modular system panels are supplied ready-to-install, only needing to finish the inner enclosure depending on the needs of the project.

It is supported by a tubular steel structure that anchors the panel to the building structure.

Advantages of the system

- **Quick installation.**
  The modular system reduces enclosure construction times so that we can obtain a performance of up to 3 m^2/ hour per worker.
- **Auxiliary means are not needed.**
  Using crane or scaffolding is not required as it is assembled from the inside of the building.
- **Reduction in waste production.**
  As the enclosure panels are supplied ready-to-install there is no need for any machining on-site that would generate waste.
- **Energy efficiency.**
  Butech's modular system is made up mostly of insulating material, thus achieving the highest energy efficiency performance.
- **100% Recyclable.**
  The system components are entirely recyclable, ideal for sustainable construction.

Certifications and technical testing

Spain

13/7215 **Applus testing to determine air permeability, water tightness, and resistance to wind load, by Applus.**

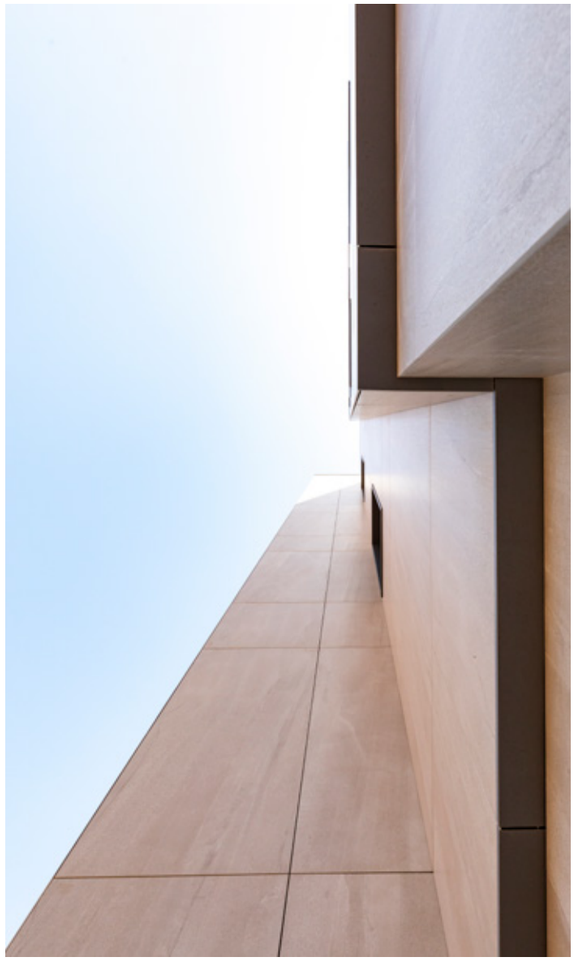
13/7213-3138 Part 2 Applus testing to determine **Fire resistance.**

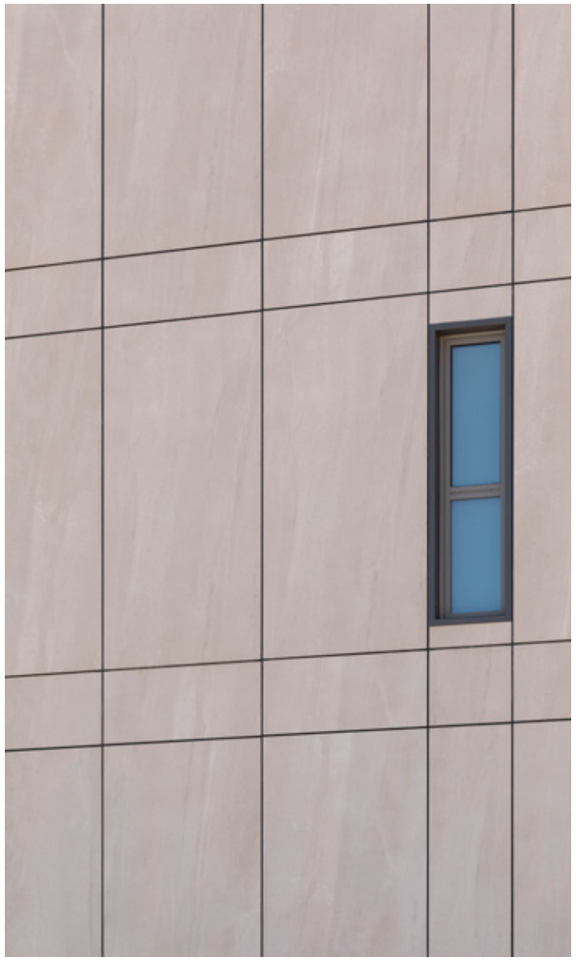
13/7215-3156 Applus testing to determine the level of **acoustic insulation for airborne noise.**

Hotel & Spa Castillo Peñíscola, Peñíscola, Spain
MODFACADES system
Arquitect: GRY Asociados

Built projects

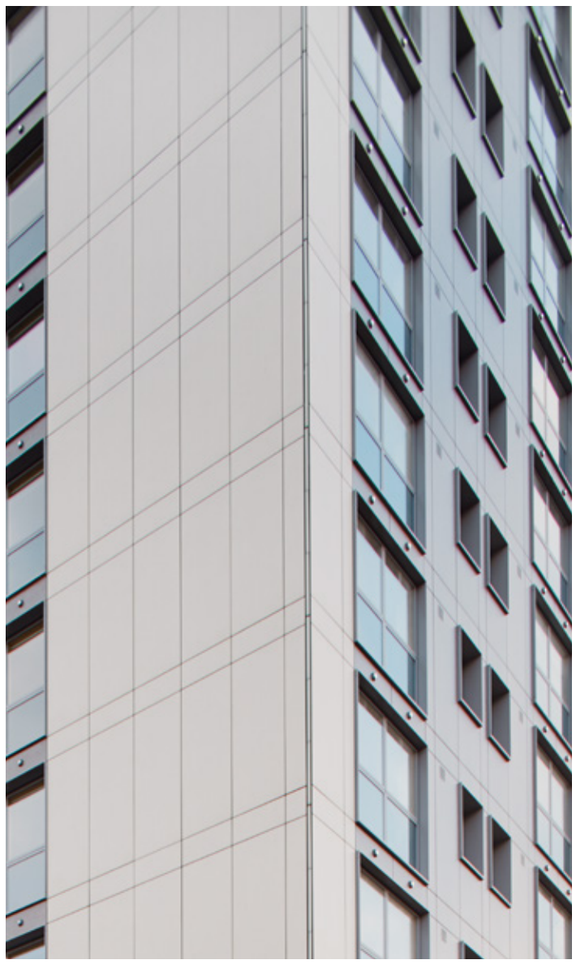
Hotel & Spa Castillo Peñíscola, Peñíscola, Spain
MODFACADES system
Arquitect: GRY Asociados

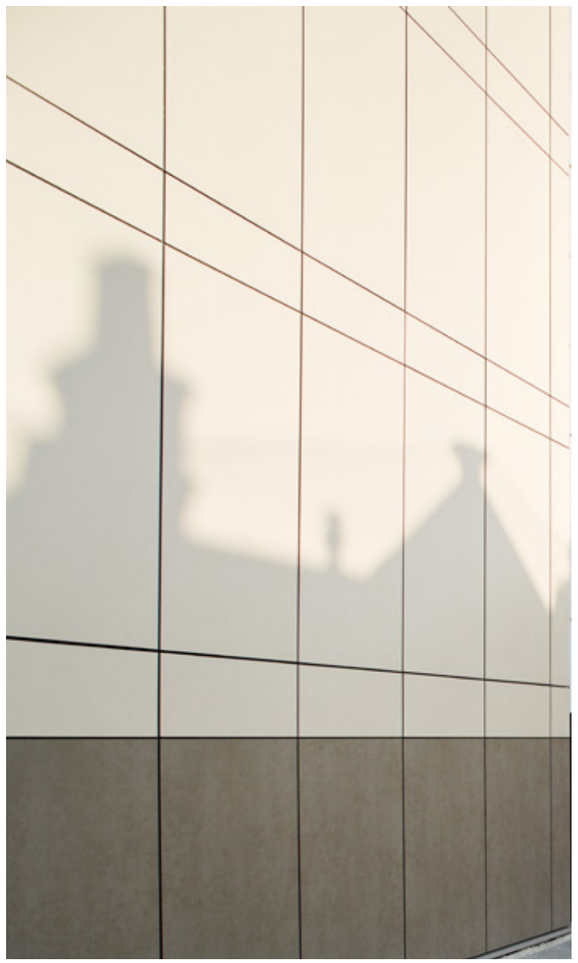




Built projects

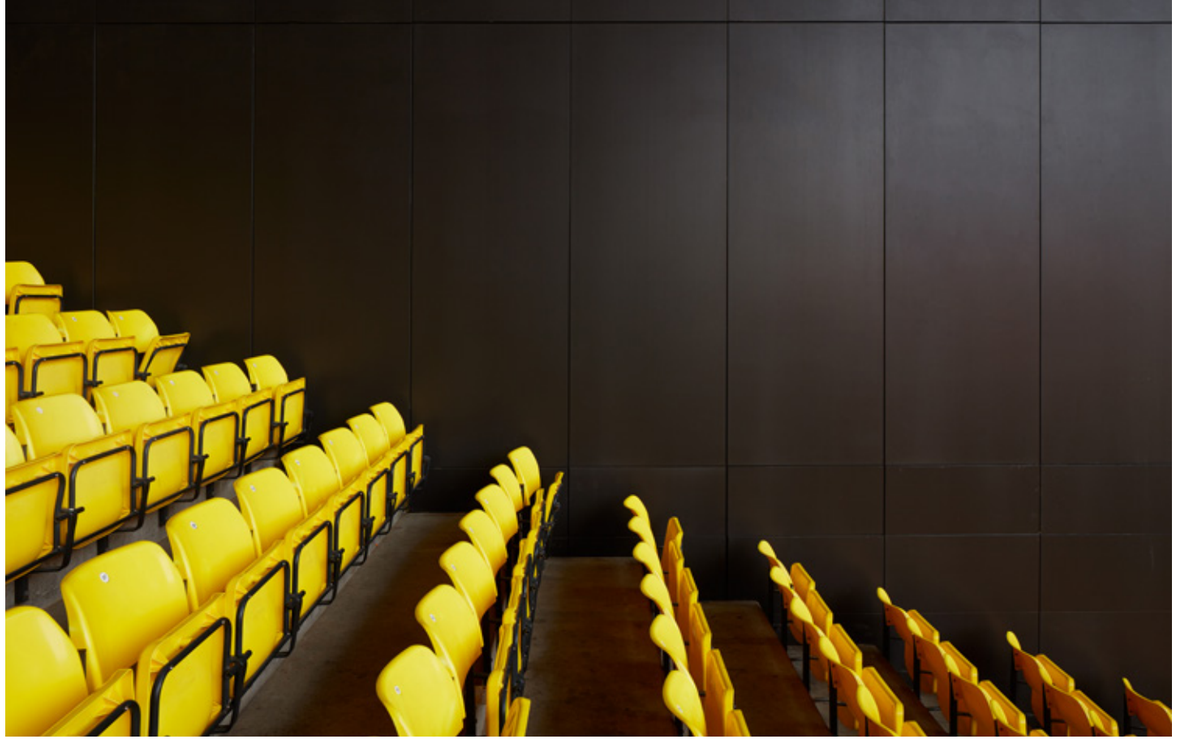
Residential building Berkshire House, Maidenhead, United Kingdom
MODFACADES system
Arquitect: Goddard Manton Architects · Photography: AA Creative

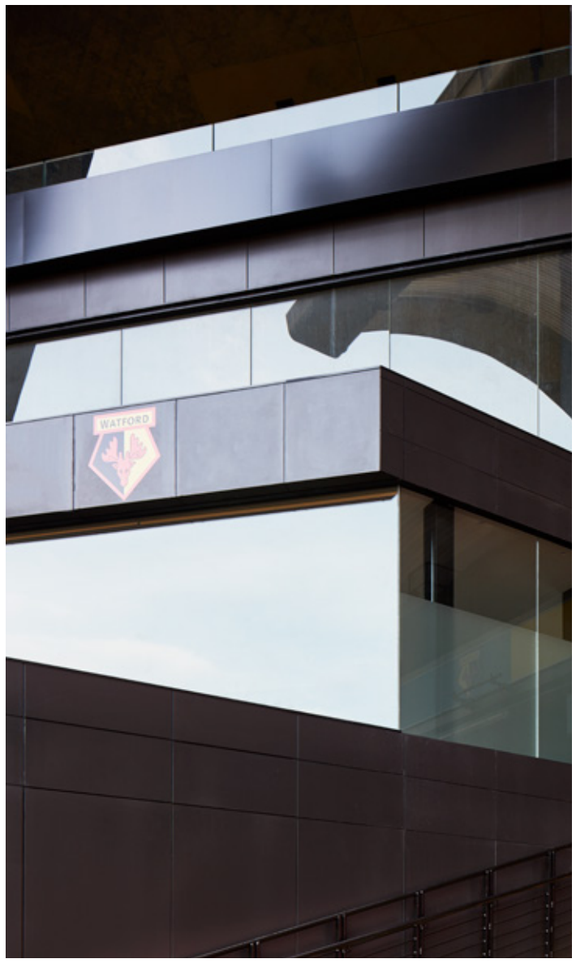




Built projects

Watford Football Stadium, Hertfordshire, United Kingdom
MODFACADES system
Arquitect: D. Guillermo Sánchez Galdó · Photography: Joel Knight



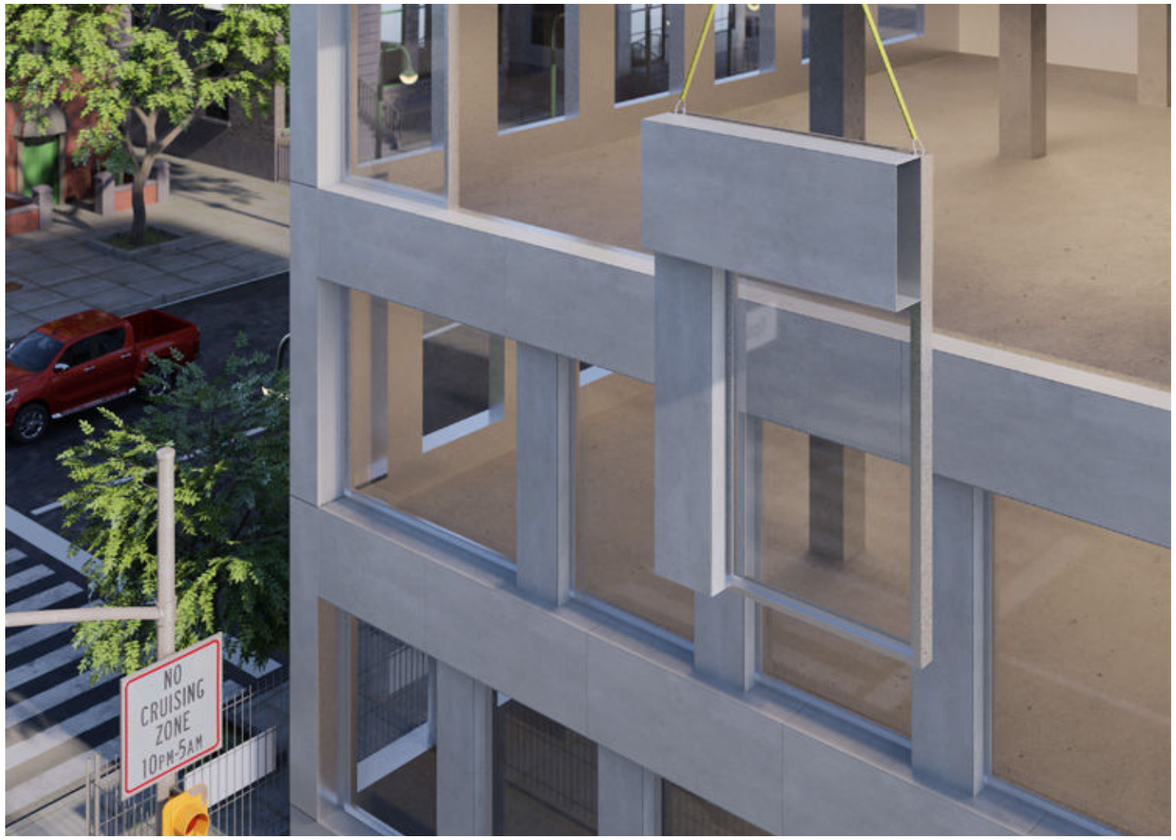


Built projects

Residential building Millworks, New York, U.S.A.
MODFACADES system
Arquitect: Butech Technical Department · 3D Render: Pb3drender

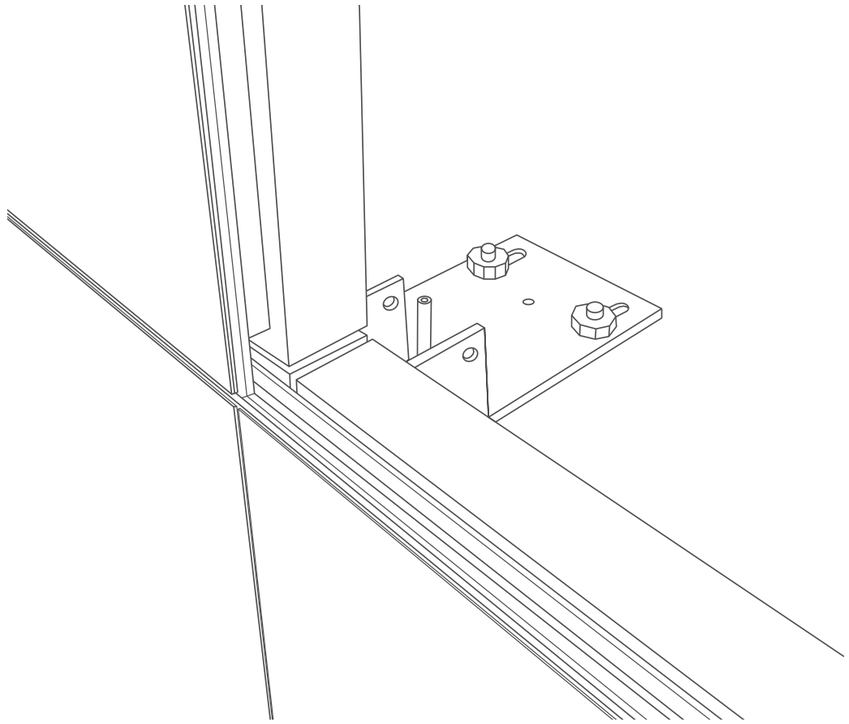
Built projects

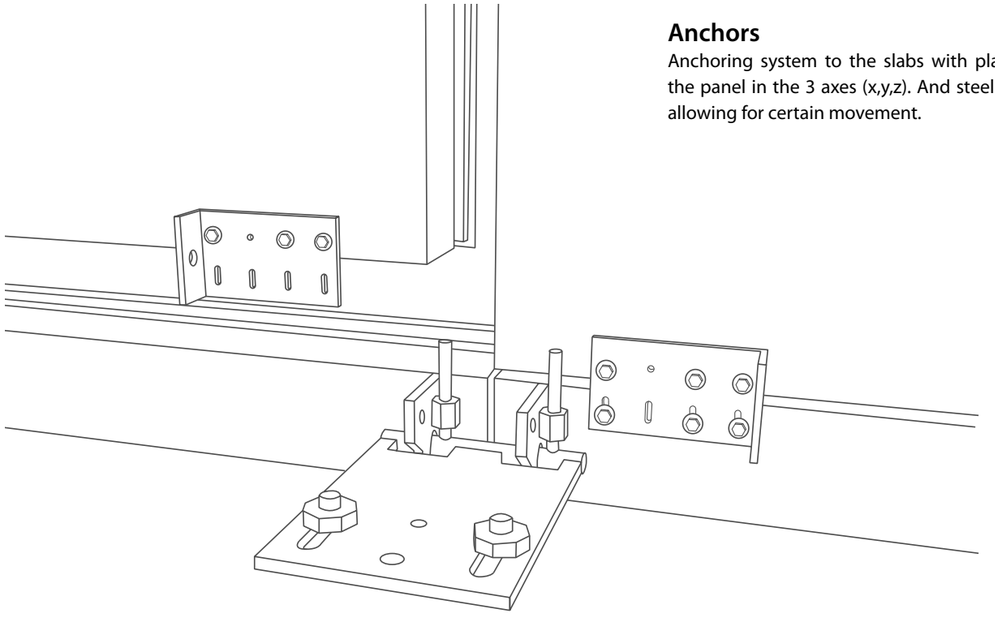
Office building Modsquare, New York, U.S.A.
MODFACADES system
Arquitect: Butech Technical Department · 3D Render: Pb3drender



Facade types

Depending on the XLIGHT porcelain panel fixing system to the facade structure, we can define two types of facade:

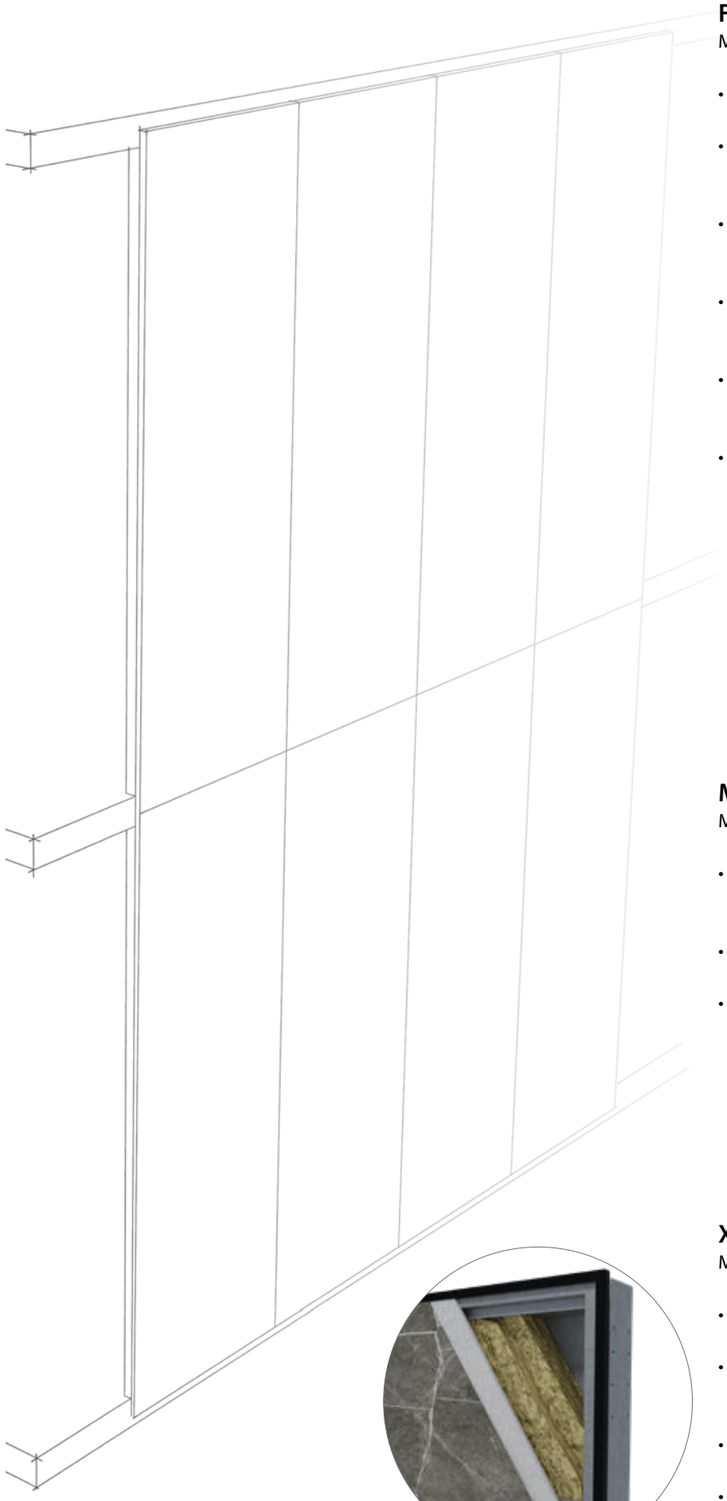




Anchors

Anchoring system to the slabs with plates allowing to level the panel in the 3 axes (x,y,z). And steel plates joining panels allowing for certain movement.

Characteristics



Façade structure.

Main characteristics:

- Façade anchored directly to the main structure of the building.
- Adapted to most of the structural systems used in building construction.
- Façade panels delivered from the factory completely finished, saving time and costs of work on site.
- Fast installation allowing to save time and costs during building process compared to traditional systems.
- Installation from the interior of the building without scaffolding reducing costs.
- Excellent thermic and acoustic performance.

Modulation of the facade.

Main characteristics:

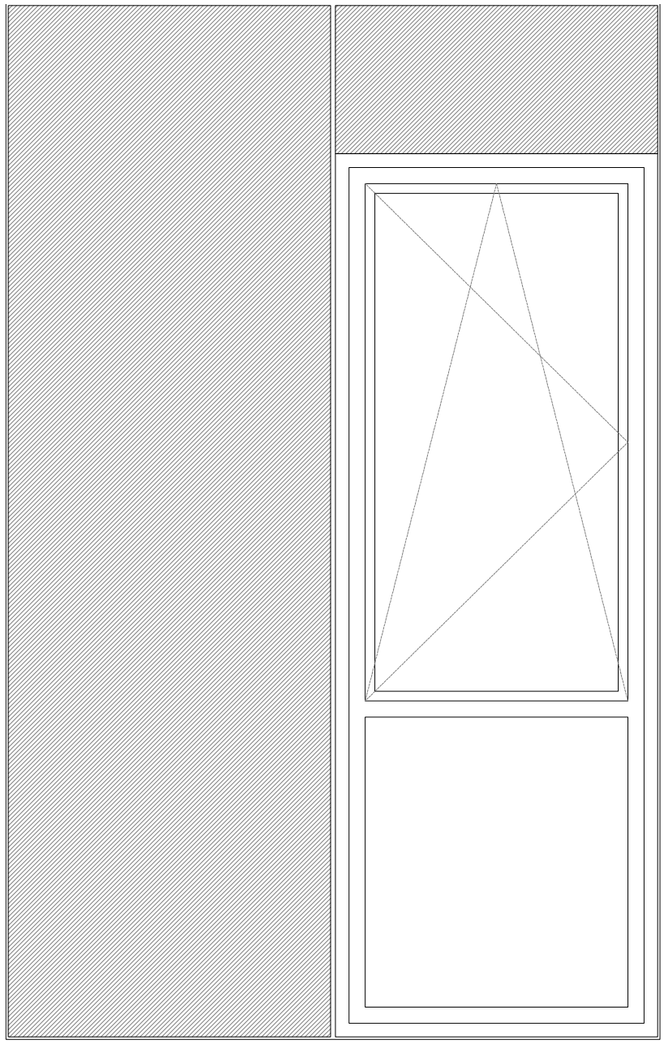
- Allows to cover the full span between slabs with just one panel using big format ceramics.
- Reduces the presence of joints in the façade.
- Joints 8mm width.

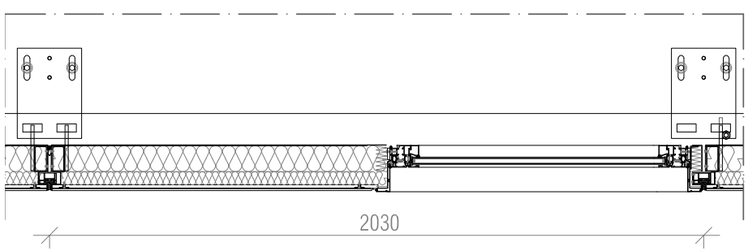
XTONE panels

Main Features:

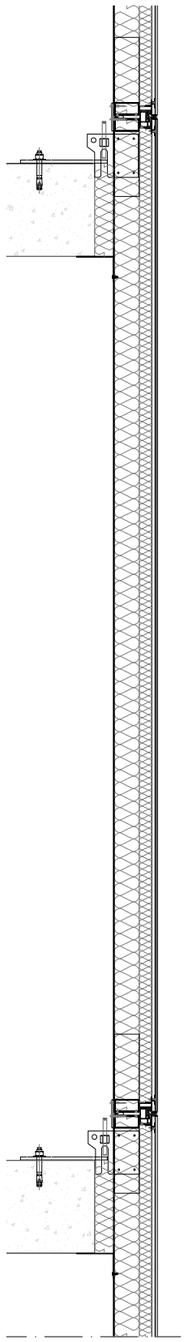
- Exclusive design by PORCELANOSA Grupo.
- Large format: up to 1500 x 3000 mm. For other dimensions, please consult Butech.
- Extremely light tiles: 7-15 kg/m^2.
- Resistant to atmospheric agents, the appearance of the slabs remains unchanged over time. Resistant to paint stains or graffiti.

These drawings are only sketches of tile modulation examples. For technical details of these façade systems, have a look the construction details at the next pages.



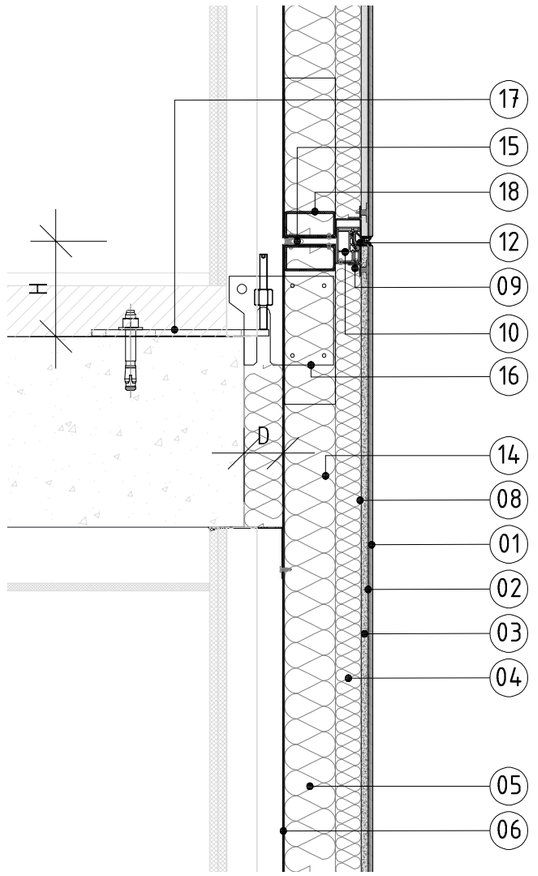


Horizontal section trough window



Vertical section opaque zone

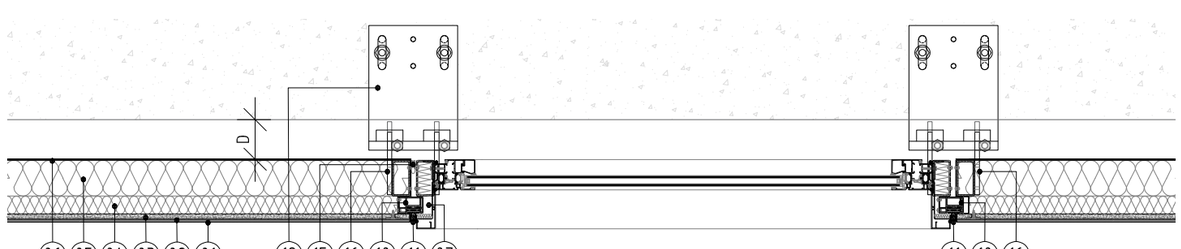
Construction details · MODFACADES



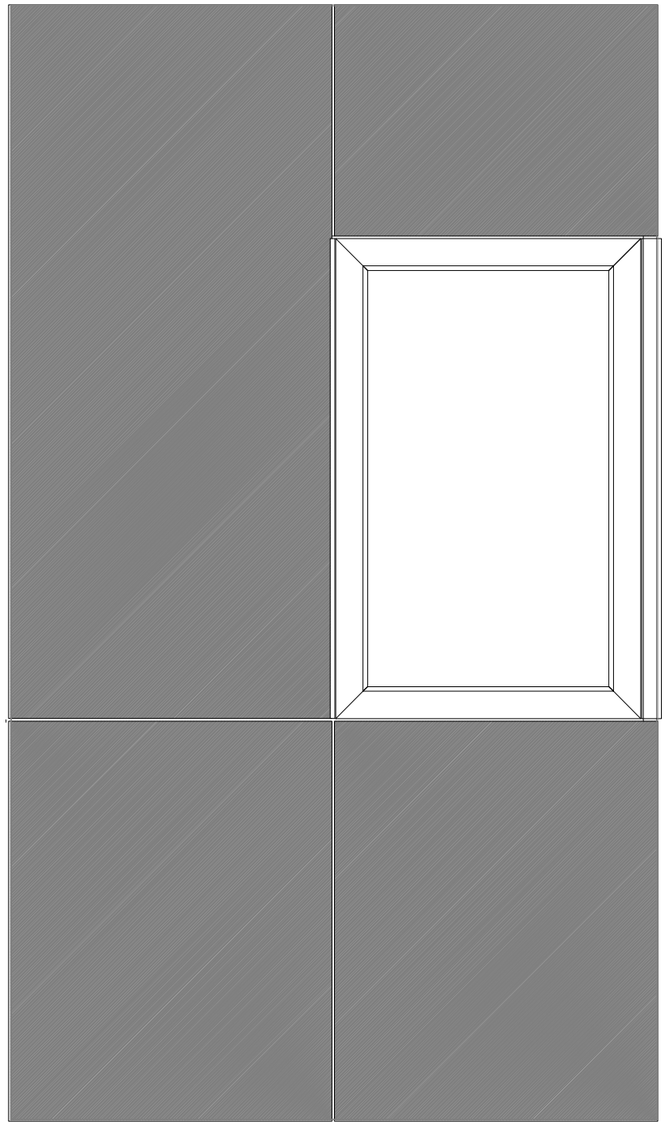
Vertical section. Structure

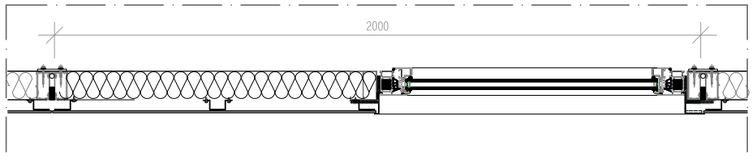
Elements of the system:

1. Ceramic tile e= 6 ó 3 mm.
2. Bicomponent adhesive.
3. Cement board panel.
4. Rockwool 90 kg/m^3 e=40 mm.
5. Rockwool 40 kg/m^3 e=80 mm.
6. Galvanized steel plate.
7. Frame, galvanized steel profile.
8. Crossbeam, "U" profile.
9. L profile.
10. PVC profile joint.
11. EPDM profile joint.
12. EPDM vertical joint.
13. Inox steel rivets .
14. False joint, coextrusion profile.
15. Interior sealant.
16. Support clamp.
17. Anchor plate.
18. Support frame, tubular profile.

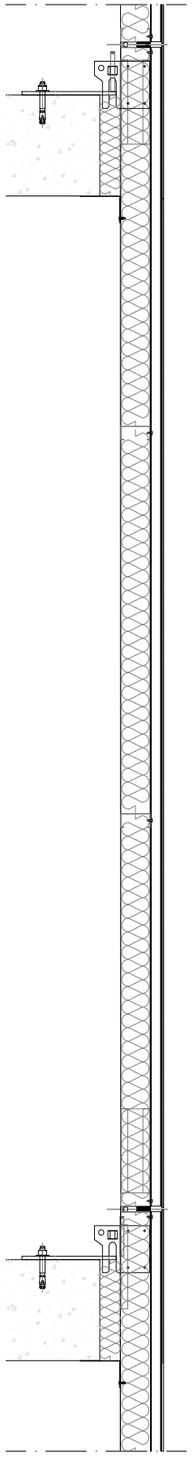


Horizontal section. Joint between panels



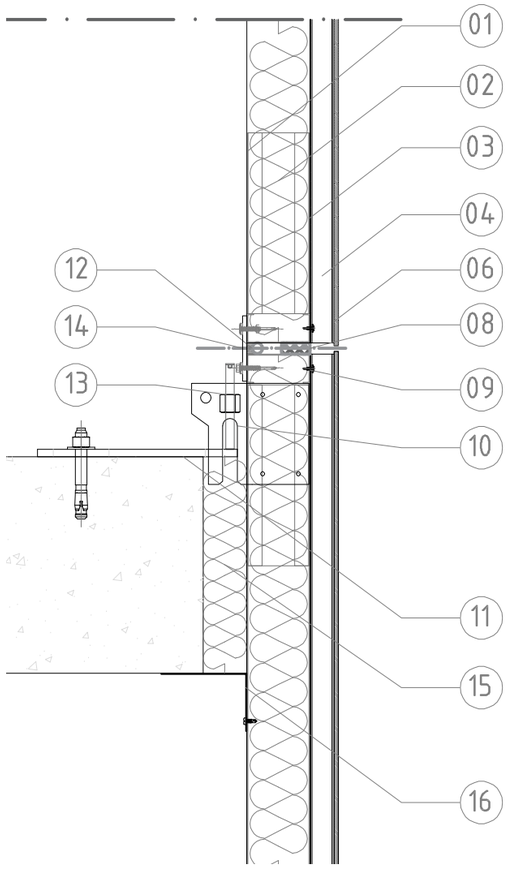


Horizontal section trough window



Vertical section opaque zone

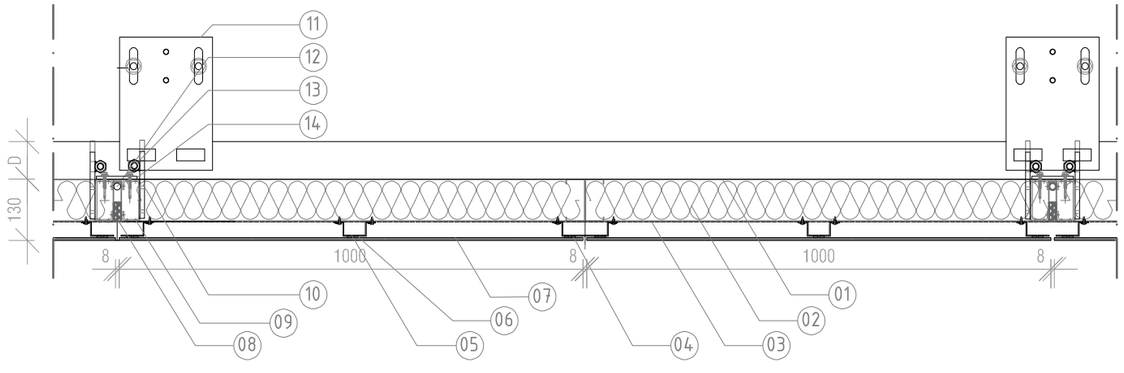
Construction details · VF MODFACADES



Vertical section. Structure

Elementos del sistema:

1. Galvanized Steel sheet
2. Mineral wool
3. Waterproof membrane
4. Aluminum top-hat profile 140.30
5. Aluminum top-hat profile 90.30
6. Double-sided tape and structural adhesive
7. Ceramic panel (3 or 6 mm width)
8. Neoprene joint
9. Galvanized steel frame
10. Anchoring clamp fixed to frame
11. Anchoring plate
12. Interior sealant
13. Levelling screw
14. Galvanized steel plate joining panels
15. Rockwool (Fire barrier)
16. L profile (Fire barrier)



Horizontal section. Joint between panels

butech reserves the right to amend and/or eliminate certain models featured shown in this catalogue without prior warning. The colours of the tiles may differ slightly from the originals.

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