

butech



Façades

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 offers this catalog to architecture professionals, where from a careful selection of materials, mainly Grupo PORCELANOSA ceramics, various facade systems are proposed that adapt to the most demanding needs of any project.

Butech, born in 2001 within Grupo PORCELANOSA, has had the clear objective since its creation of maintaining 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 and functional performance in the installation of ceramics.





INDEX

14

VF PORCELAIN PANEL

42

**TYPES, CHARACTERISTICS AND
DETAILS VF PORCELAIN PANEL**

50

VF XLIGHT / XTONE

64

**TYPES, CHARACTERISTICS AND DETAILS
VF XLIGHT / XTONE**

72

VF KRION

90

**TYPES, CHARACTERISTICS AND DETAILS
VF KRION**

94

MODFACADES

106

**CHARACTERISTICS AND DETAILS
MODFACADES**

Experience, global presence

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

With over 500 000 m² of VF installed, as the absolute global leader in the installation of ceramics, Butech is synonymous with quality, efficiency, and guarantee of success, with over 5000 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, Shenzhen, China · KRION VF System · KRION® 1100 Snow White
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%.



W I N T E C H
BUILDING ENVELOPE TESTING



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, 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.

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 metallic structure.

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/cm², 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 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.
- Lacquered aluminum uprights on which the porcelain panels are installed.
- Stainless steel clips for fixing the ceramic piece to the uprights.
- Self-drilling joint screws between vertical uprights and aluminum spacers.

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

Certifications and technical testing



France
Avis Technique AT
2.2/20-1807_v1 AT 2.2/20-1806_v1
expedido por el Secr tariat de la
Comission des Avis Techniques



Spain
DIT 530R/20 del
Instituto Eduardo
Torroja de Madrid.



United States
Florida Approval
FL20391



United Kingdom
BBA Agreement
Certificate 22/6111
en el Reino Unido



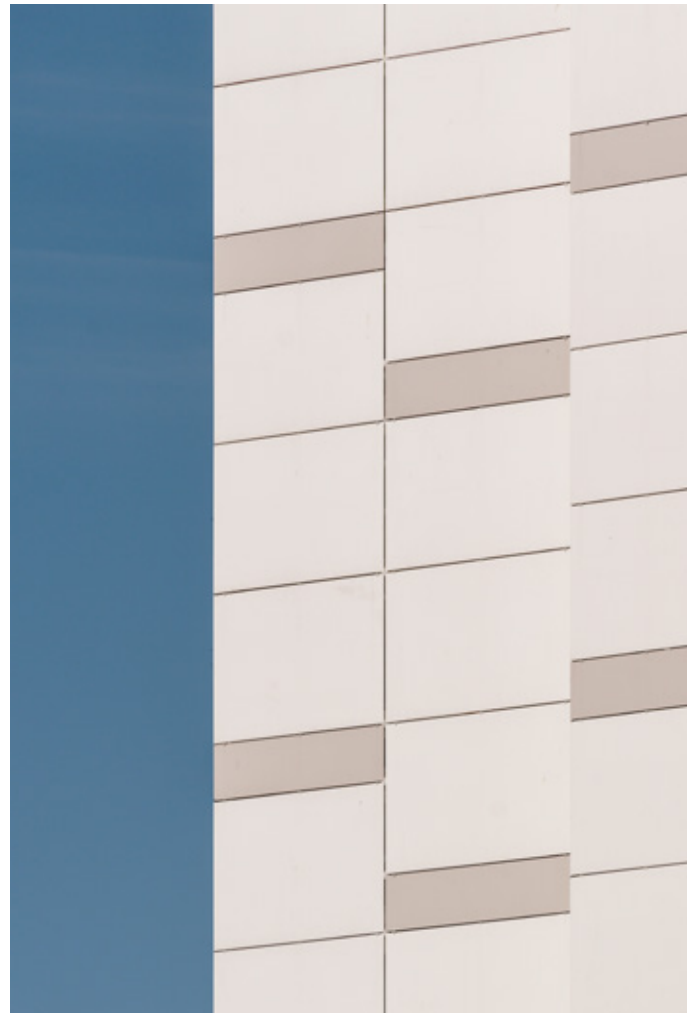
United Kingdom
WINTech Building
Envelope Testing
Report No R12764



United States
ICC
(ICC-ES Evaluation
Report ESR-3343)



Porcelain panel system - The Filaments, Wandsworth, United Kingdom
VF Porcelain panel system with concealed clips - Extreme White
Architect: The Filaments - Photography: Alex Keane, Aa Creative



THE SILVA

New York, U.S.A.

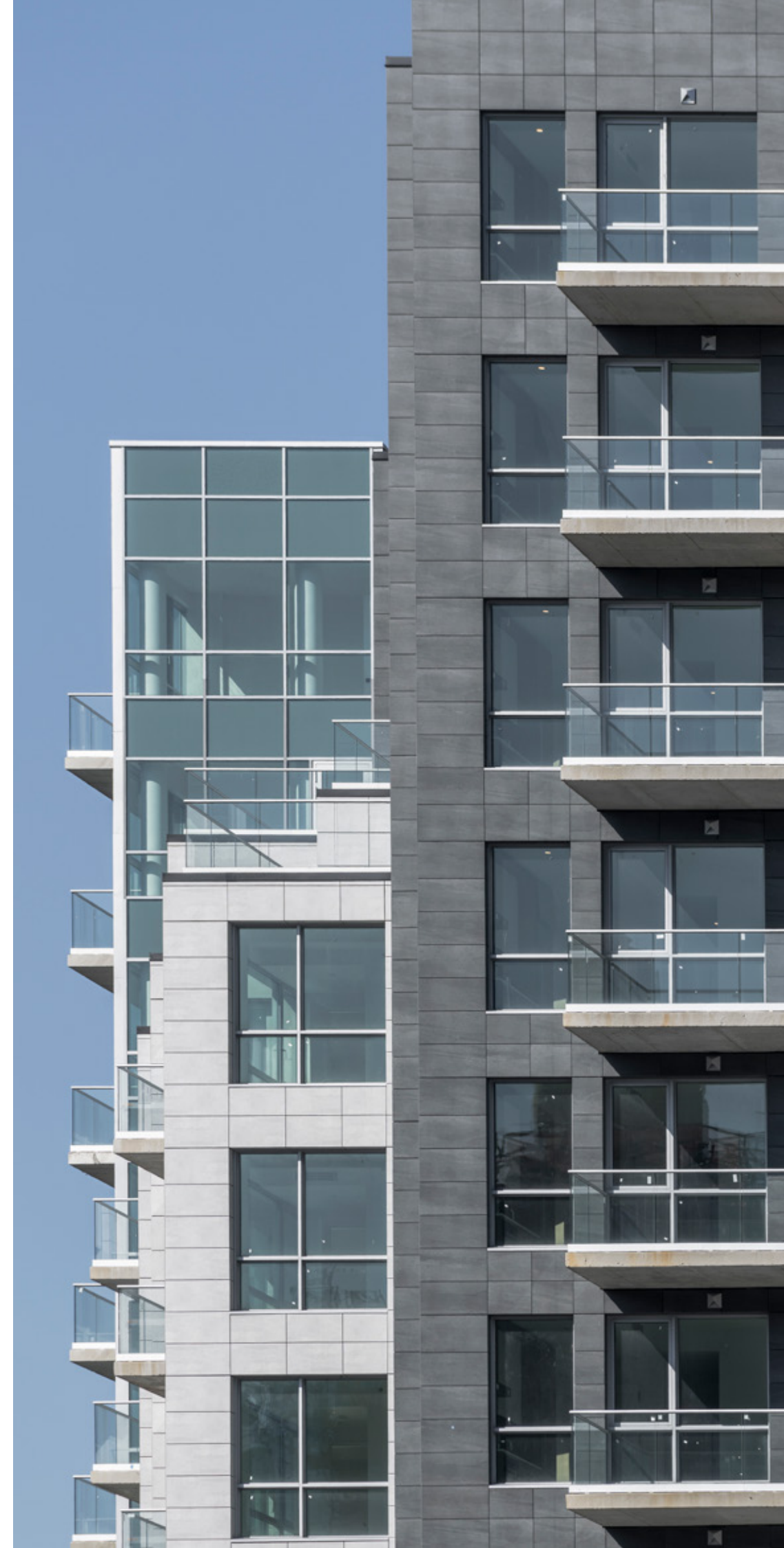
VF Porcelain system with concealed clips - Krono Clay Nature

Architect: Grimshaw / Core Architecture + Design

Photography: Ron Ngiam

THE PRIME

New York, U.S.A.
VF Porcelain system with concealed clips · Aged Dark Nature
Architect: SRRA+E
Photography: Imagen Subliminal



TANGRAM NB3

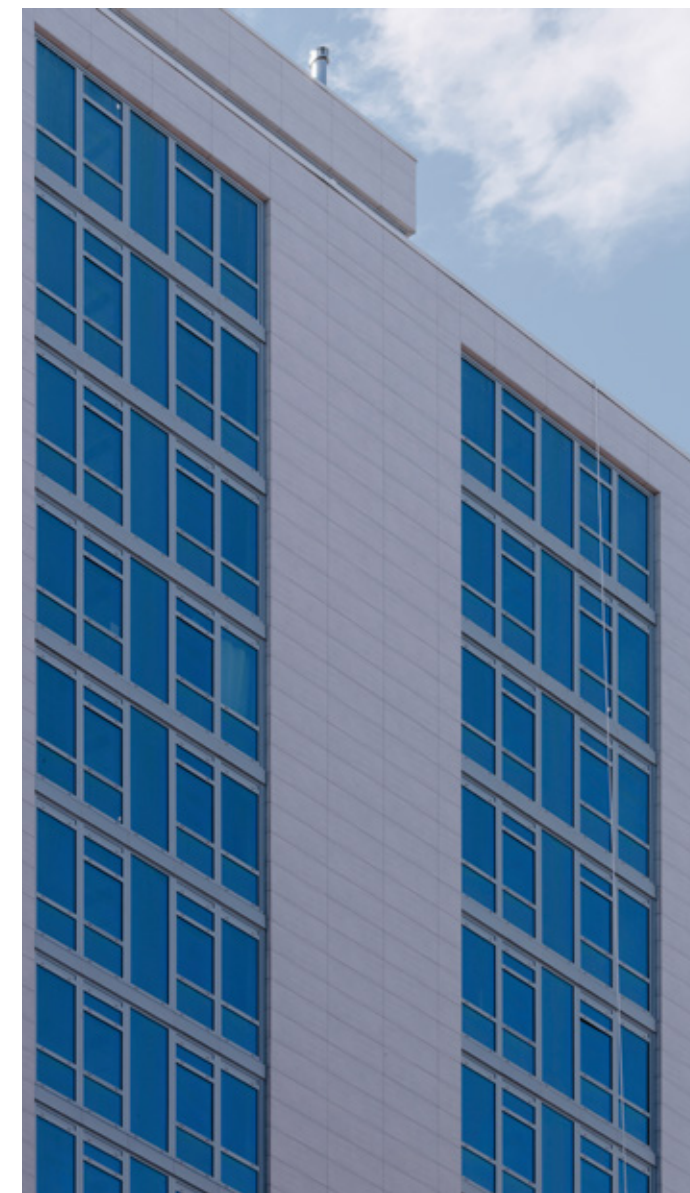
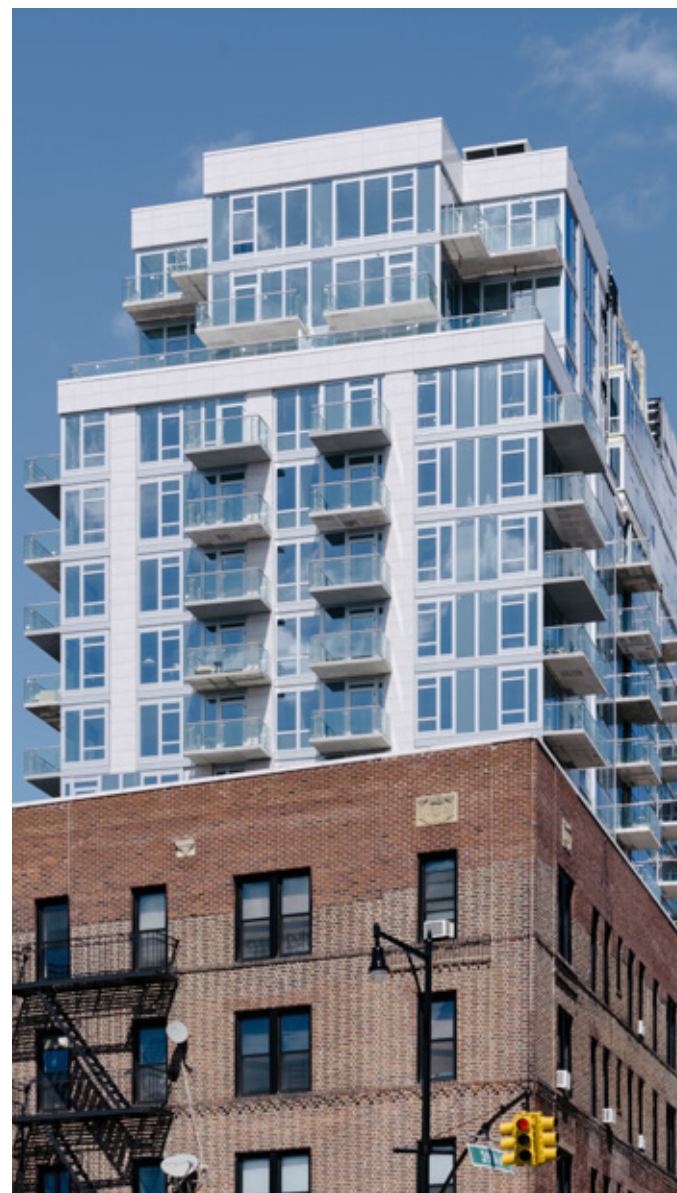
New York, U.S.A.

VF Porcelain system with concealed clips

Ferroker Niquel / Deep Light Grey / Extreme White

Architect: Margulies Hoelzli Architects

Photography: Imagen Subliminal



321 WHITE AVE

New York, U.S.A.

VF Porcelain system with concealed clips

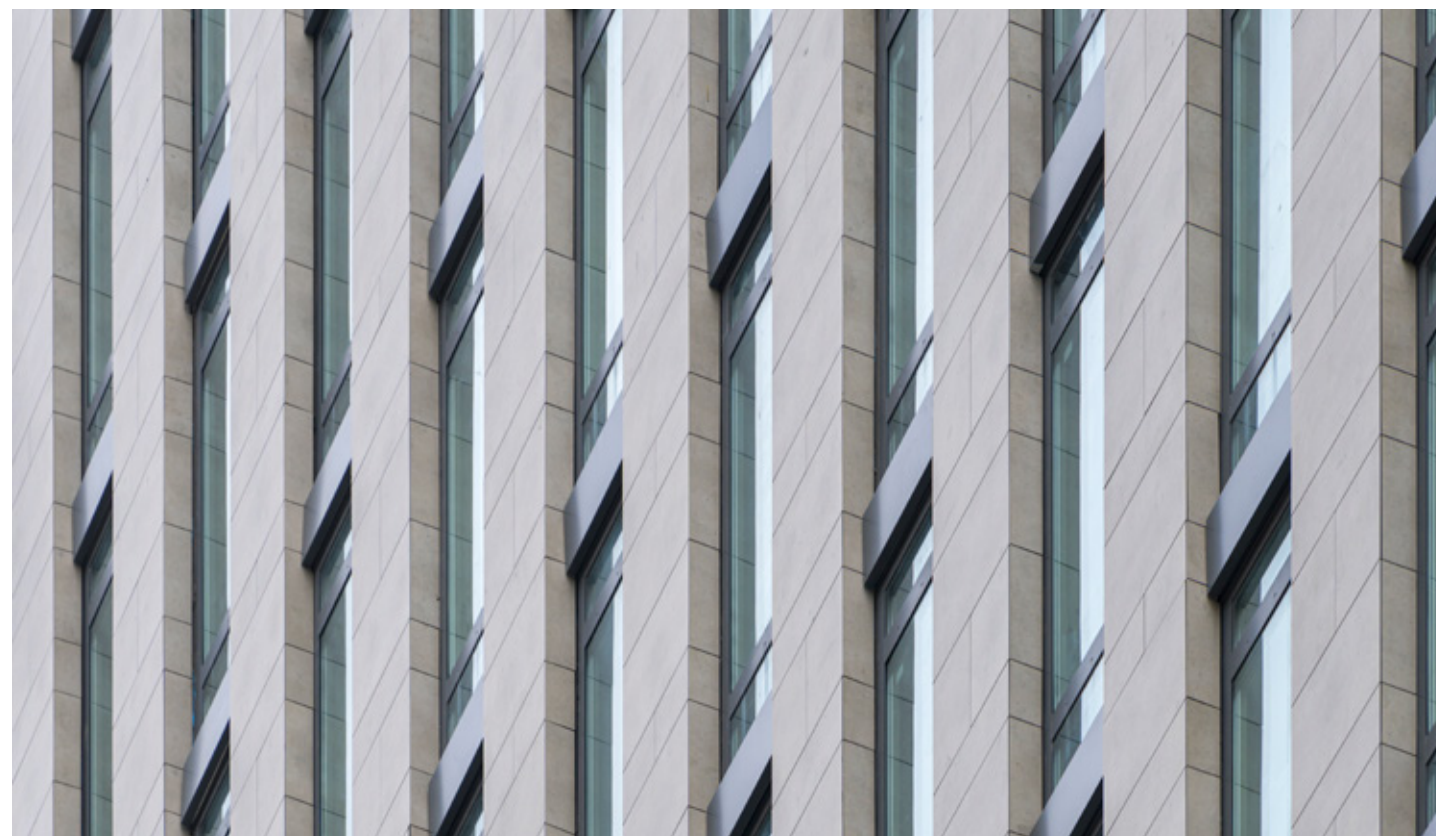
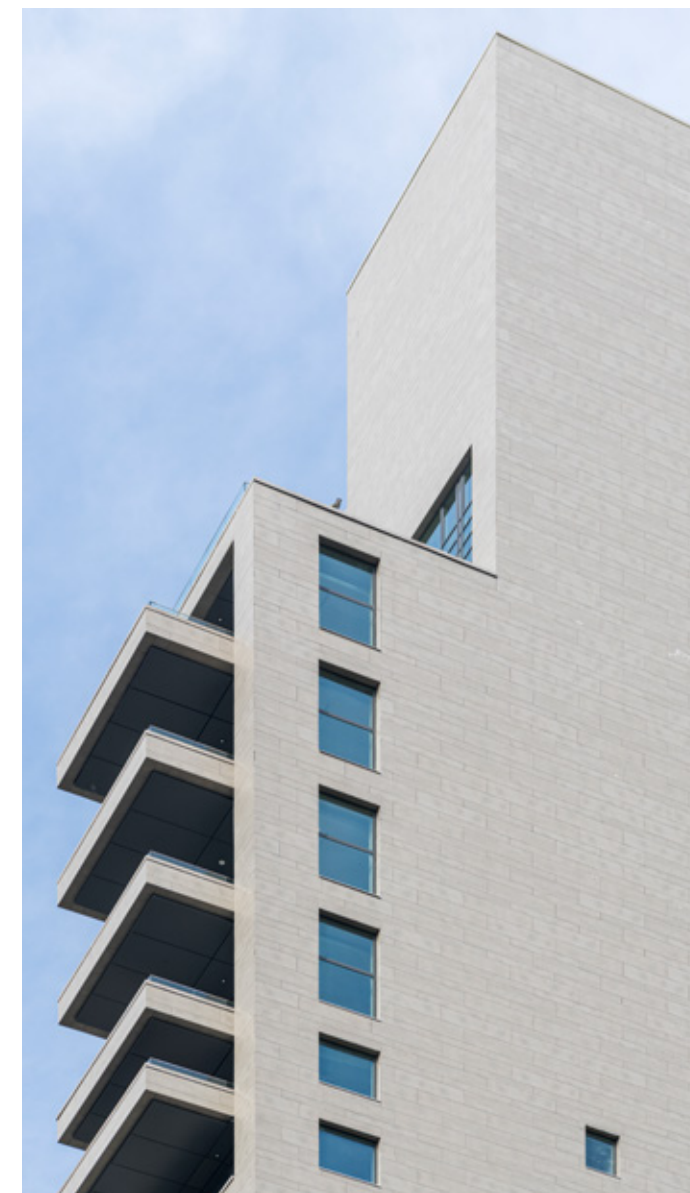
Architect: ND Architecture and Design

Photography: Imagen Subliminal



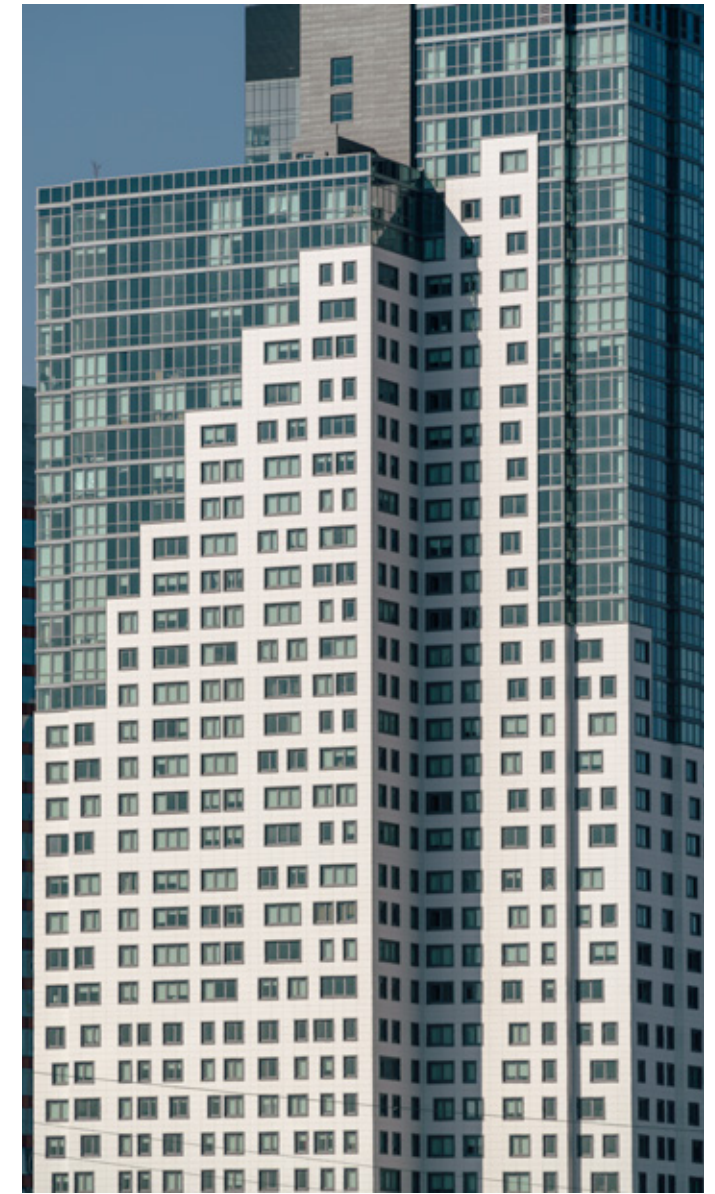
THE LEYTON

New York, U.S.A.
VF Porcelain system with concealed clips
Architect: Manuel Glas Architect
Photography: Imagen Subliminal



ALTA LIC TOWERS

New York, U.S.A.
VF Porcelain system with concealed/visible clips · Extreme White
Architect: The Stephen B. Jacobs Group PC
Photography: Imagen Subliminal

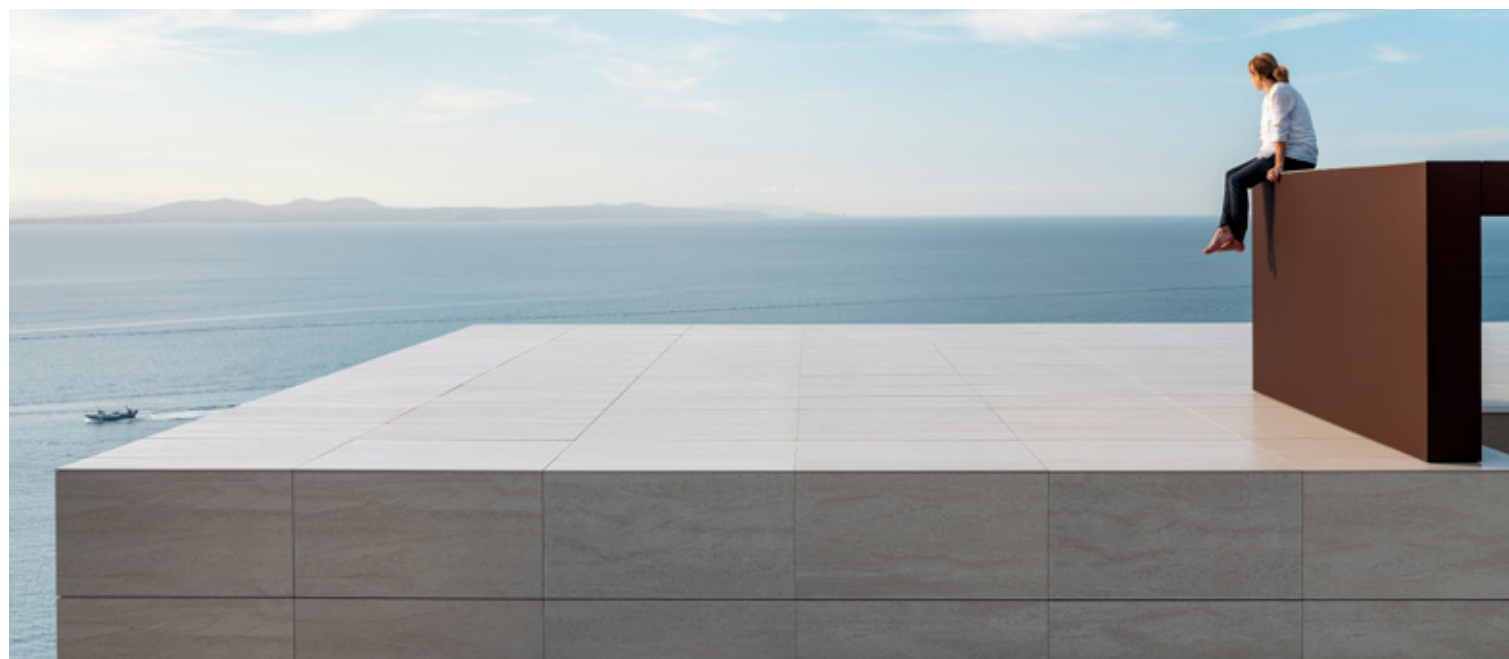




LAFINCA - LGC3

Pozuelo de Alarcón, Spain
VF Porcelain system with concealed clips - Newport White
Architect: La Finca Real State
Photography: Alex del Río





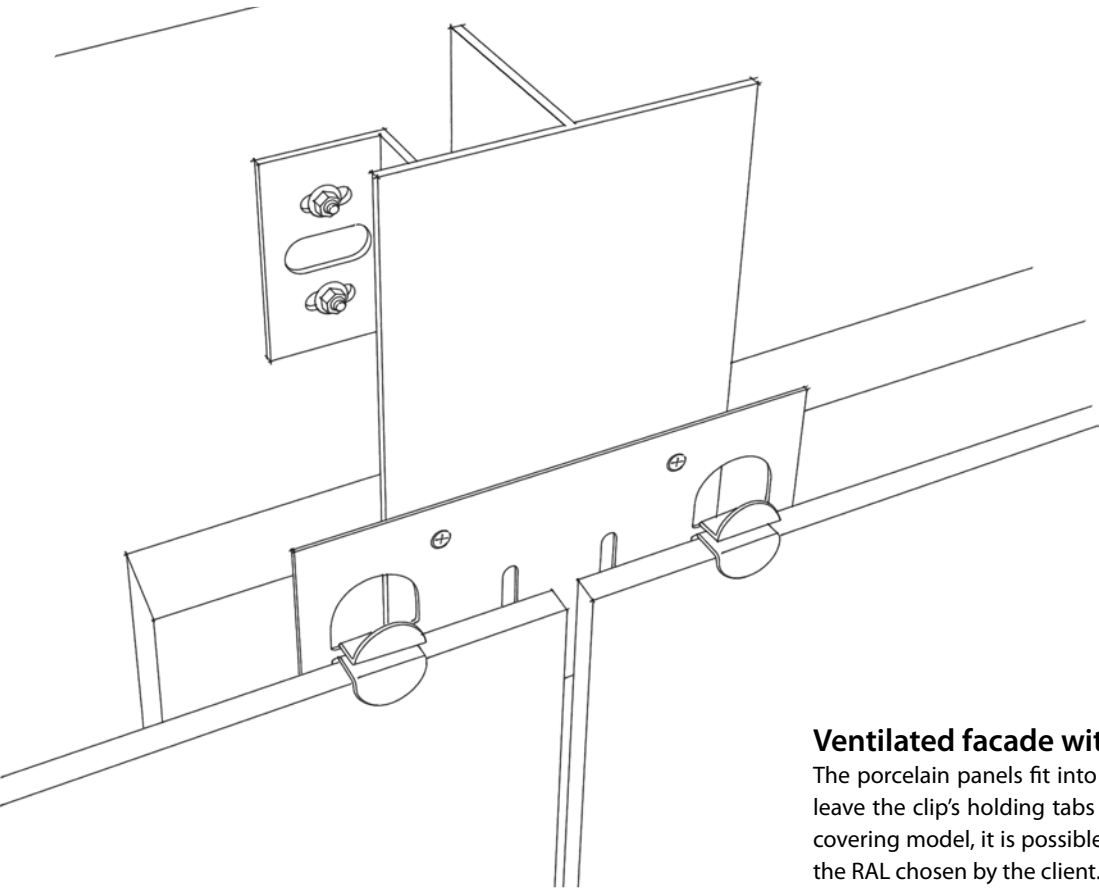
VILLA SRT

Alt Empordà, Spain
VF Porcelain system with concealed clips
Architect: Ilan i Culell Arquitectura
Photography: Simón García / ARQFOTO



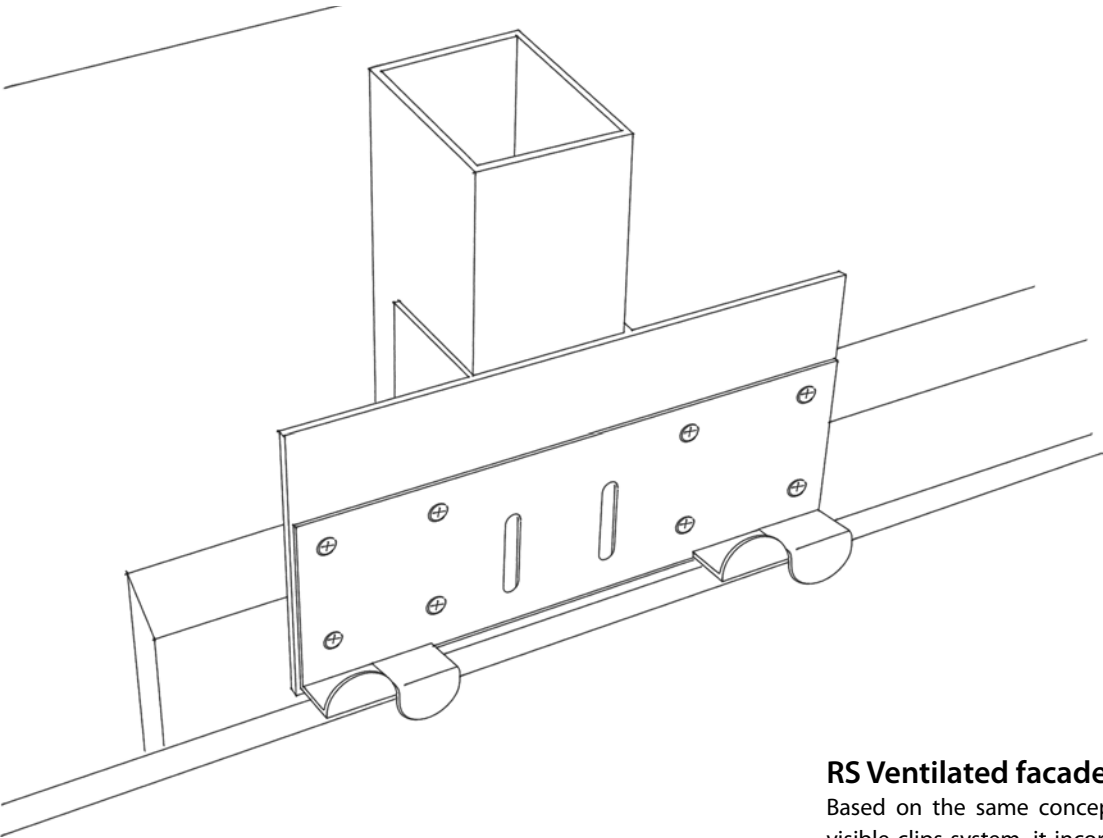
Facade types

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



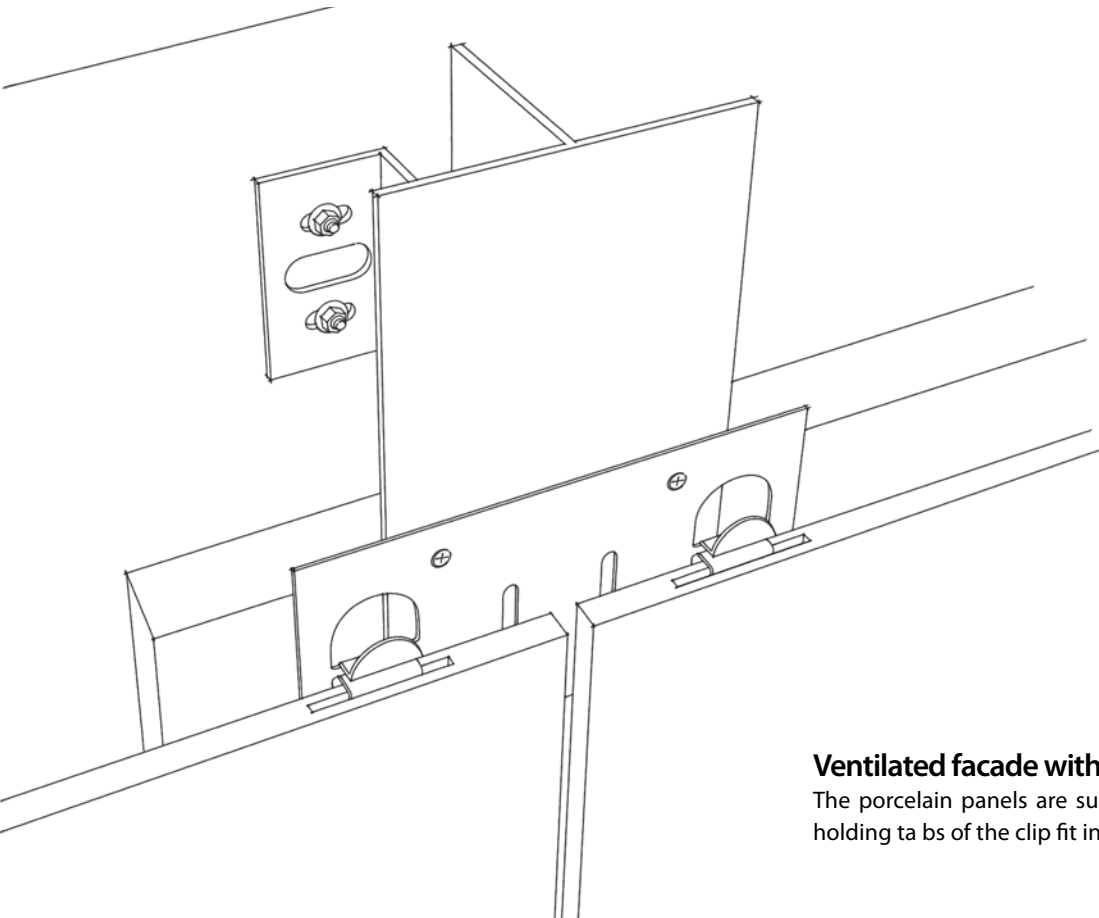
Ventilated facade with visible clips.

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 chosen by the client.



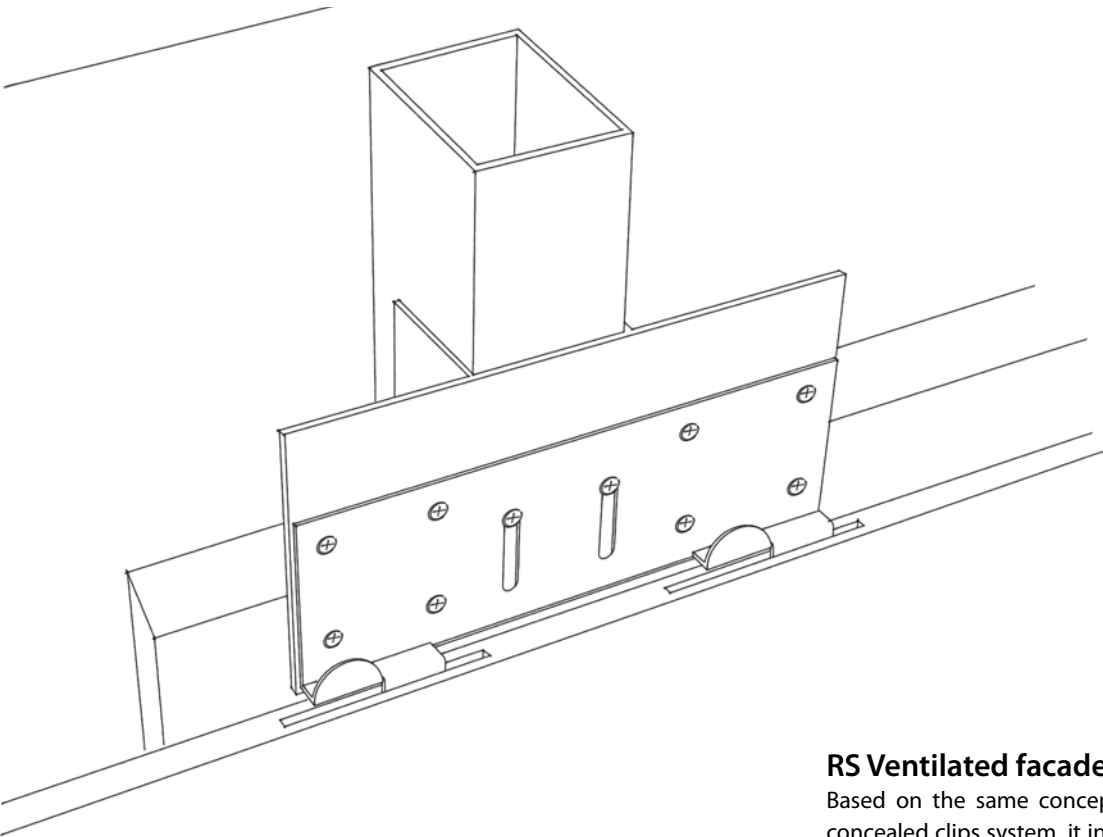
RS Ventilated facade with visible clips.

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 separator, 60 x 40 mm tubular profile, π -shaped reinforcing element, and high-performance clip.



Ventilated facade with concealed clips.

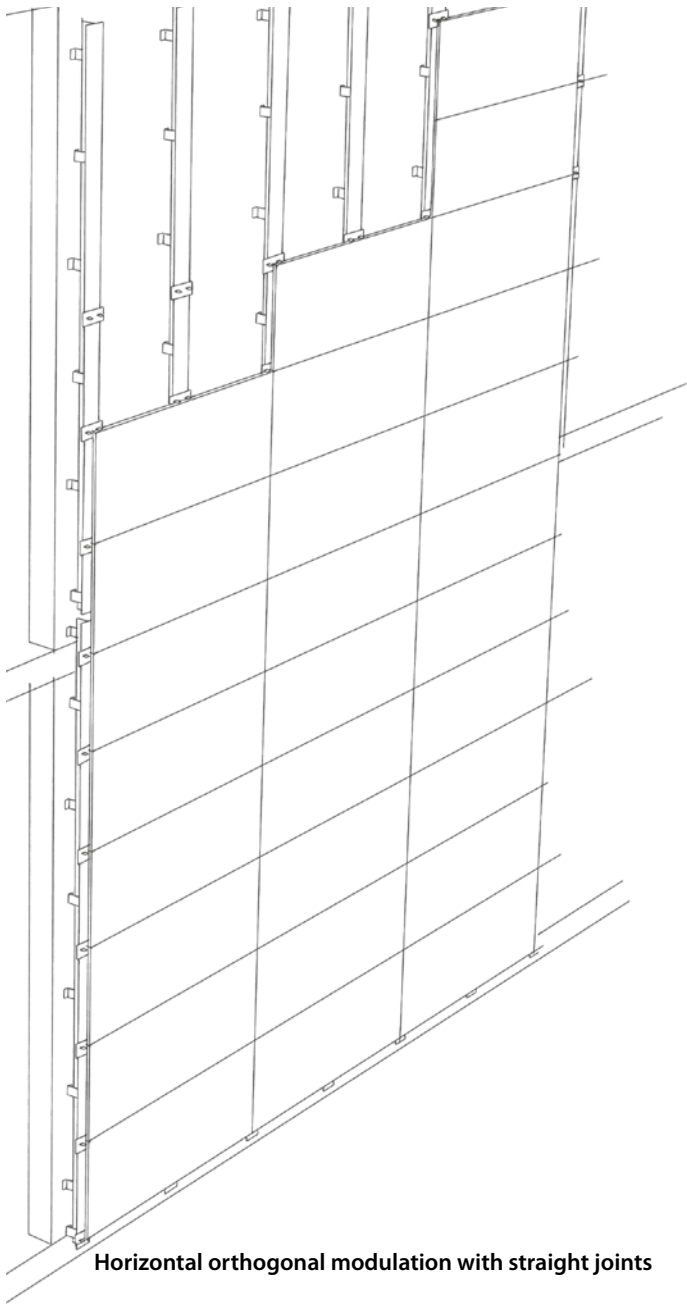
The porcelain panels are supplied with side slots where the holding tabs of the clip fit in, leaving them concealed.



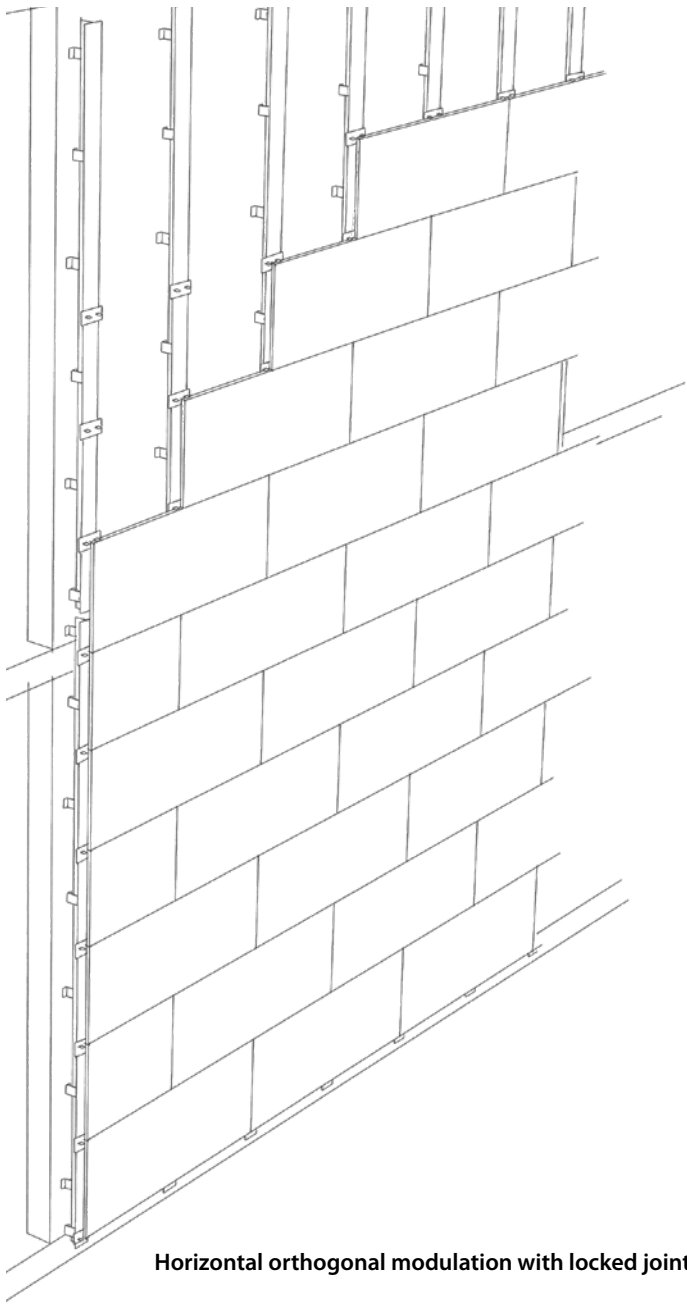
RS Ventilated facade with concealed clips.

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 separator, 60 x 40 mm tubular profile, π -shaped reinforcing element, and high-performance clip.

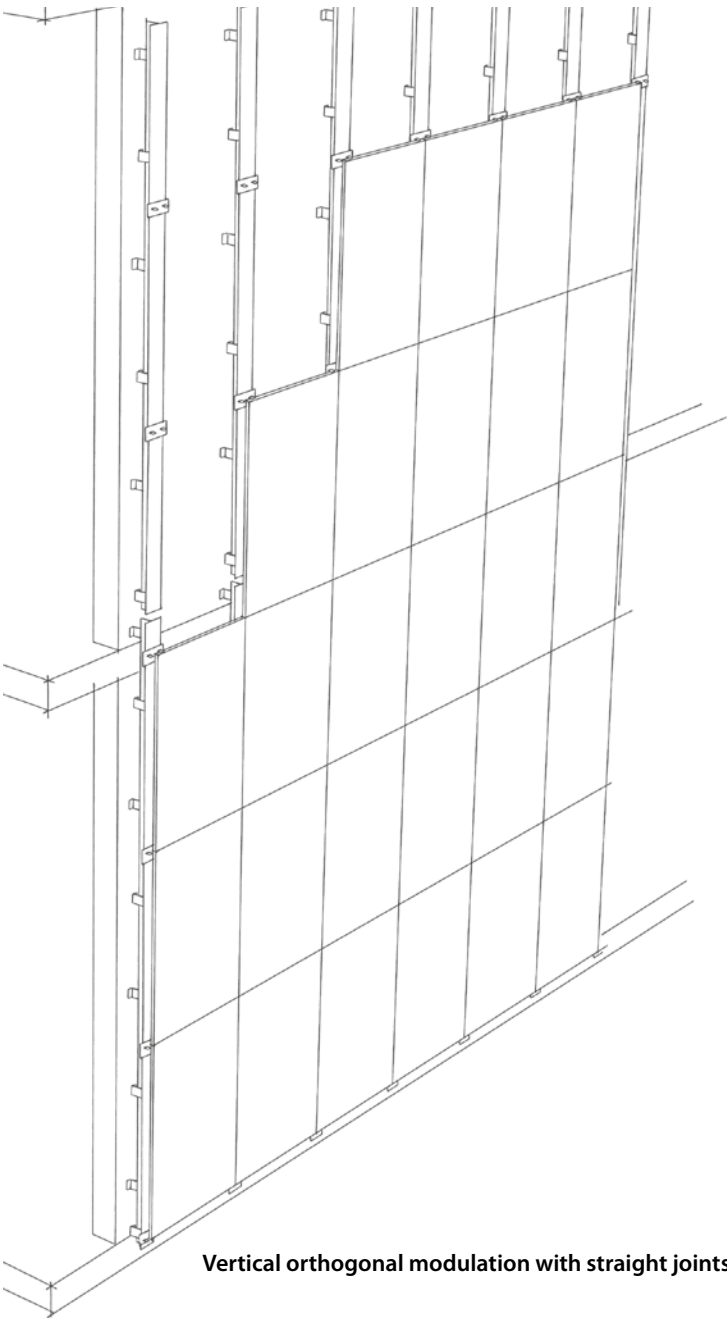
Characteristics



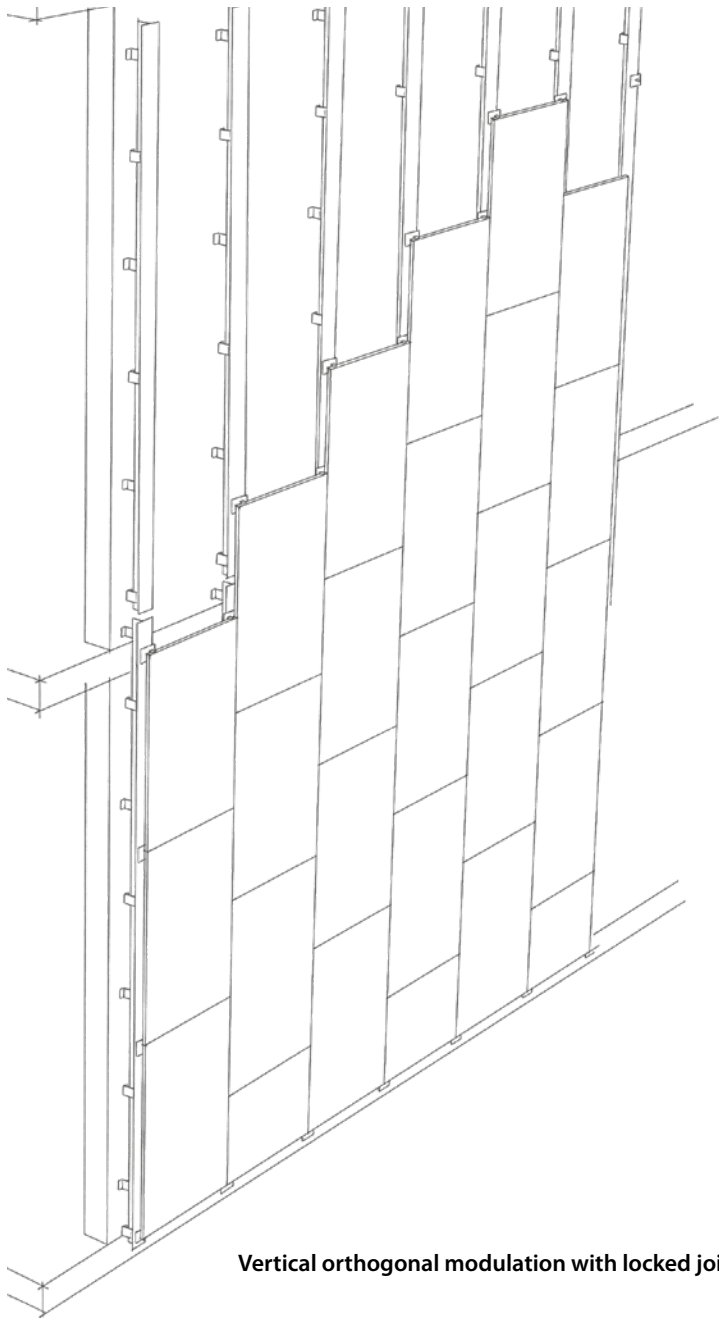
Horizontal orthogonal modulation with straight joints



Horizontal orthogonal modulation with locked joints



Vertical orthogonal modulation with straight joints



Vertical orthogonal modulation with locked joints

Facade structure.

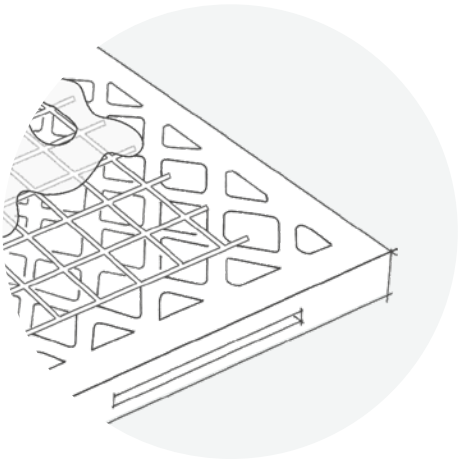
Main characteristics:

- 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/m².
- 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 “fish scale” pattern.



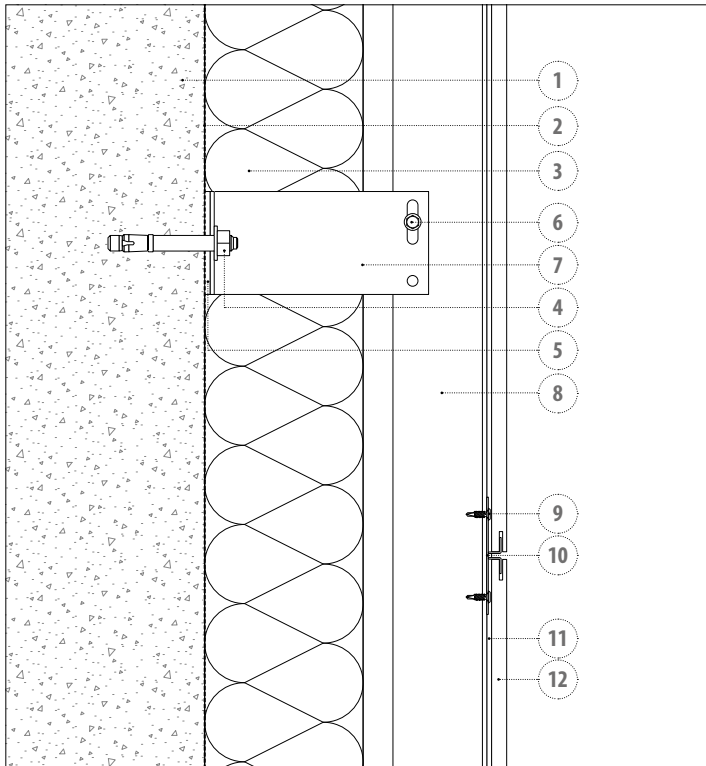
Porcelain panels.

Main characteristics:

- Exclusive design of PORCELANOSA Grupo.
- Wide variety 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.

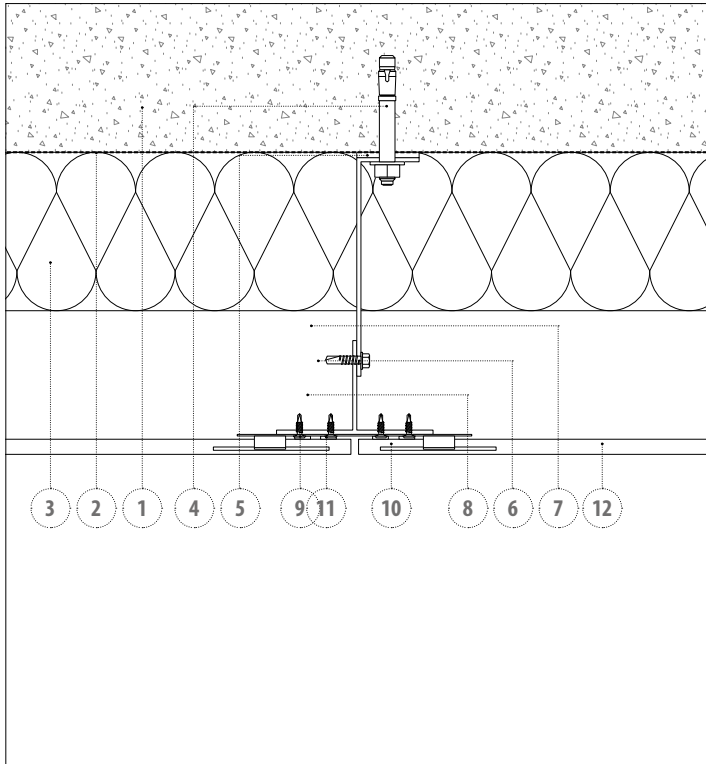
These drawings are only sketches of tile modulation examples. For technical details of these façade systems, have a look the construction details at the next pages.

Construction details · Concealed clip system

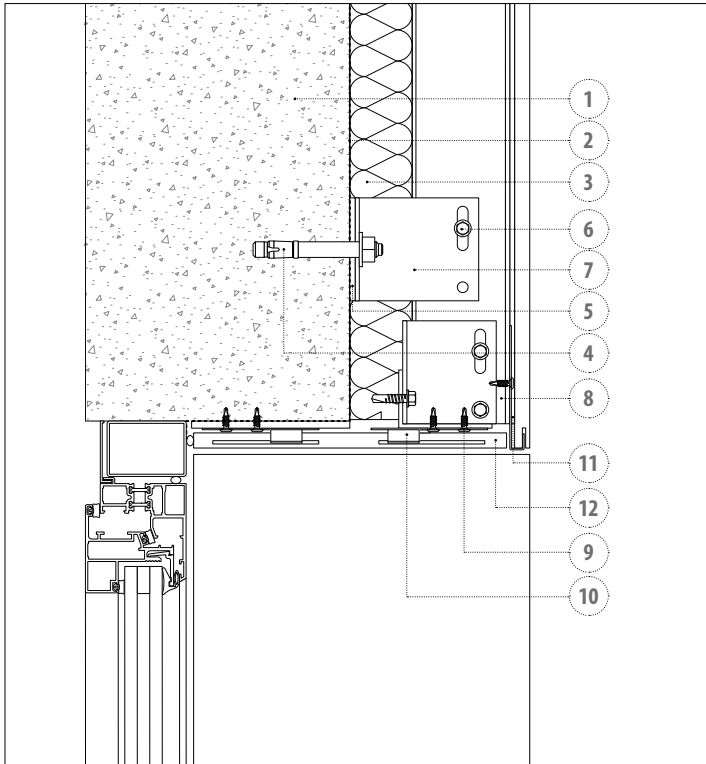


- Elements of the system:
- 1. Concrete support
 - 2. Waterproofing sheet
 - 3. Thermal insulation
 - 4. Anchor for concrete
 - 5. Thermal break
 - 6. Stainless steel self-drilling screw
 - 7. Secondary L-shaped aluminum spacer
 - 8. Aluminum T-shaped upright
 - 9. Self-drilling screw
 - 10. Concealed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

Vertical cross-section

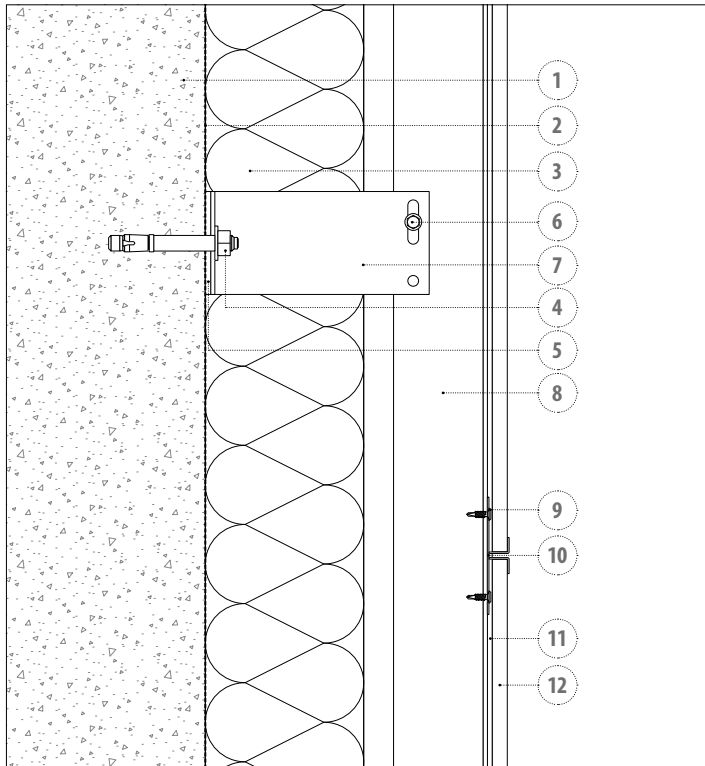


Horizontal cross-section



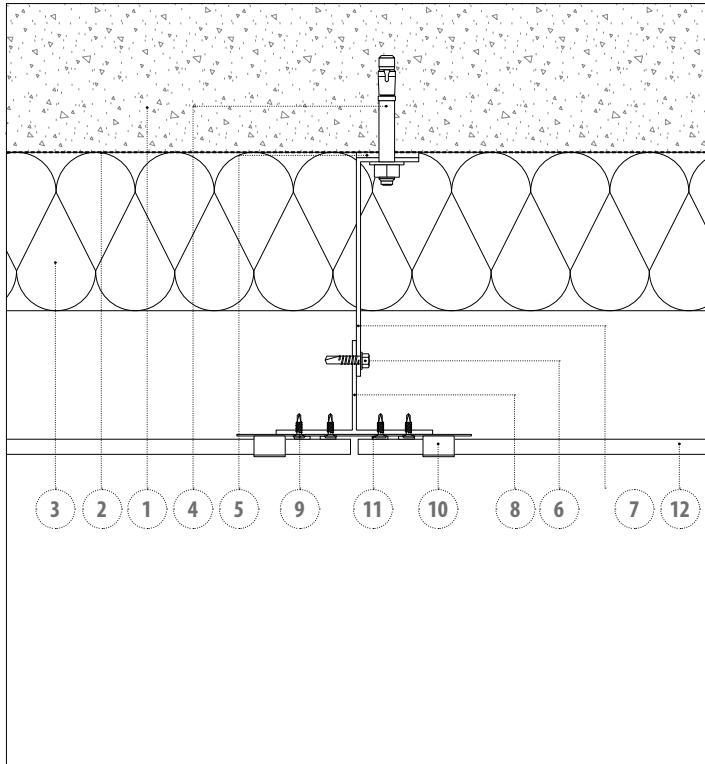
Lintel

Construction details · Visible clip system

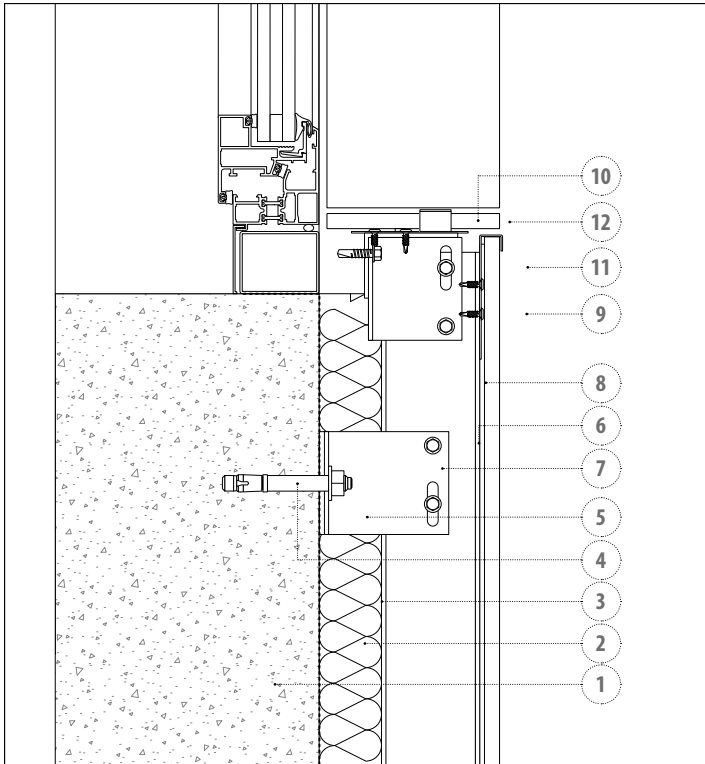


- Elements of the system:
- 1. Concrete support
 - 2. Waterproofing sheet
 - 3. Thermal insulation
 - 4. Anchor for concrete
 - 5. Thermal break
 - 6. Stainless steel self-drilling screw
 - 7. Secondary L-shaped aluminum spacer
 - 8. Aluminum T-shaped upright
 - 9. Self-drilling screw
 - 10. Visible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

Vertical cross-section

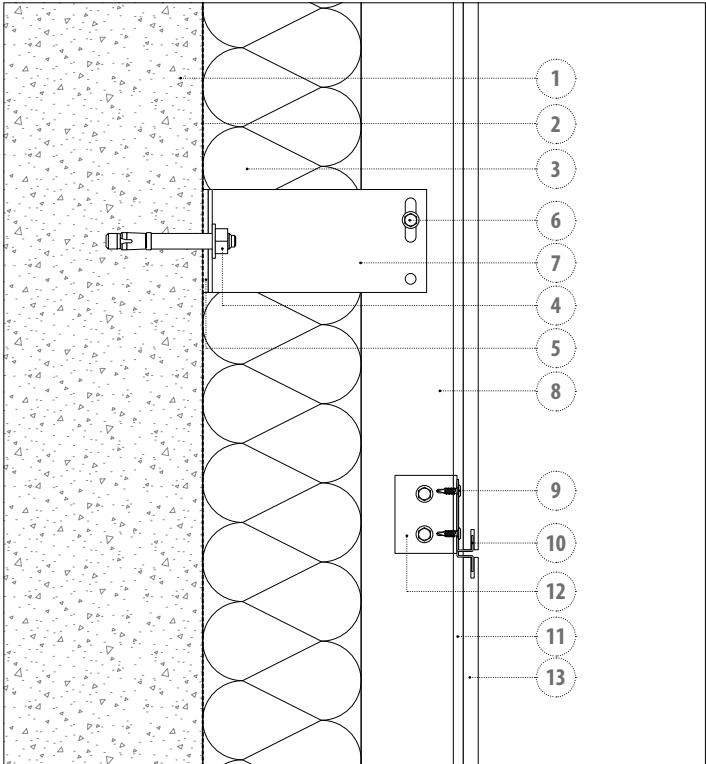


Horizontal cross-section



Sill

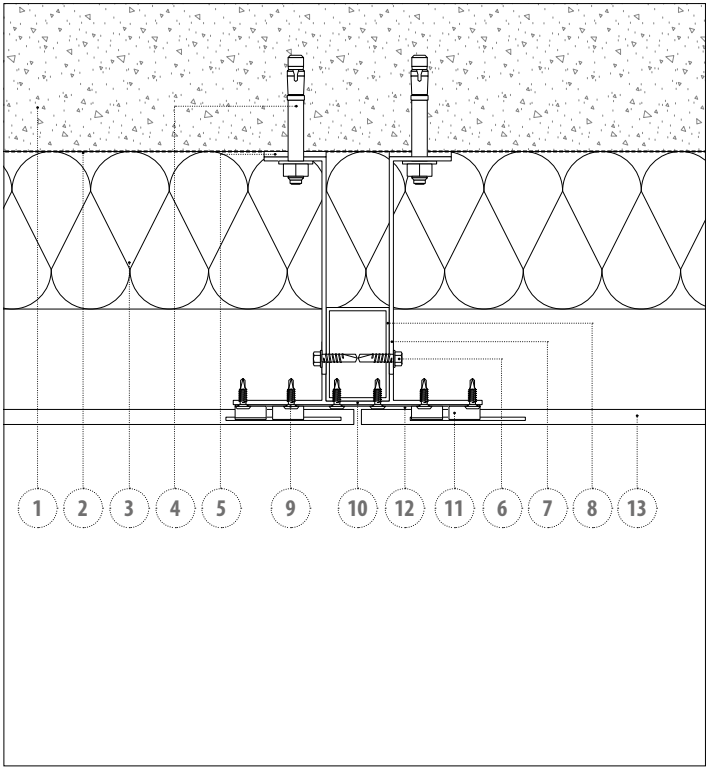
Construction details · RS system with concealed clip



Elements of the system:

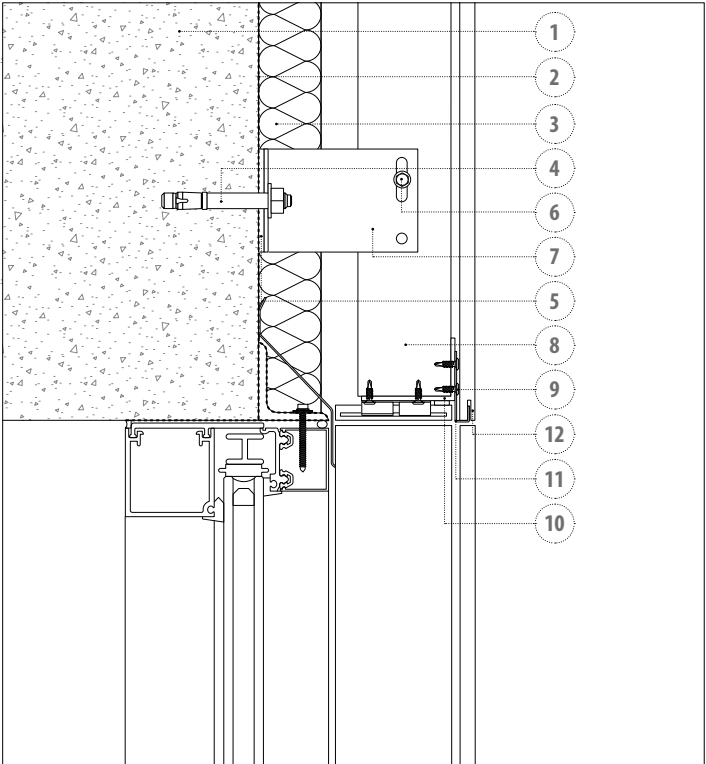
- 1. Concrete support
- 2. Waterproofing sheet
- 3. Thermal insulation
- 4. Anchor for concrete
- 5. Thermal break
- 6. Stainless steel self-drilling screw
- 7. Secondary L-shaped aluminum spacer
- 8. Vertical aluminum tubular profile
- 9. Self-drilling screw
- 10. π -shape reinforcement piece
- 11.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

Vertical cross-section



Horizontal cross-section

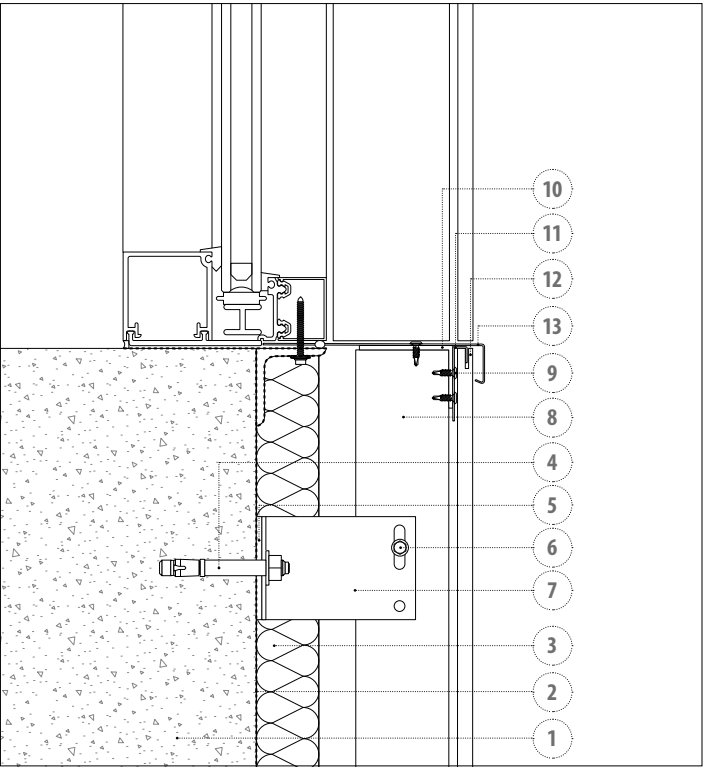
Construction details · RS system with concealed clip



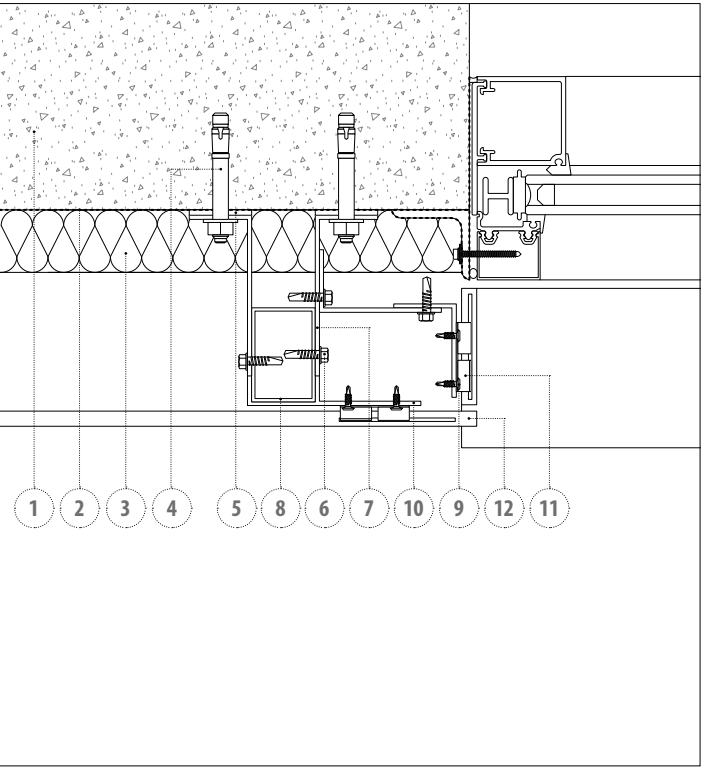
Elements of the system:

- 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. π -shape reinforcement piece
- 11. High performance concealed clip
- 12. Porcelain panel
- 13. Metal window casings

Lintel



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 staples that ensure the bonding of porcelain stoneware to the metallic structure of the facade.

XTONE / XLIGHT porcelain stoneware plates are characterised by their large size, measuring up to 1600 mm x 3200 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 / XTONE ventilated facades with hidden anchorage are supplied fixed to a metal substructure that allows them to be fixed on to the building structure.

Estructura metálica de la fachada ventilada

- Mechanically anchoring the facade to the enclosure, according to the type of support.
- L-shaped aluminium separators determine the cavity between the enclosure and the ceramic coating.
- Vertical aluminium pillars onto which the porcelain stoneware pieces are fitted.
- Stainless steel staples for anchoring the XLIGHT plates to the vertical pillars.
- Self-drilling screws to connect vertical pillars and aluminium separators.

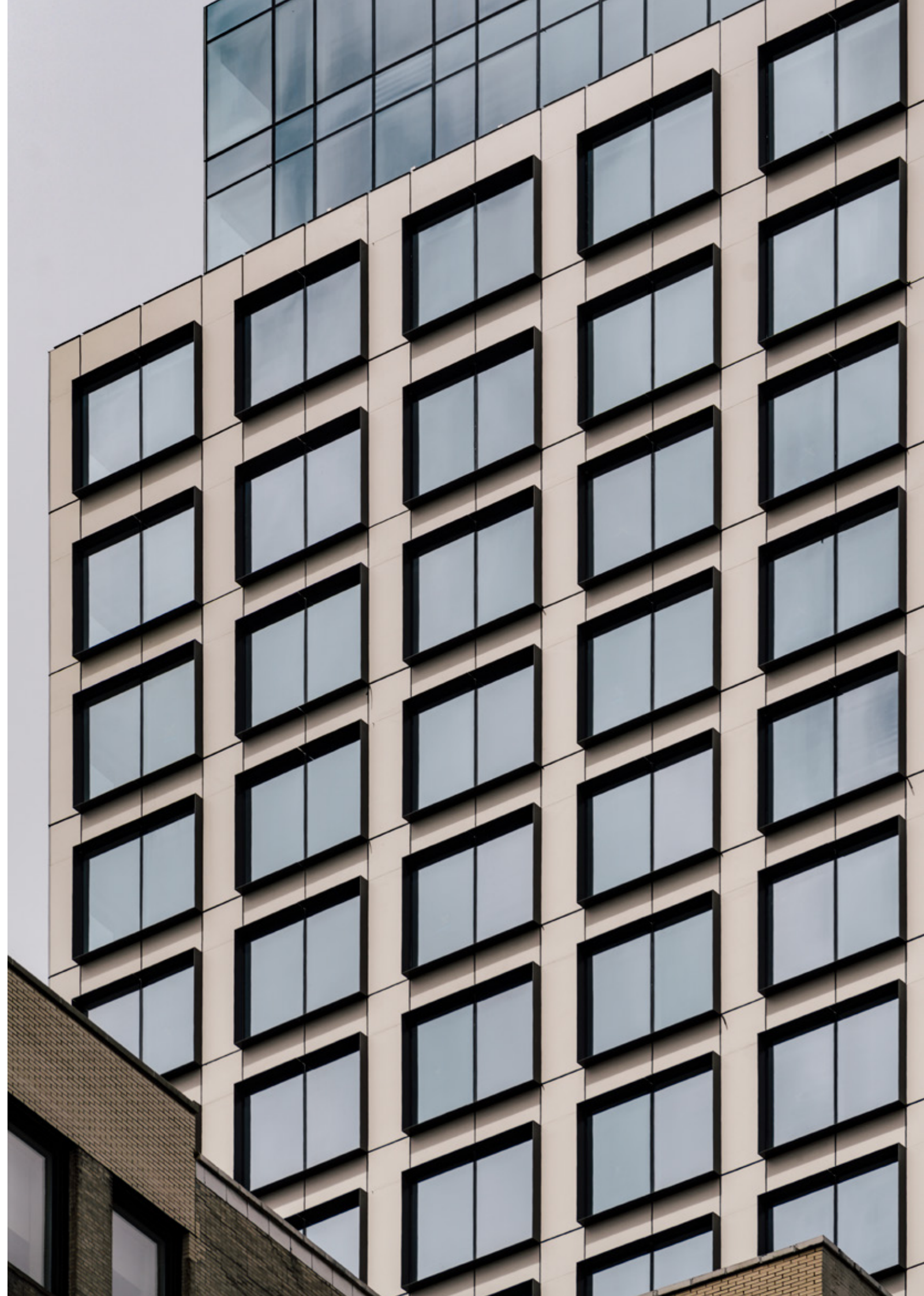
The metallic structure of the ventilated facade is made of AW 6005A aluminium, while the mechanical anchors are AISI 304 stainless steel.

- Anchoring the facade directly to the building structure.
- Minimum distance of 80 mm between support and facade.
- Very light facade structure: less than 5 kg/m².
- Dual chemical and mechanical anchorage system; full security.
- Plane modulation and level with the facade. Horizontal or vertical angle. With straight or locked joints.
- Horizontal placement joints of between 5 mm and 8 mm in width. Vertical placement joints from 1 mm in width
- Wide variety of plate formats: from 1200 mm x 2700 mm to 1600 mm x 3200 mm.
- Mesh on the back of the pieces to prevent fragments from falling in the event of breakage.
- Resistance to climate agents; the elements' physical appearance remains unchanged with the passage of time.
- Easy to clean in the event of paint marks or graffiti.

Certifications



XTONE 12mm
EE.UU.
ESR-4555



FUNDACIÓN LABORAL DE LA CONSTRUCCIÓN

VF XLIGHT system with visible clips
Architect: MRM Arquitectos
Photography: Mikel Muruzabal Studio



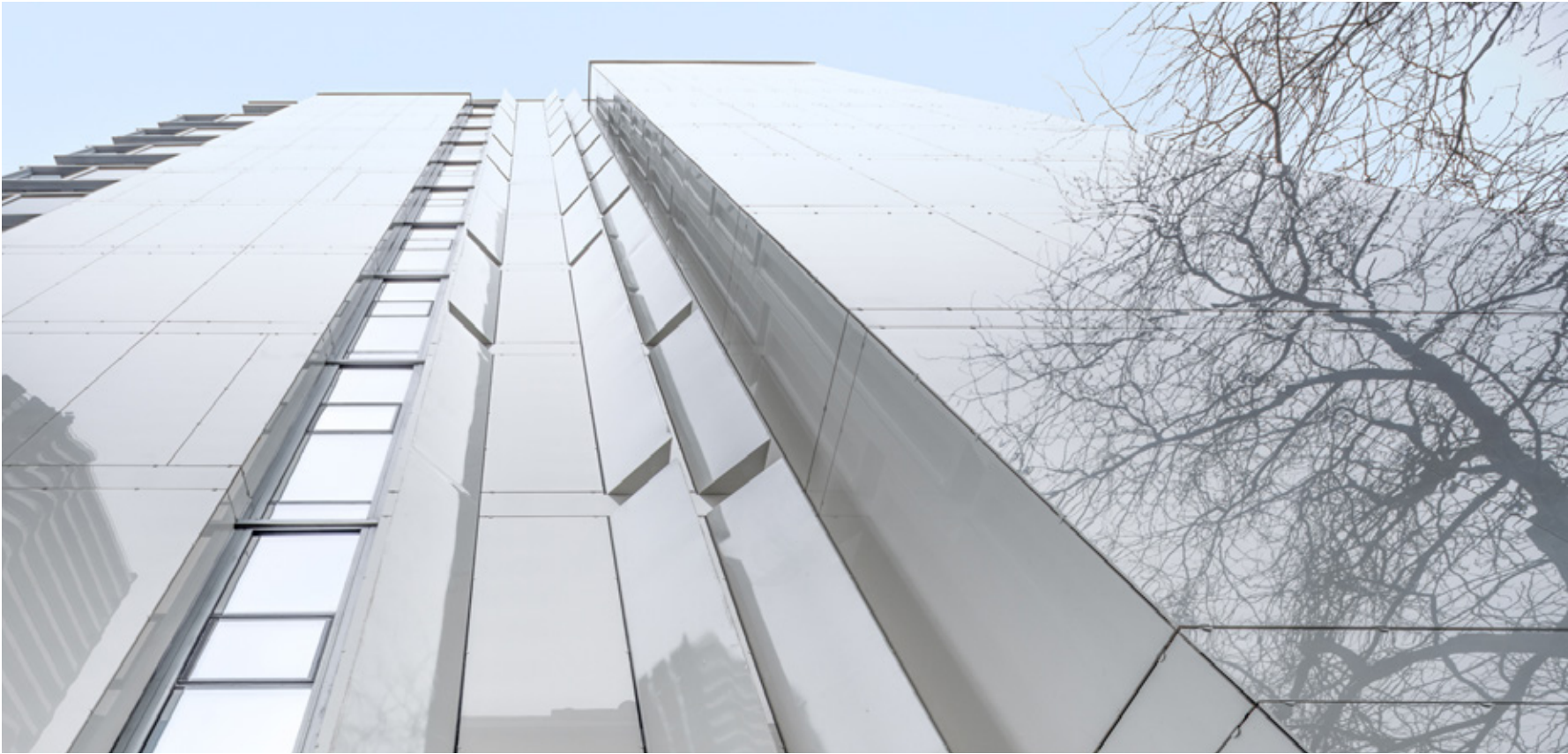


AYALA GREENBELT MALL

Makati city, Philippines.
VF XLIGHT system with concealed clips
Architect: J Antonio Mendoza Design Consultants Manila

PW WHITEHOUSE

Vancouver, Canada.
VF XLIGHT system with visible clips
Architect: Buttjes Architecture, Peter Wall Mansion & Estates
Photography: Michael Elkan



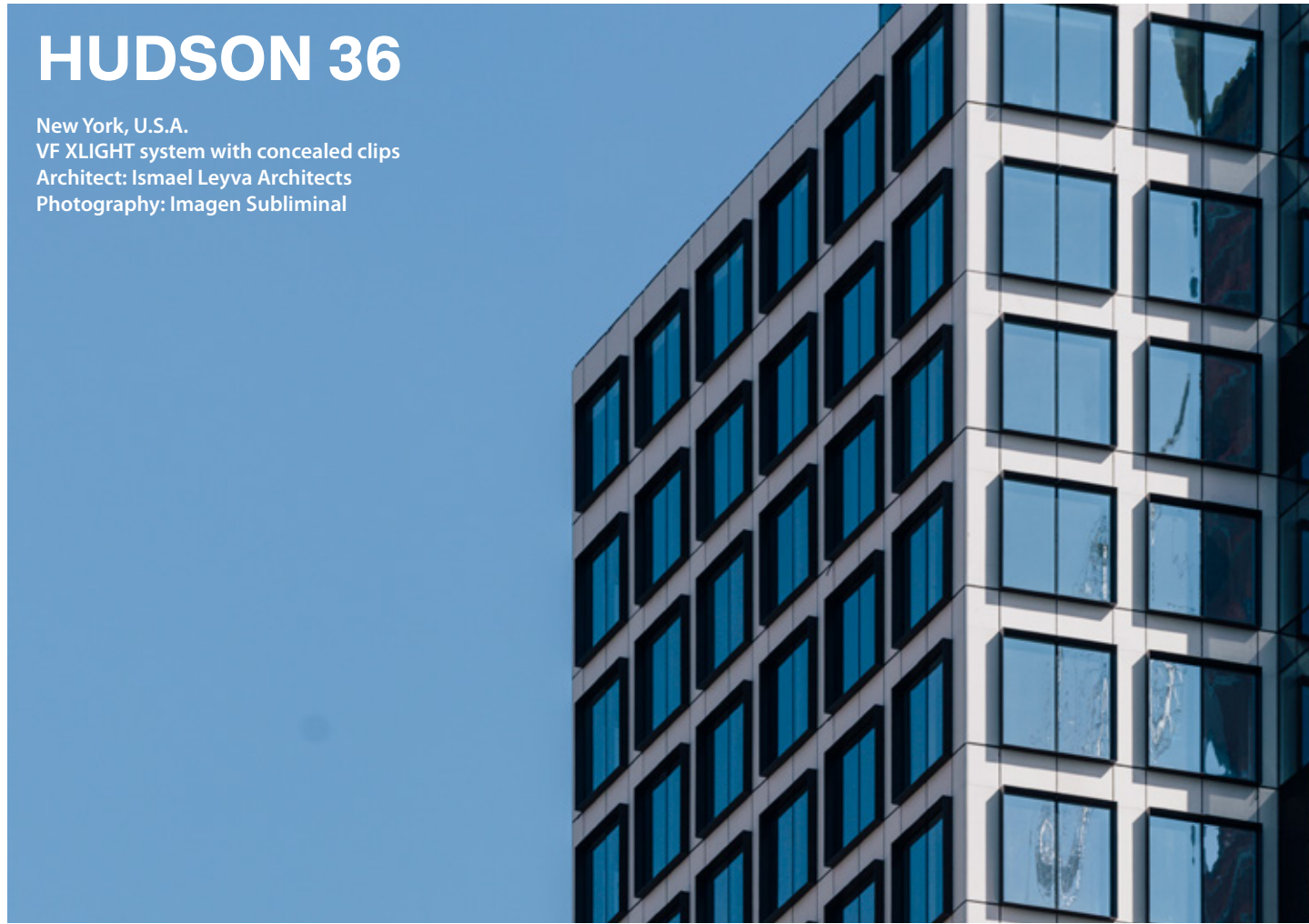
MERRYHILL FARM

Hampshire, United Kingdom.
VF XLIGHT system with concealed clips
Architect: OB Architecture
Photography: Martin Gardner Photography



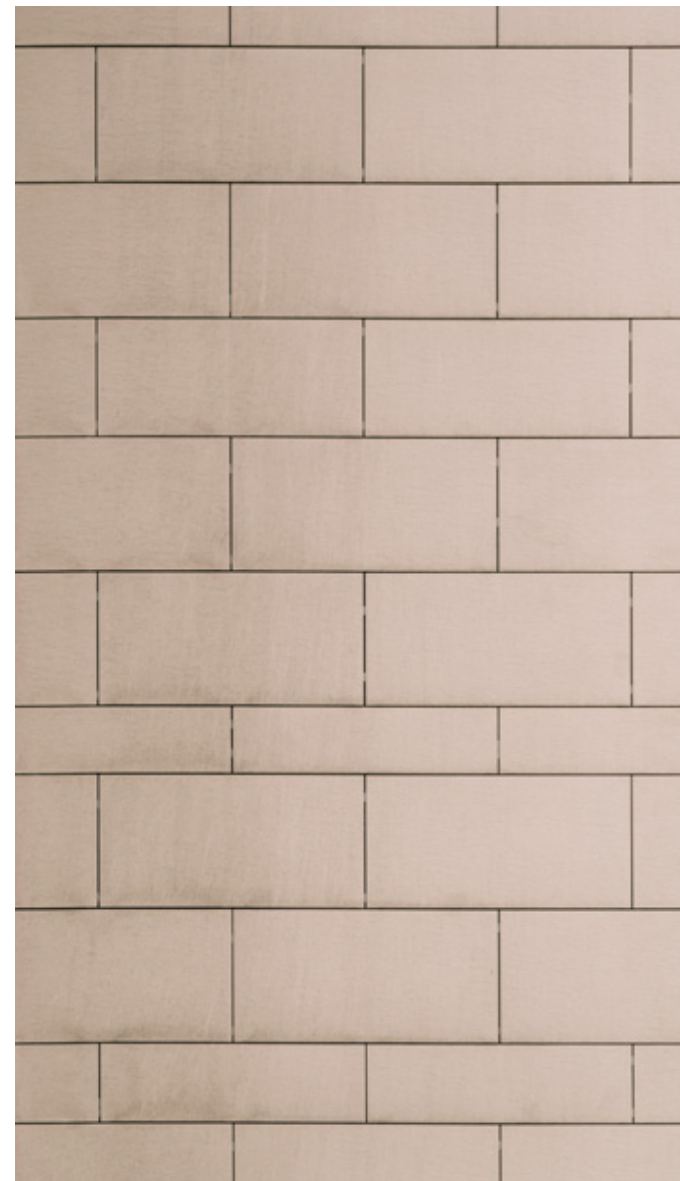
HUDSON 36

New York, U.S.A.
VF XLIGHT system with concealed clips
Architect: Ismael Leyva Architects
Photography: Imagen Subliminal



THE EXPLANADE

Toronto, Canada
VF XLIGHT Porcelain system with concealed clips
Architect: Page+Steele Architects
Photography: Imagen Subliminal





SINGLE-FAMILY HOME BUENO

Algemés, Spain
VF XLIGHT system with concealed clips
Architect: Chiralt Arquitectos
Photography: Eva Pérez





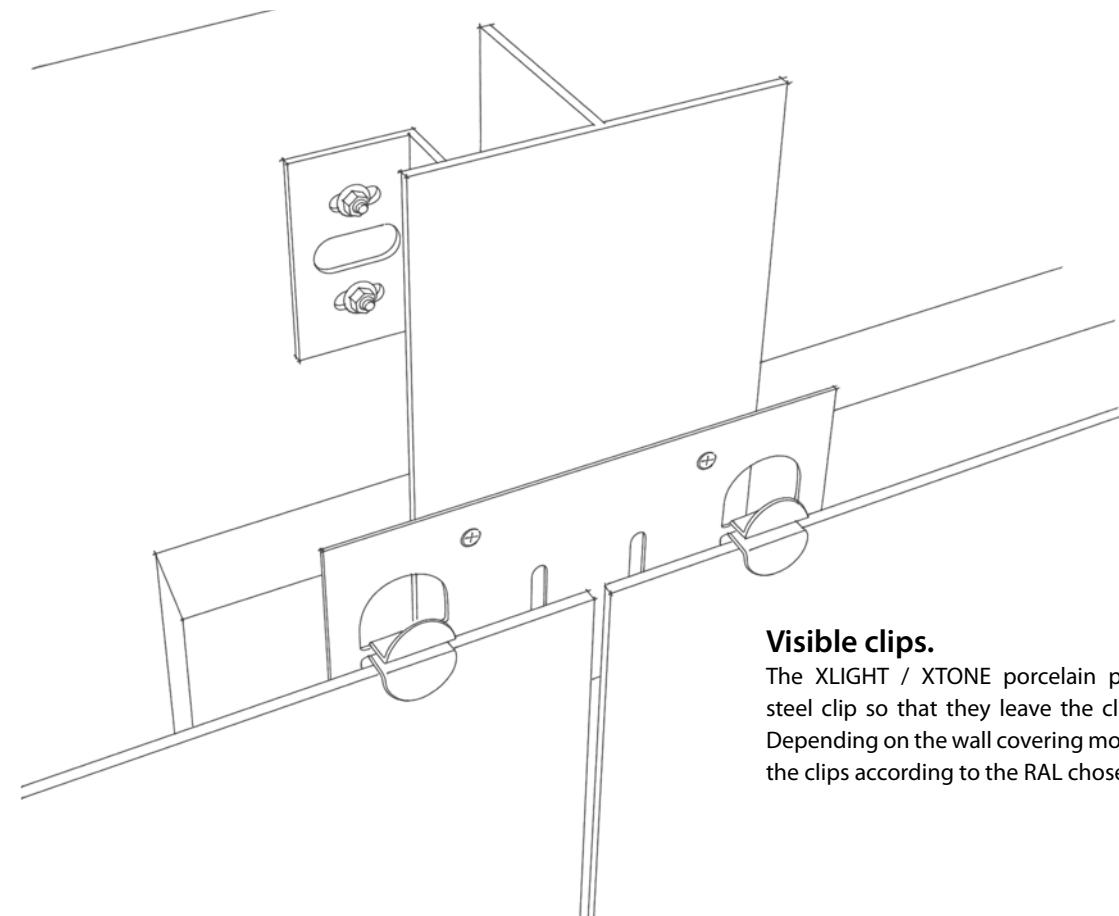
SINGLE-FAMILY HOME COLBORNE

Alberta, Canada
VF XTONE C-BOLT system
Architect: Jackson McCormick Design Group

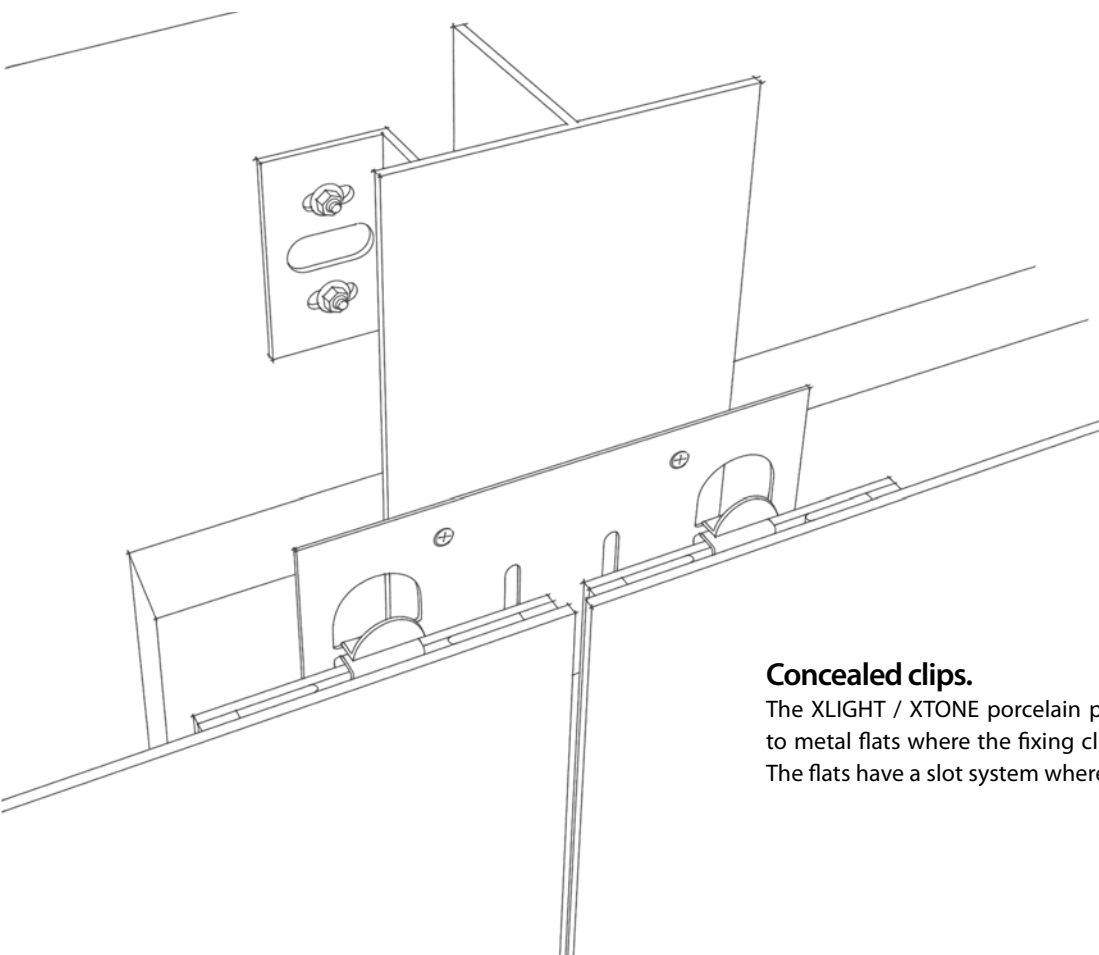


Facade types

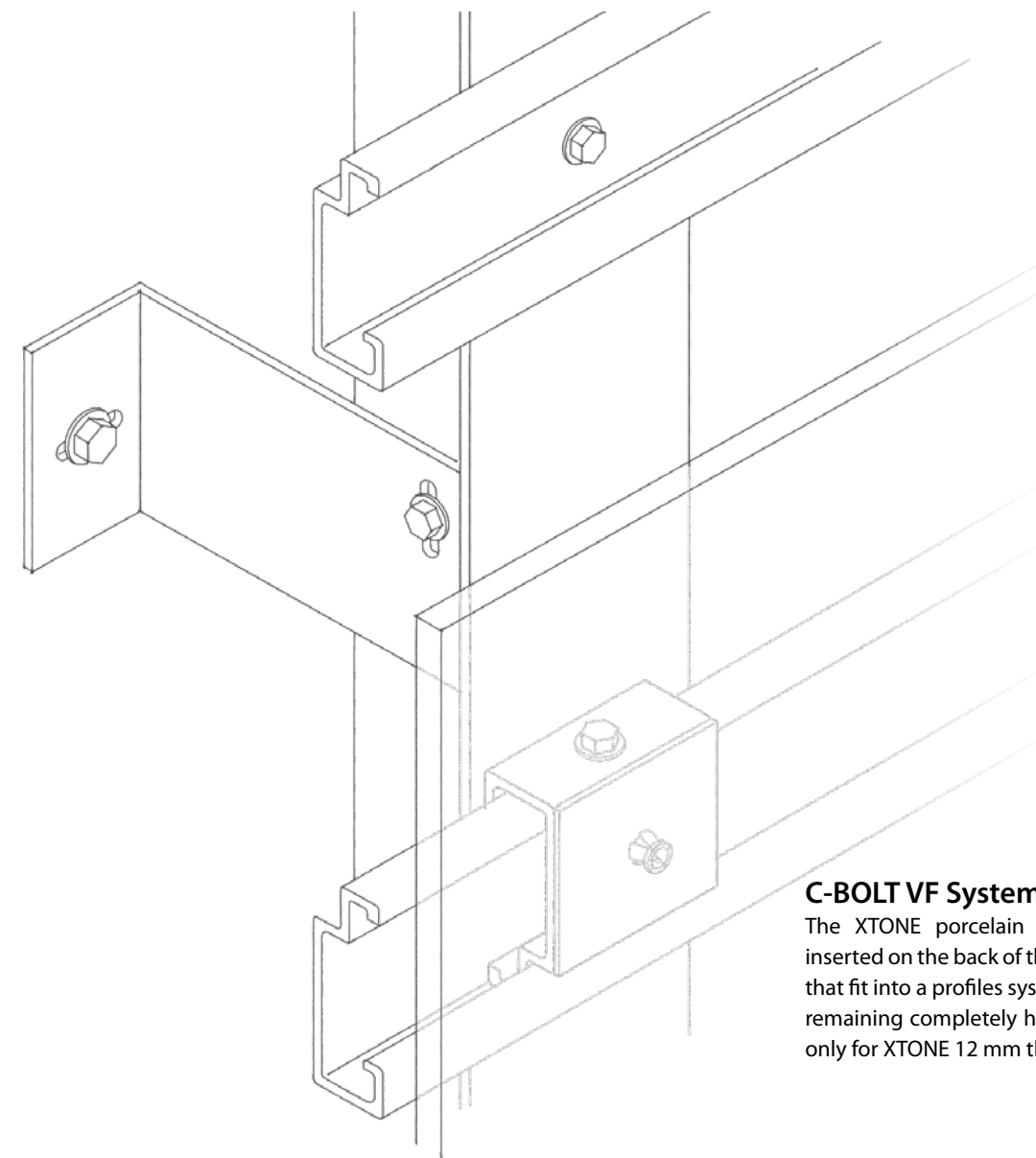
Depending on the XLIGHT / XTONE porcelain panel fixing system to the facade structure, we can define two types of facade:



Visible clips.
The XLIGHT / XTONE 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.

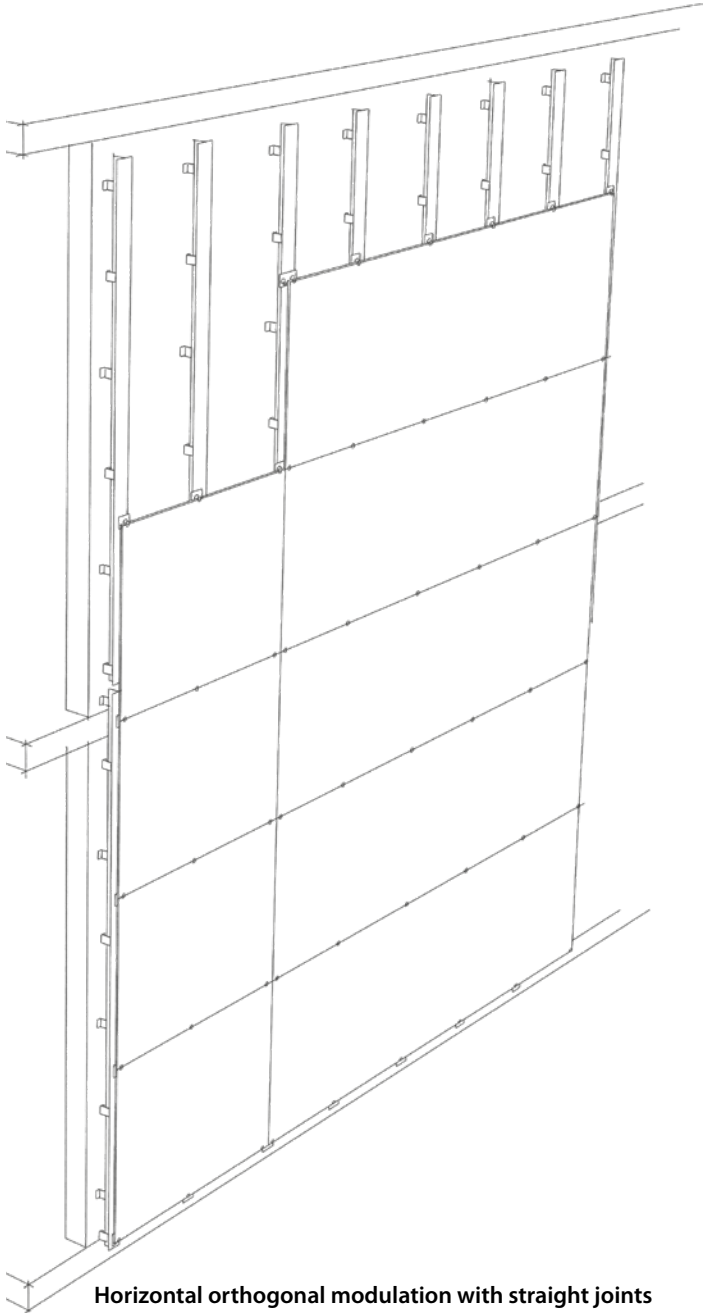


Concealed clips.
The XLIGHT / XTONE porcelain panels are supplied attached to metal flats where the fixing clips are fixed to the uprights. The flats have a slot system where the facade clip tabs fit into.

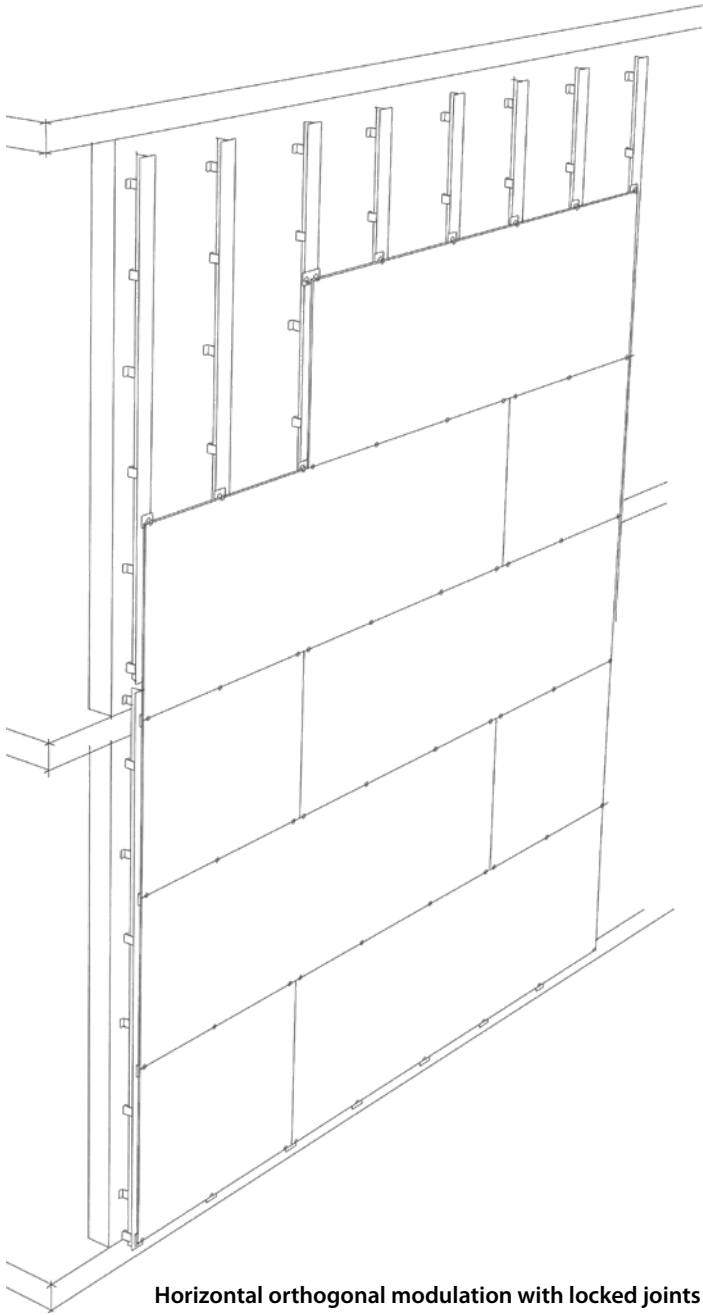


C-BOLT VF System concealed clips.
The XTONE porcelain panels are supplied with anchors inserted on the back of the pieces through expandable screws that fit into a profiles system attached to the facade structure, remaining completely hidden from view. This system is valid only for XTONE 12 mm thick panels.

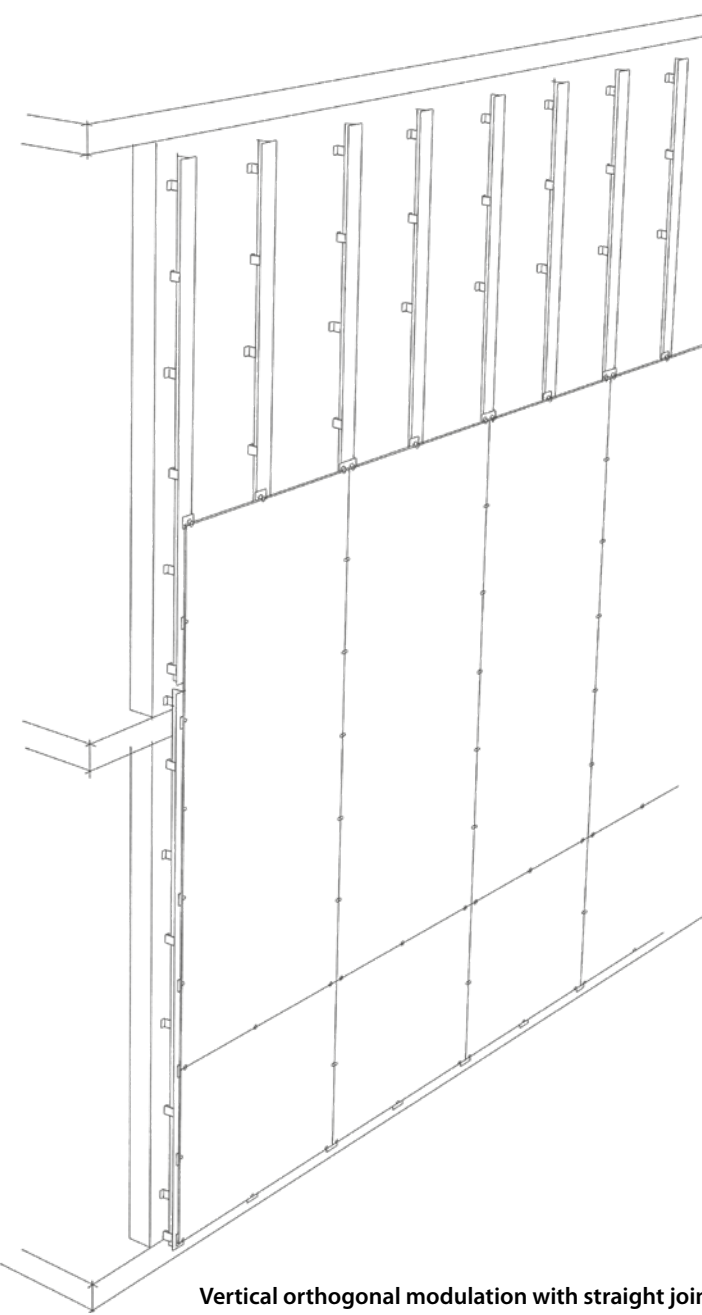
Characteristics



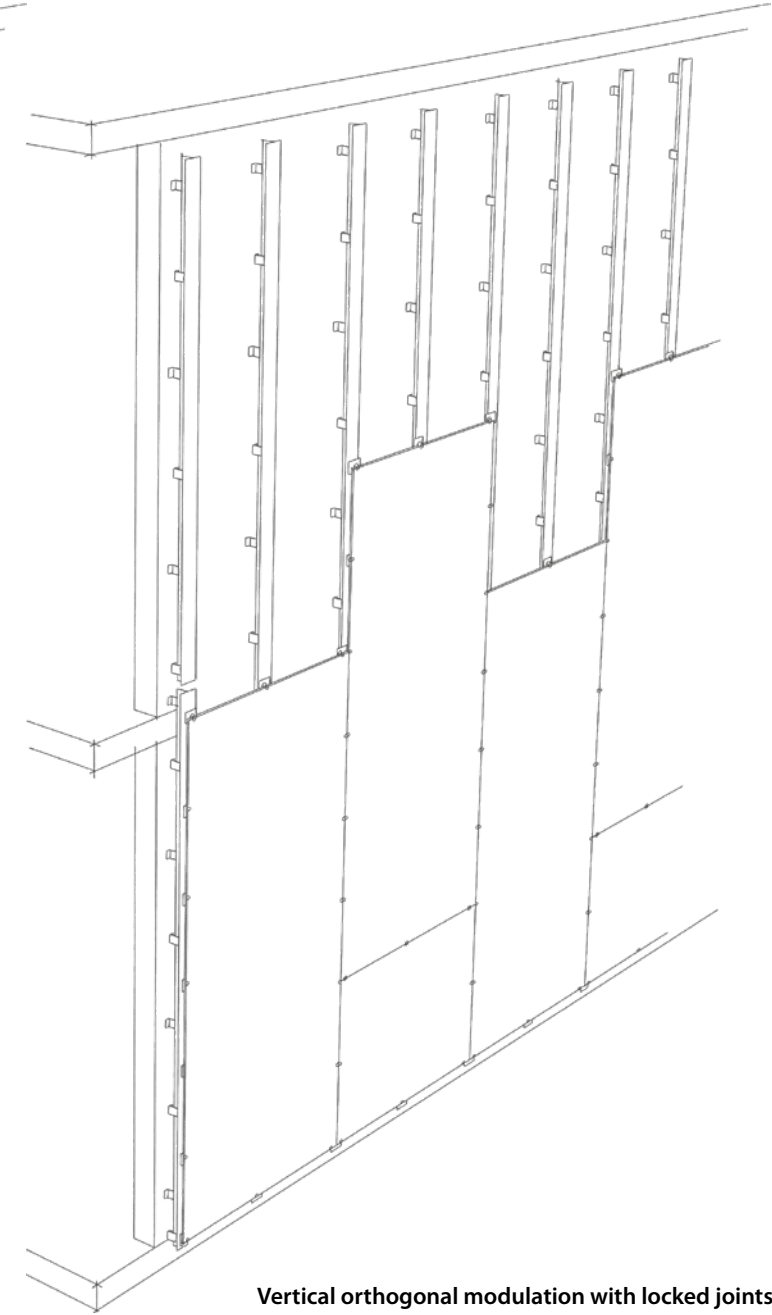
Horizontal orthogonal modulation with straight joints



Horizontal orthogonal modulation with locked joints



Vertical orthogonal modulation with straight joints



Vertical orthogonal modulation with locked joints

Facade structure.

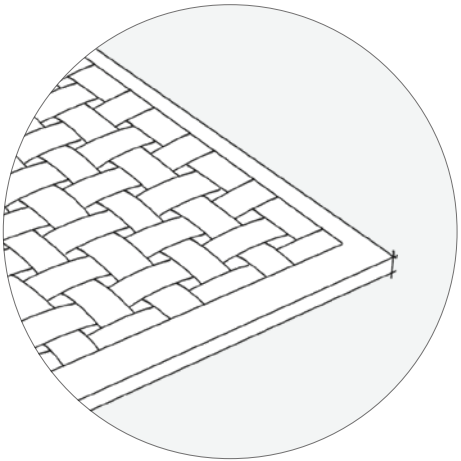
Main characteristics:

- 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/m².
- 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.



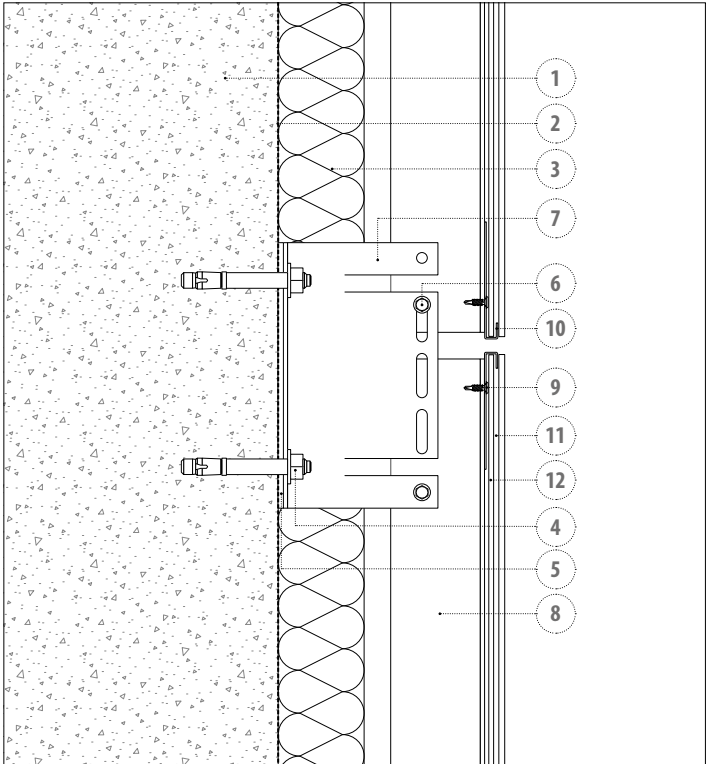
XLIGHT and XTONE panels.

Main characteristics:

- Exclusive design of PORCELANOSA Grupo.
- Large format: XLIGHT and XTONE from 1200 mm x 2700 mm to 1600 mm x 3200 mm.
- Minimum thickness for XLIGHT panels: 3.5 mm.
- In the case of XLIGHT, extremely light panels: 9 - 12 kg/m².
- 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/m²

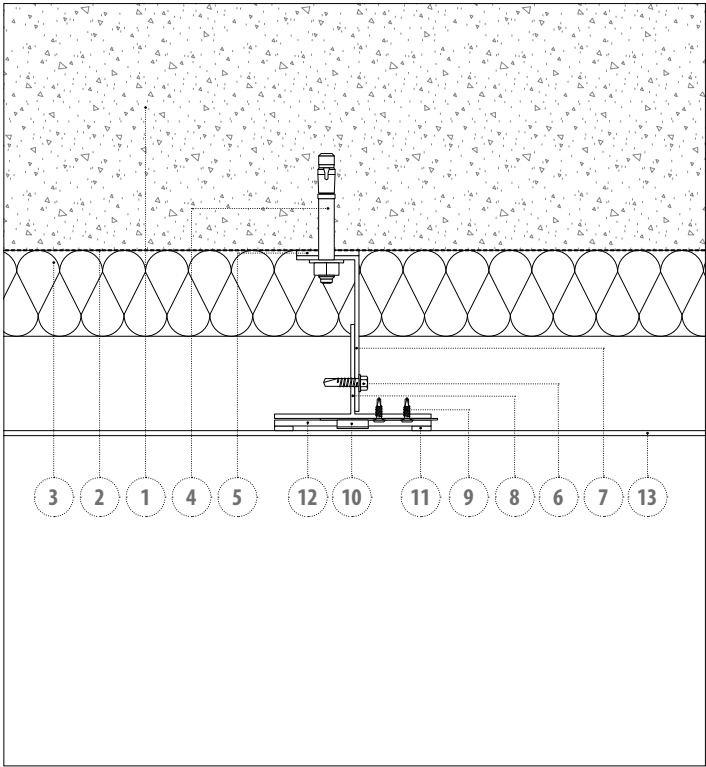
These drawings are only sketches of tile modulation examples. For technical details of these façade systems, have a look the construction details at the next pages.

Construction details · Concealed clip system

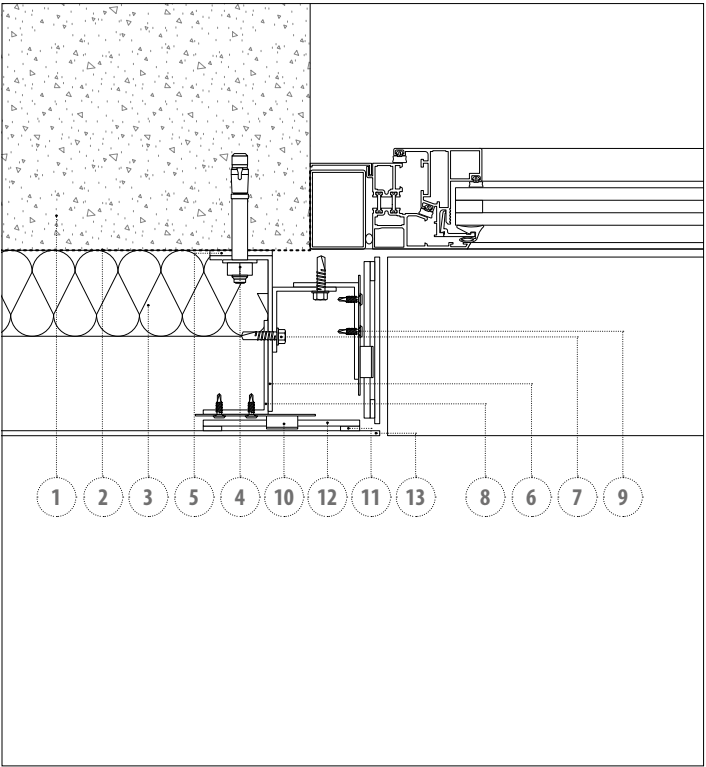


- Elements of the system:
- 1. Concrete support
 - 2. Waterproofing sheet
 - 3. Thermal insulation
 - 4. Anchor for concrete
 - 5. Thermal break
 - 6. Stainless steel self-drilling screw
 - 7. L-shaped aluminum spacer
 - 8. Aluminum T-shaped upright
 - 9. Self-drilling screw
 - 10. Concealed clip
 -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

Vertical cross-section

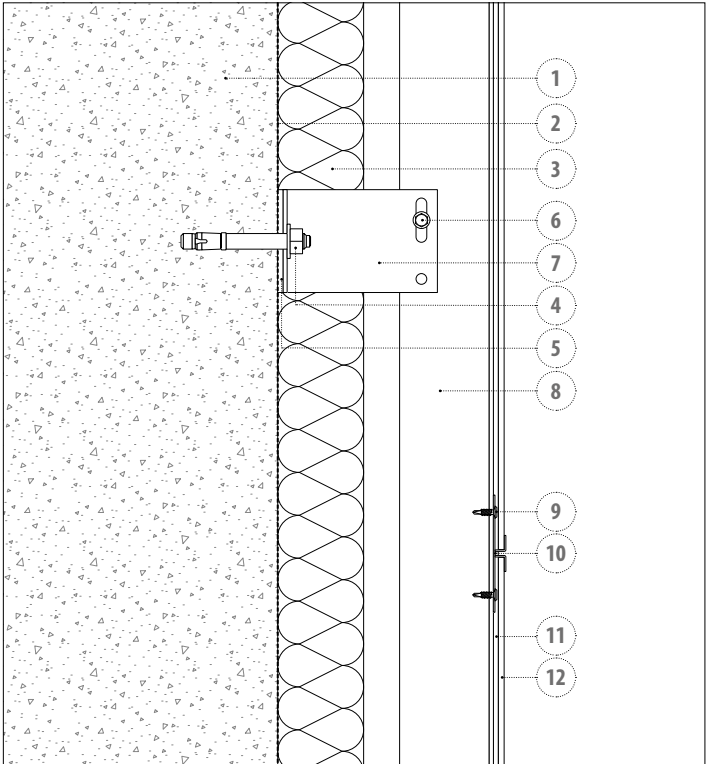


Horizontal cross-section



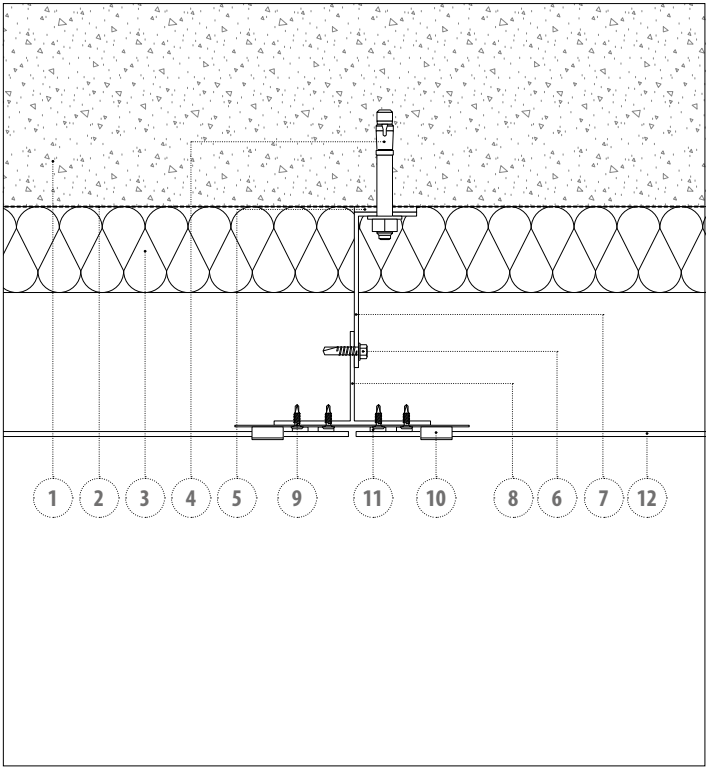
Lintel

Construction details · Visible clip system

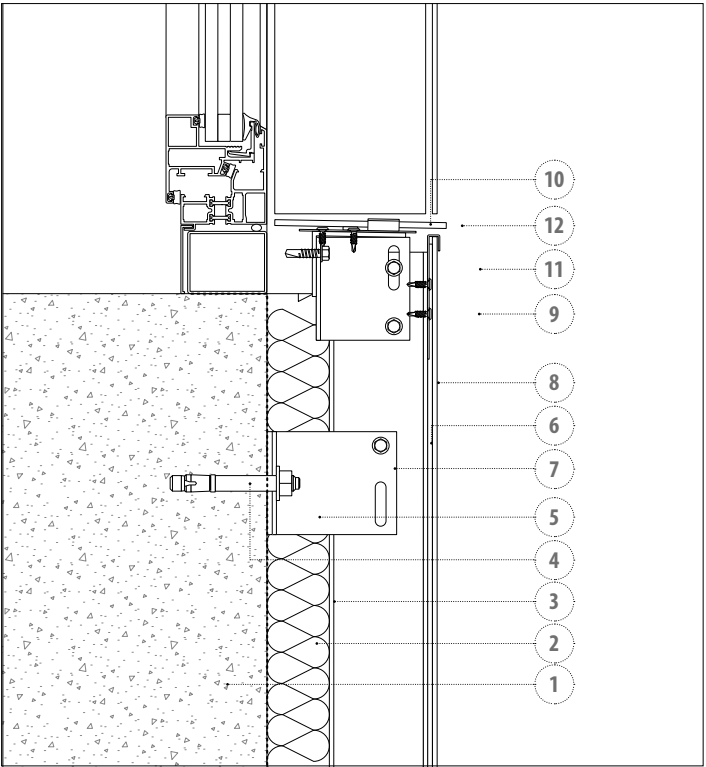


- Elements of the system:
- 1. Concrete support
 - 2. Waterproofing sheet
 - 3. Thermal insulation
 - 4. Anchor for concrete
 - 5. Thermal break
 - 6. Stainless steel self-drilling screw
 - 7. L-shaped aluminum spacer
 - 8. Aluminum T-shaped upright
 - 9. Self-drilling screw
 - 10. Visible clip
 - 11.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

Vertical cross-section

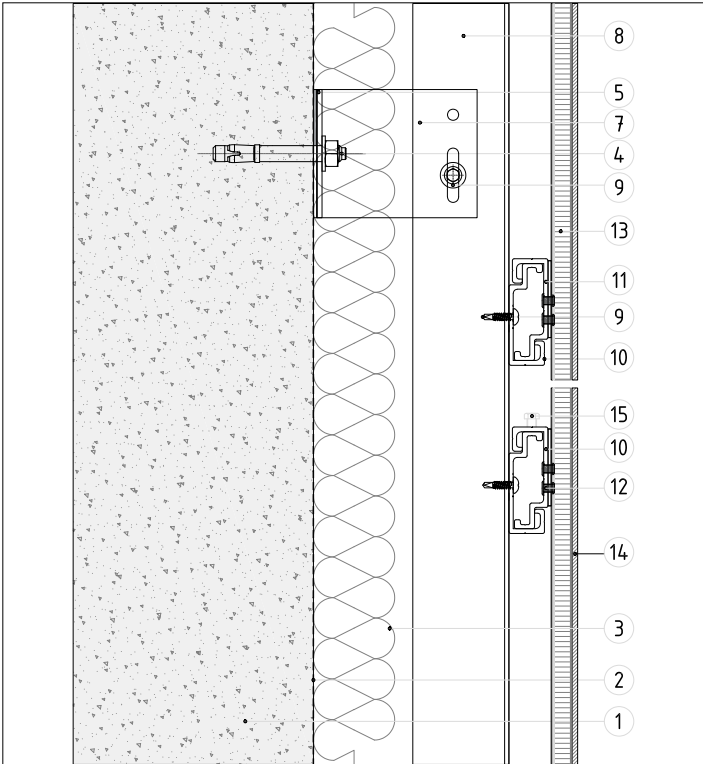


Horizontal cross-section



Sill

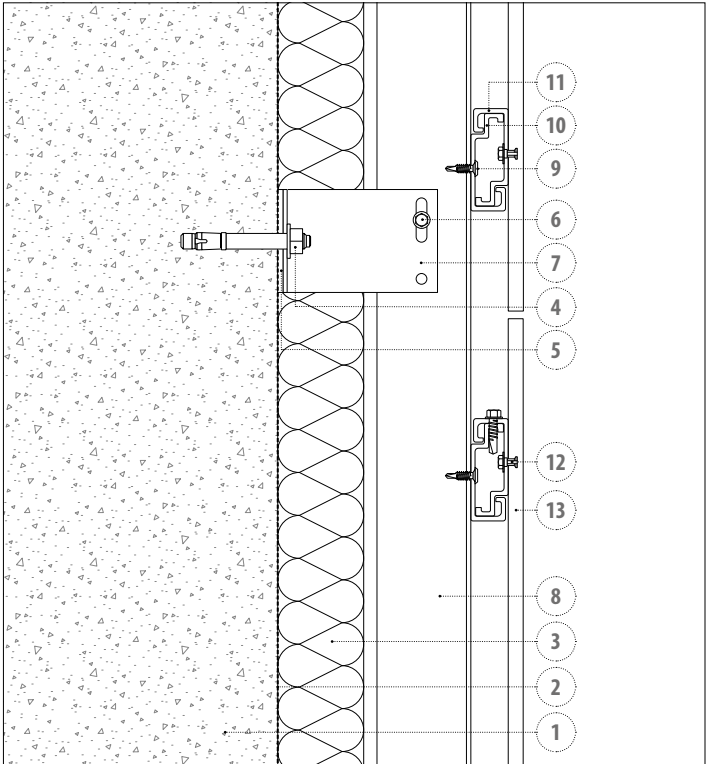
Construction details · XLIGHT+ concealed clip system



Vertical cross-section

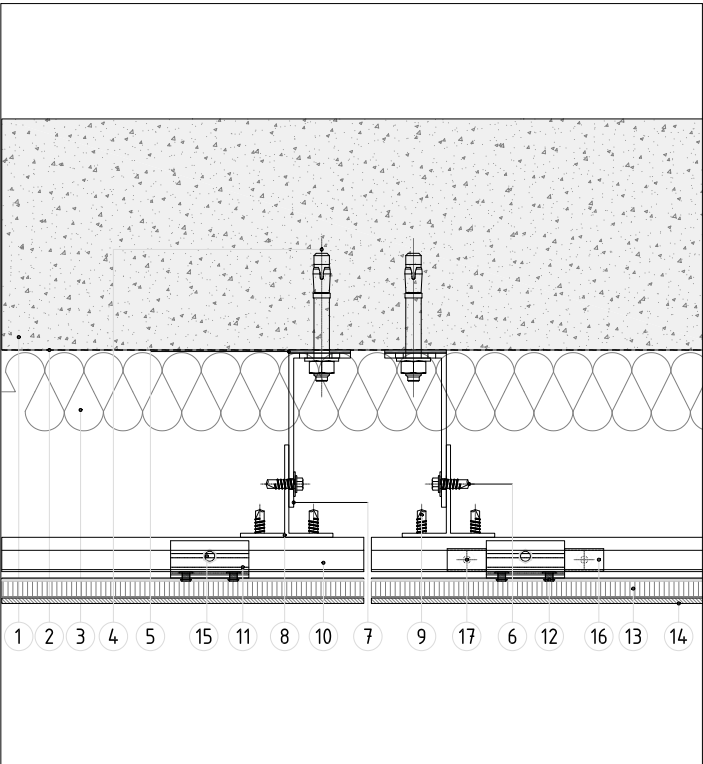
- Elements of the system:
- 1. Concrete support
 - 2. Waterproofing sheet
 - 3. Thermal insulation
 - 4. Anchor for concrete
 - 5. Thermal break
 - 6. Stainless steel self-drilling screw
 - 7. L-bracket
 - 8. Vertical T-profile
 - 9. Stainless steel self-drilling screw
 - 10. C-BOLT Horizontal Profile
 - 11. C-BOLT Clip
 - 12. Stainless steel rivet
 - 13. PET + aluminum panel
 - 14. XLIGHT
 - 15. Stainless steel leveling screw
 - 16. Blocking plate
 - 17. Stainless steel self-drilling screw
 - 18. Metal window return

Construction details · C-BOLT concealed clip

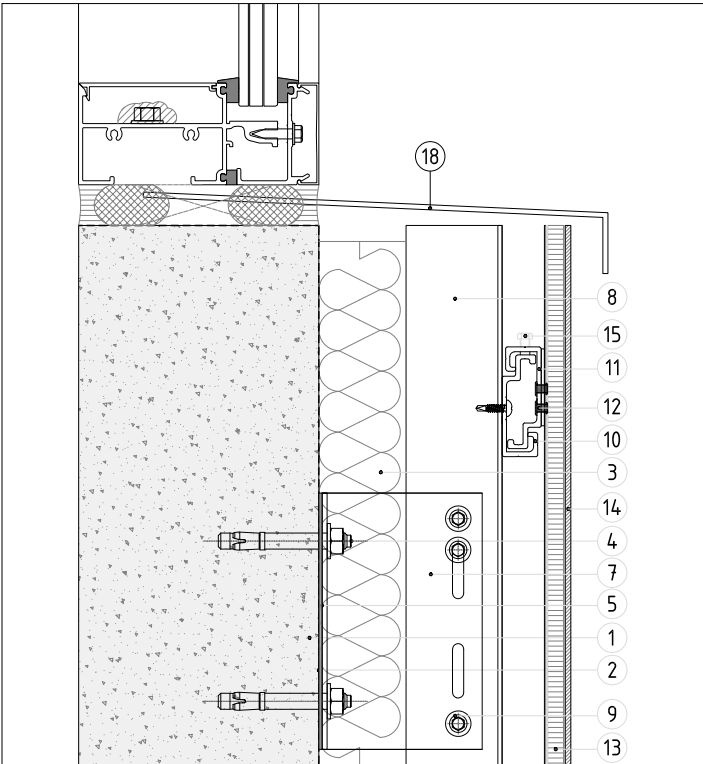


Vertical cross-section

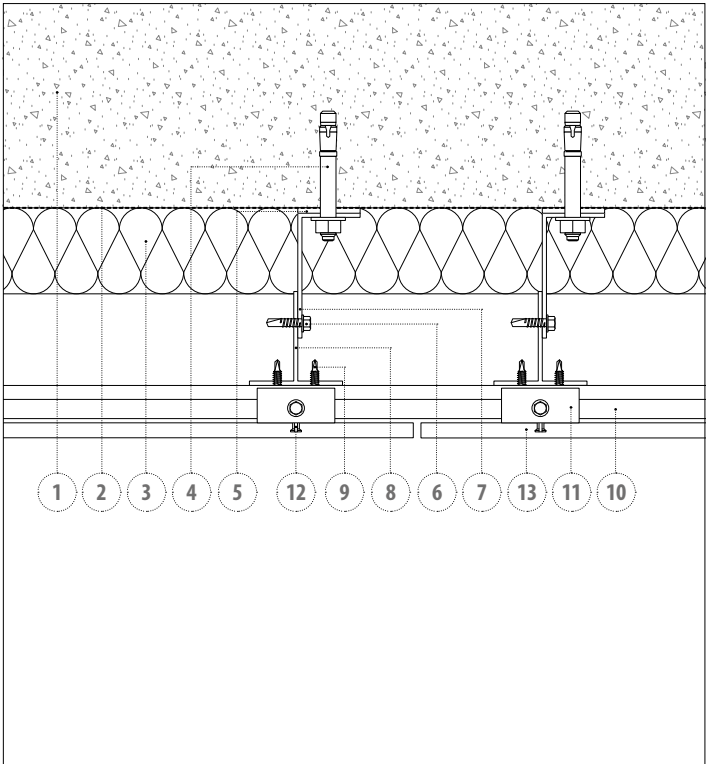
- Elements of the system:
- 1. Concrete support
 - 2. Waterproofing sheet
 - 3. Thermal insulation
 - 4. Anchor for concrete
 - 5. Thermal break
 - 6. Stainless steel self-drilling screw
 - 7. Secondary L-shaped aluminum spacer
 - 8. Vertical aluminum tubular profile
 - 9. Self-drilling screw
 - 10.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



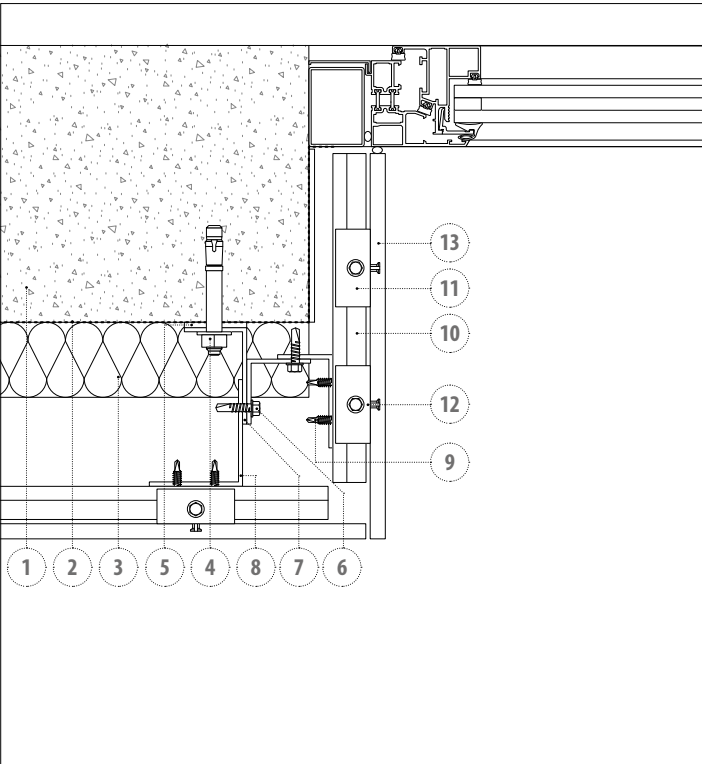
Horizontal cross-section



Sill



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 6080 x 3680 mm. 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



ETA-17/0387
ETA 16-0979



France
AT-2.2-14-1624_v3
AT-2.2-21-1814_v2



United Kingdom
2018/73
2018/74



IAPMO
N°403





AURA

Barcelona, Spain
KIRON C-BOLT VF system
Architect: BCA

Photography: Mathius de Felipe, Simón García - Arqfoto

HALO

Vigo, Spain

KIRON C-BOLT VF system

Architect: AM2 Arquitectos, Arenas & Asociados, NOARQ

Photography: Joao Morgado, Attilio Fiumarella



IVORY COAST

San Pawl il-Baħar, Malta
KIRON C-BOLT VF system
Architect: Independent architecture & planning professional
Photography: Jurgen Aquilina



COMMERCIAL MALL CENTER LAFINCA GRAND CAFÉ

Madrid, Spain
KIRON C-BOLT VF system
Lafinca Real State
Architect: LaFinca A + D



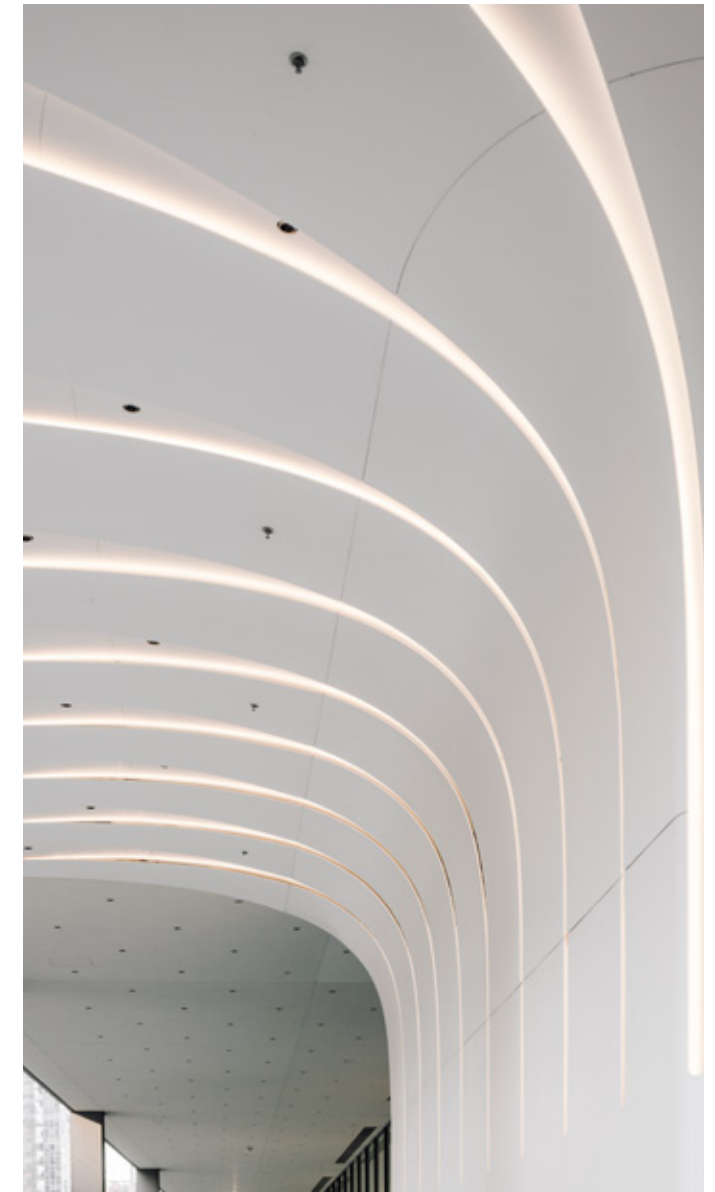


DIAGONAL 525

Barcelona, Spain
KRION K-FIX VF system
Architect: Sanzpont Arquitectura
Photography: David Cardelús

MERCANTILE EXCHANGE CME CENTER

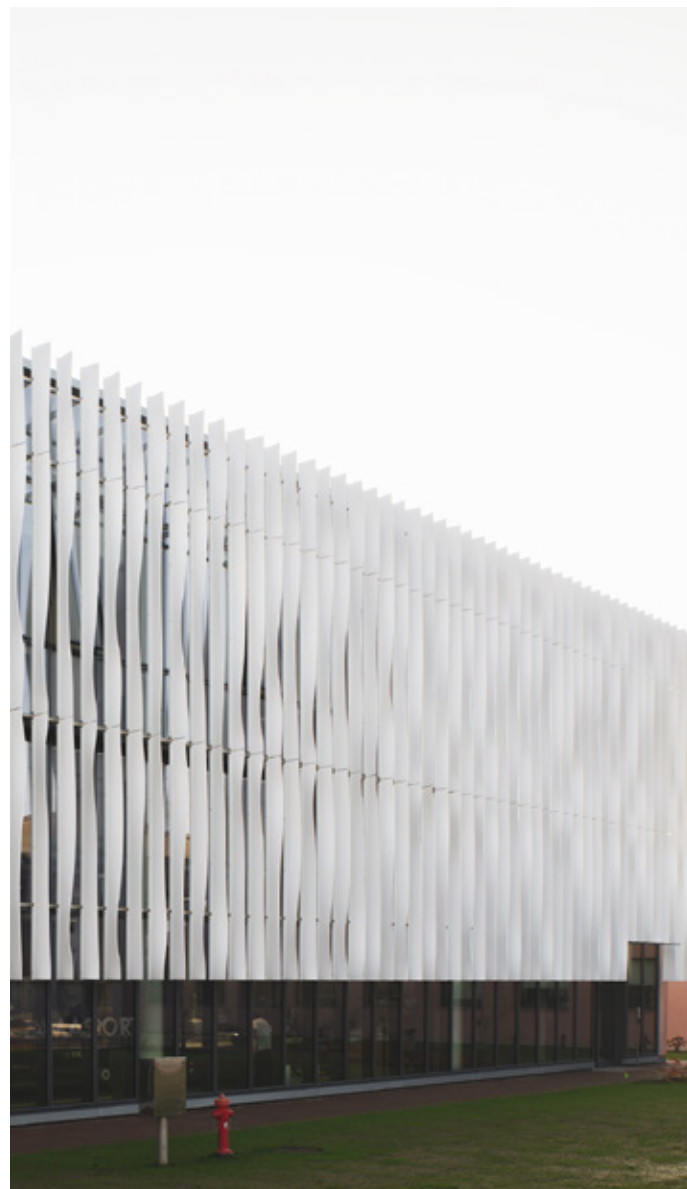
Chicago, U.S.A.
KIRON K-FIX VF system
Architect: Krueck + Sexton Architects
Photography: Imagen Subliminal





ZAMASPORT HEADQUARTER

Novara, Italy
Système FV KRION K-FIX
Architect: Frigelio Desing
Photography: Mario Frusca



BG AGRO

Varna, Bulgaria
KIRON K-BOLT VF system
Architect: STARH
Photography: Dian Stanchev



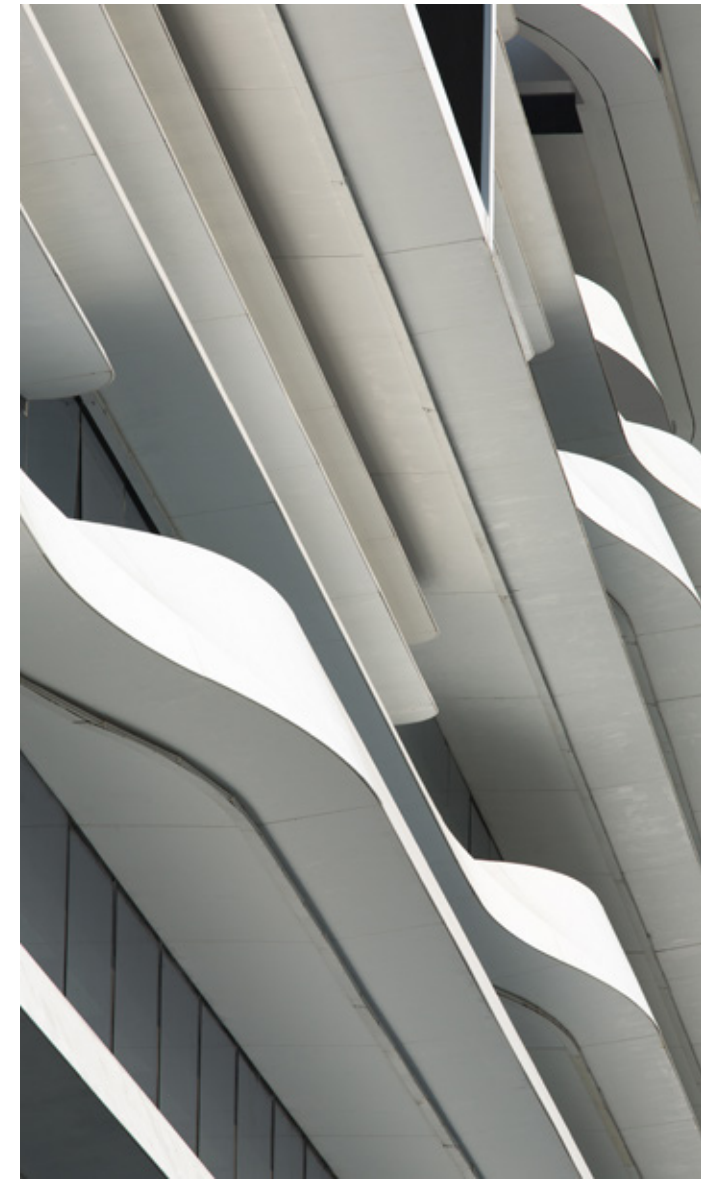
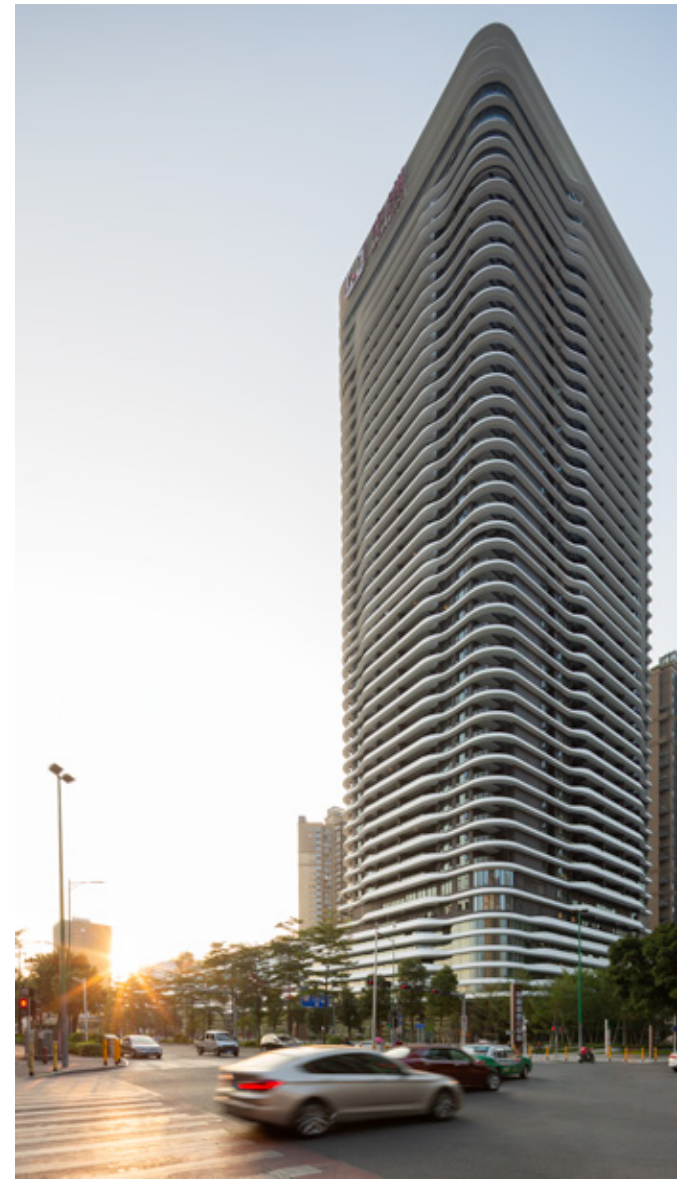
CENTRALCON BUILDING

Shenzhen , China

KIRON K-FIX VF system

Architect: Zhao Guo Xing - Peddle Thorp Architects

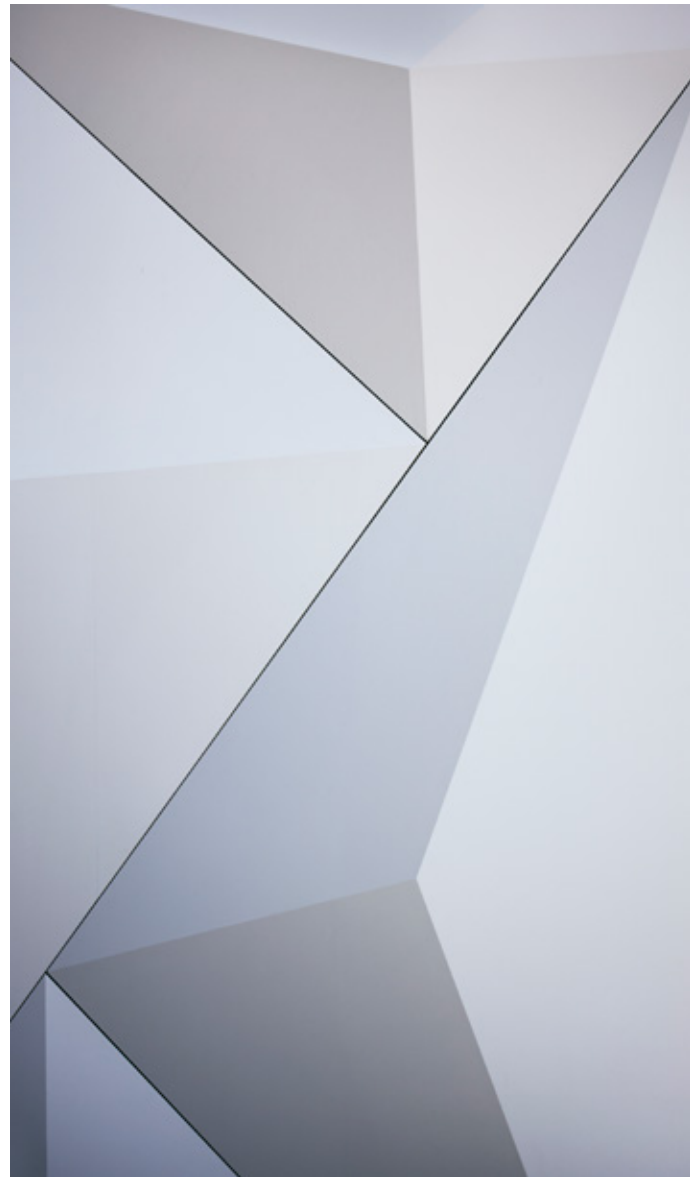
Photography: Salva Méndez





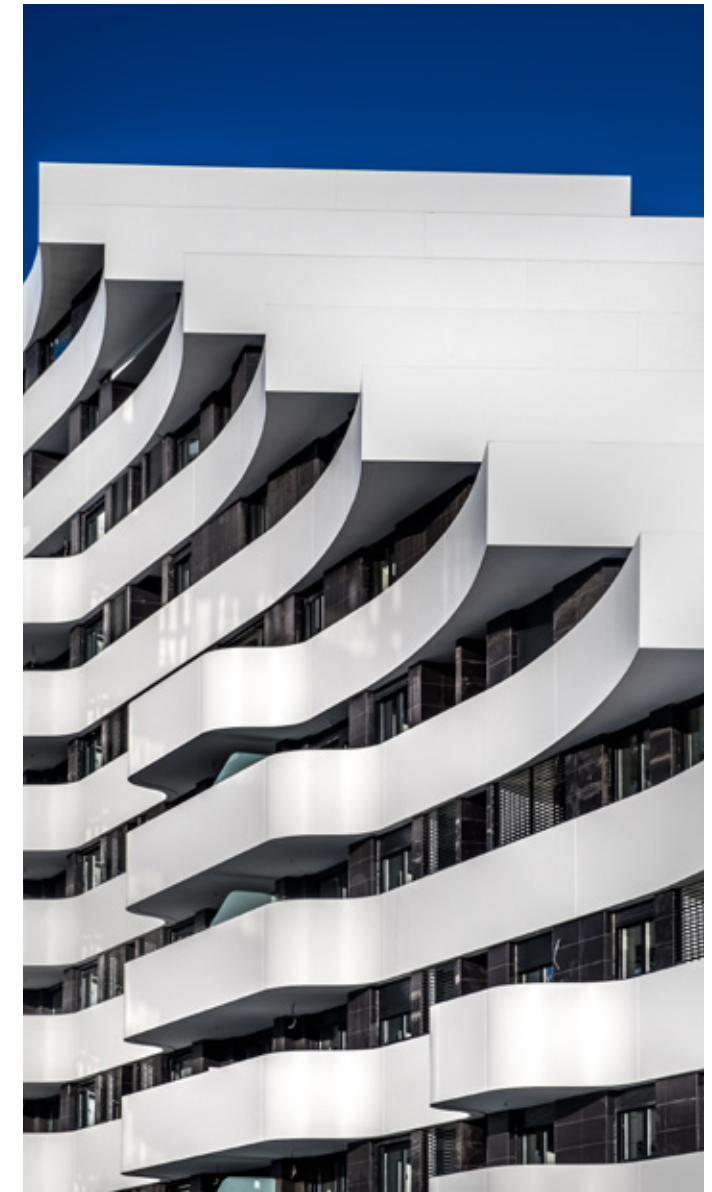
IBIZA CORSO HOTEL & SPA

Ibiza, Spain
KRION K-FIX VF system
Architect: José María García Sánchez
Photography: Alex del Río



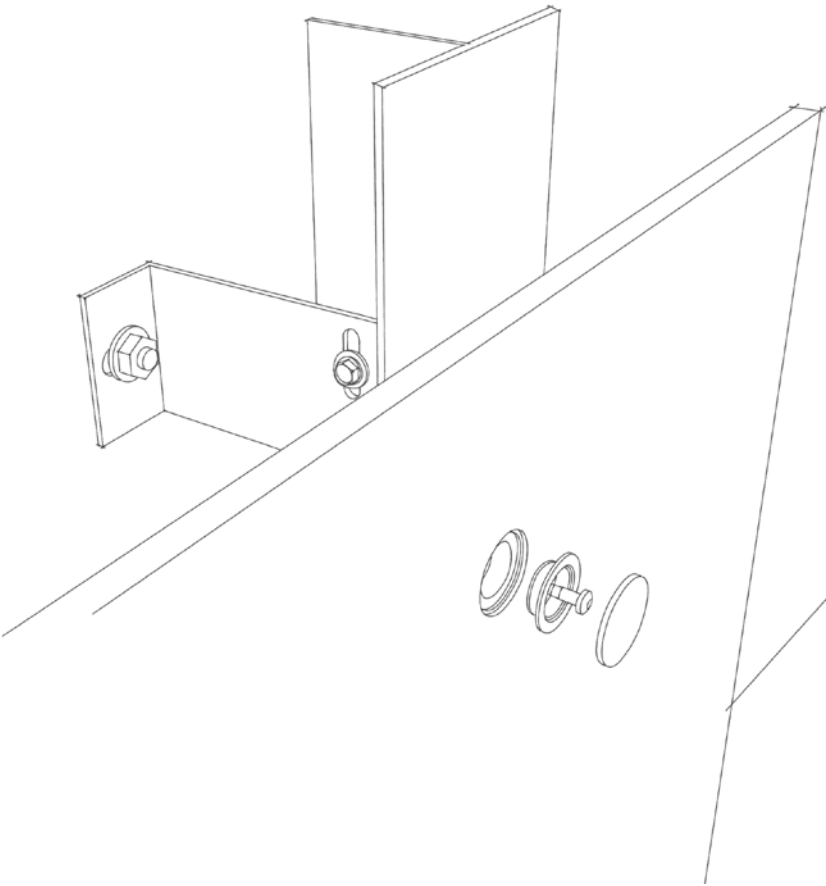
TERRAZAS DEL LAGO

Madrid, Spain
KIRON K-FIX VF system
Architect: Estudio de Arquitectura Morph
Photography: Luzestudio

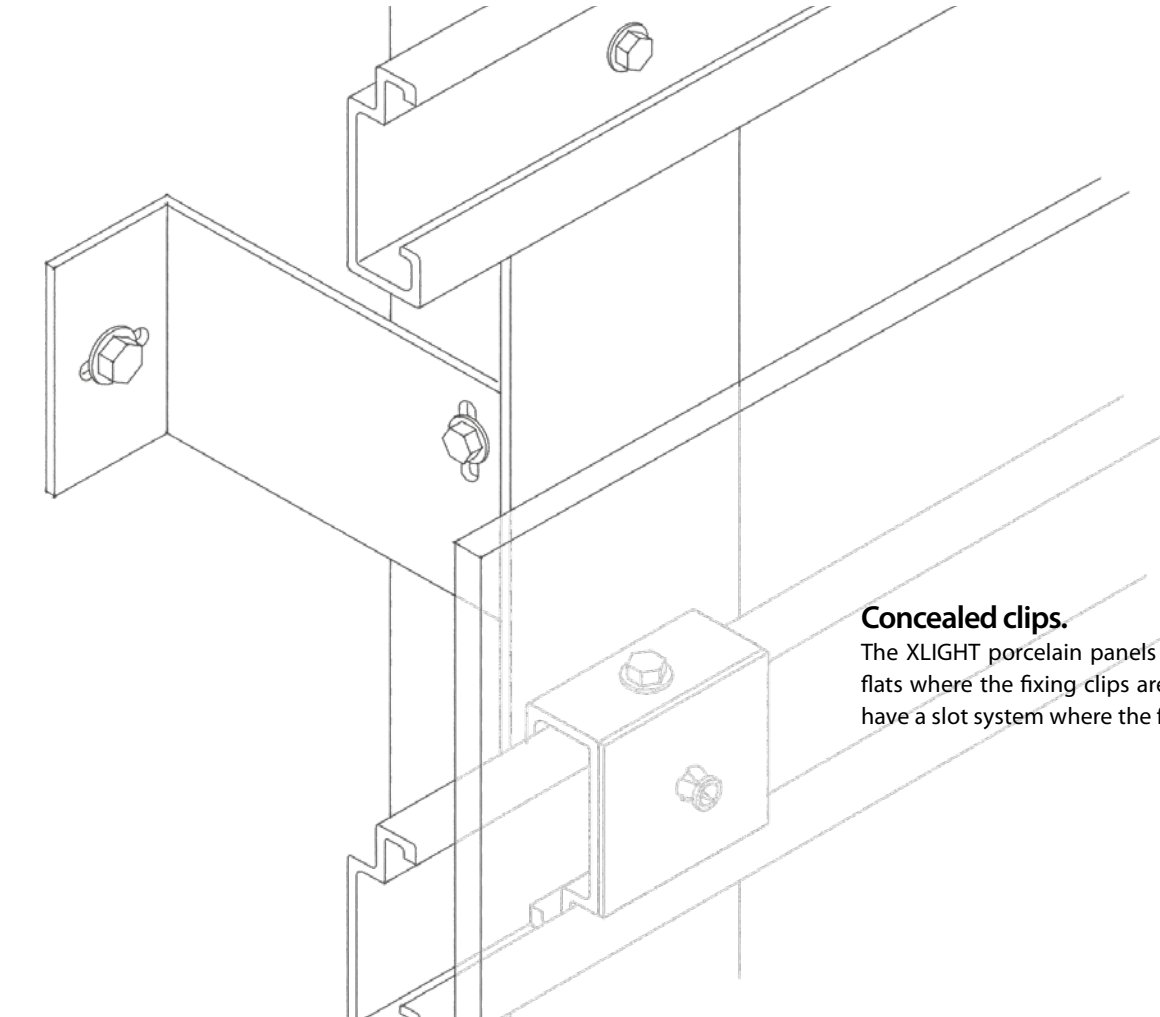


Facade types

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

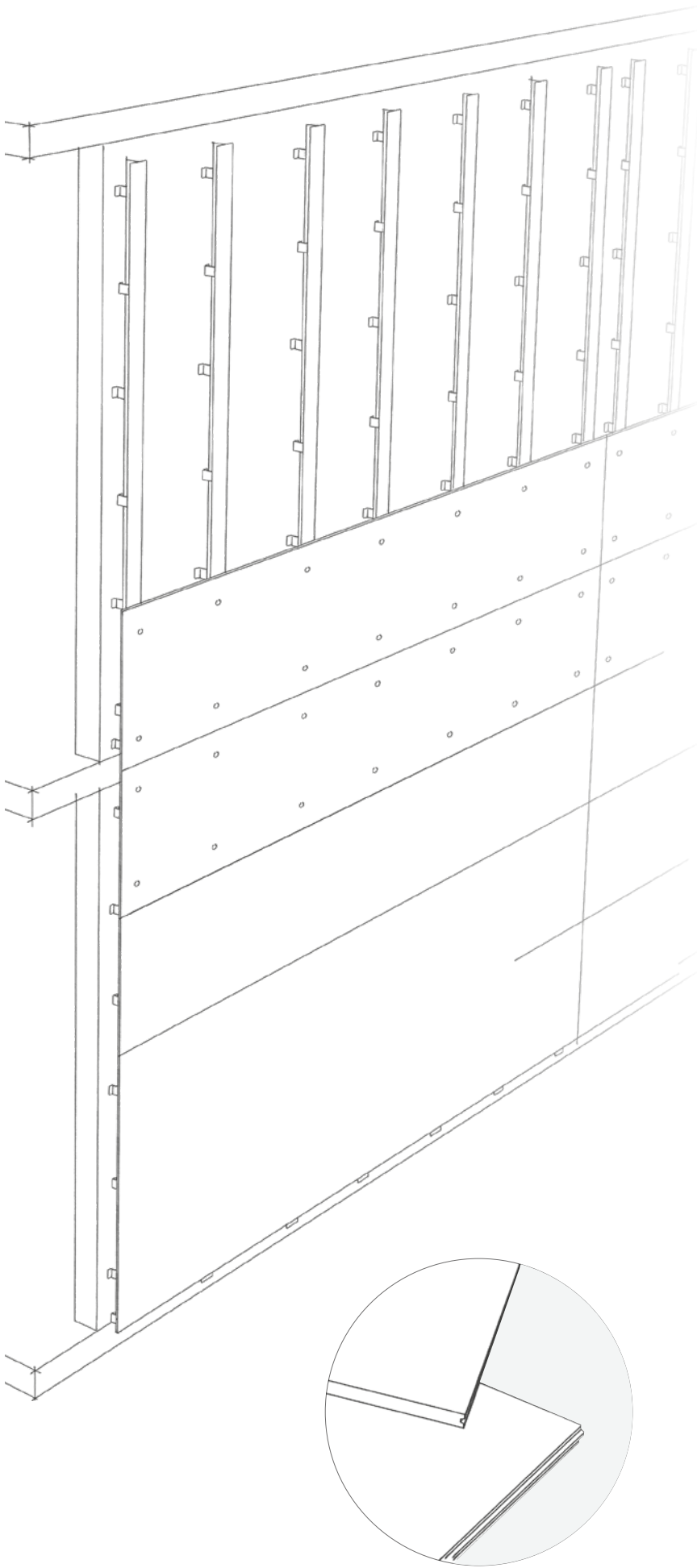


Visible clips.
The XLIGHT porcelain panels fit into a stainless-steel clip so that they leave the clip's holding tabs exposed. Depending on the wall covering model, it is possible to lacquer the clips according to the RAL chosen by the client.



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.

Characteristics



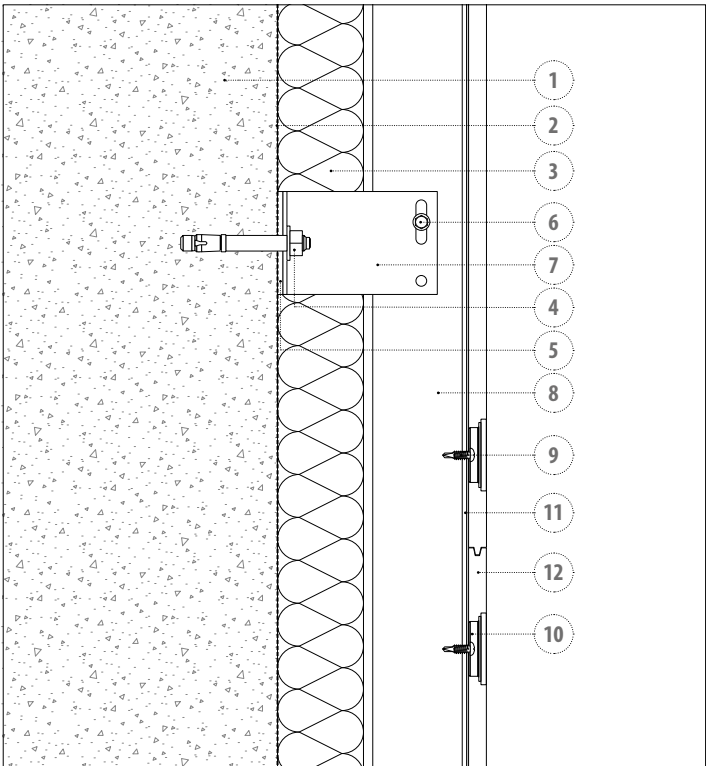
- Facade structure.**
Main characteristics:
- Facade anchoring direct to the building structure.
 - Applicable to most structure and enclosure types used in construction.
 - Structure consisting of only vertical profiles.
 - Structure for very light facade: less than 5 kg/m²
 - It allows for 3D facade 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

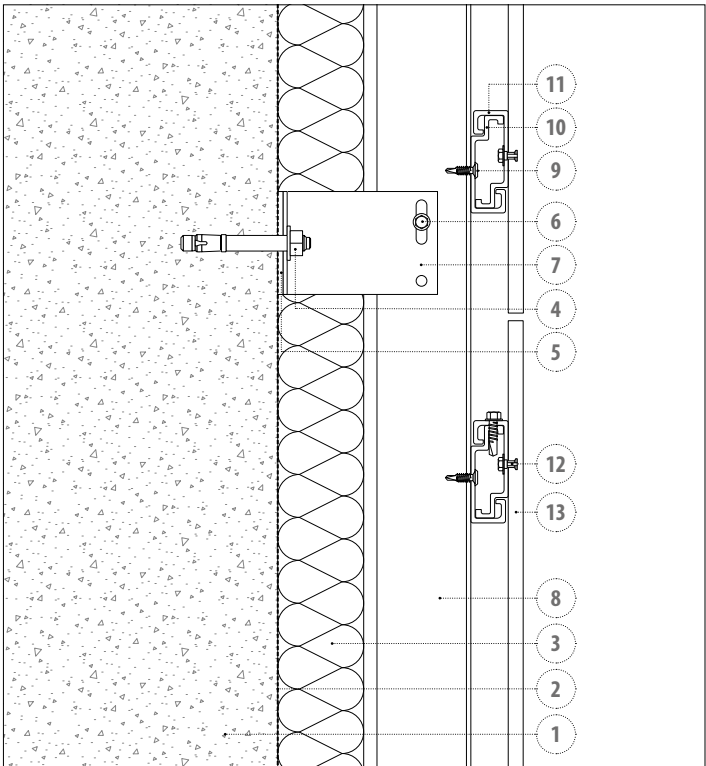


Elements of the system:

- 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. Aluminum T-shaped upright
- 9. Self-drilling screw
- 10. Aluminium fixing clip
- 11. Polyurethane putty
- 12. KRION®

Vertical cross-section

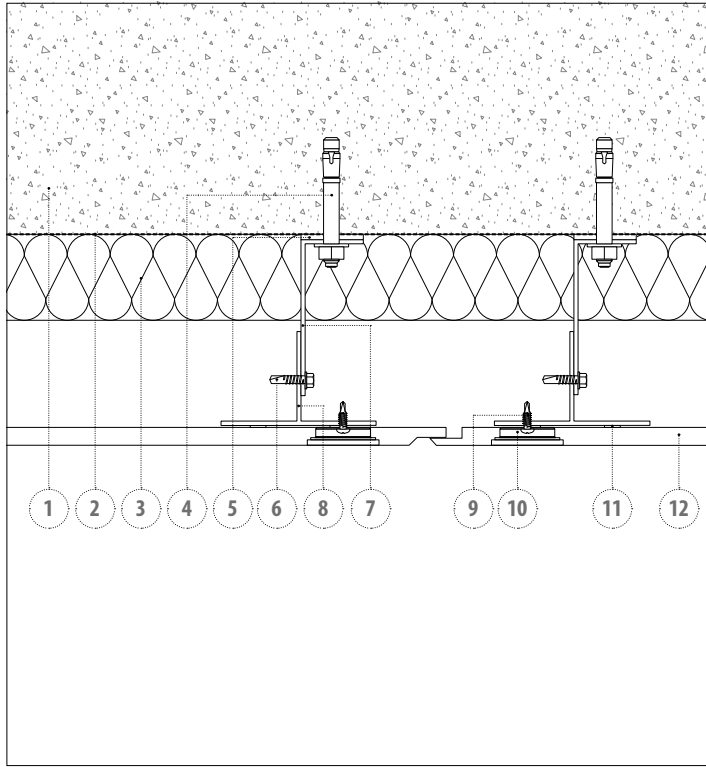
Construction details · K-BOLT Concealed clips



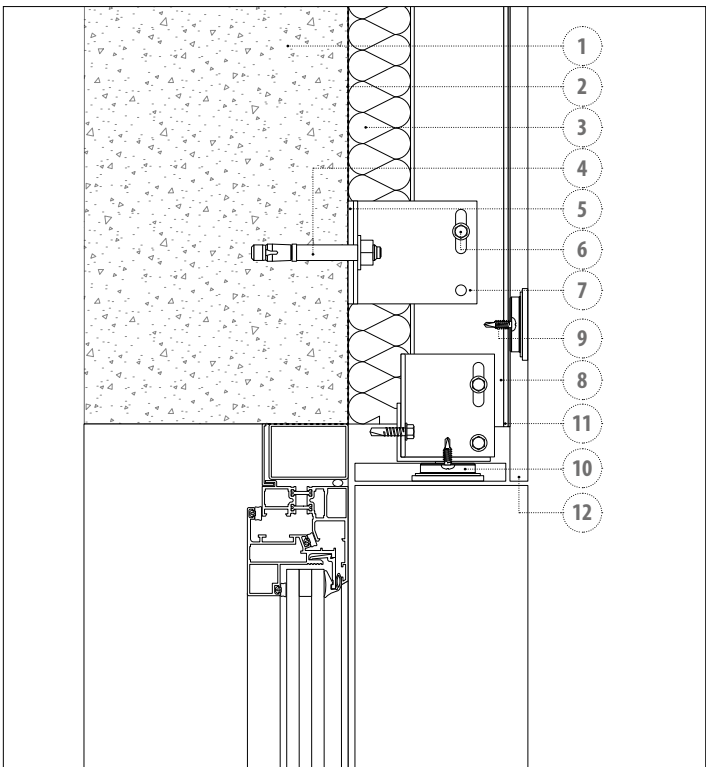
Elements of the system:

- 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. KRION®

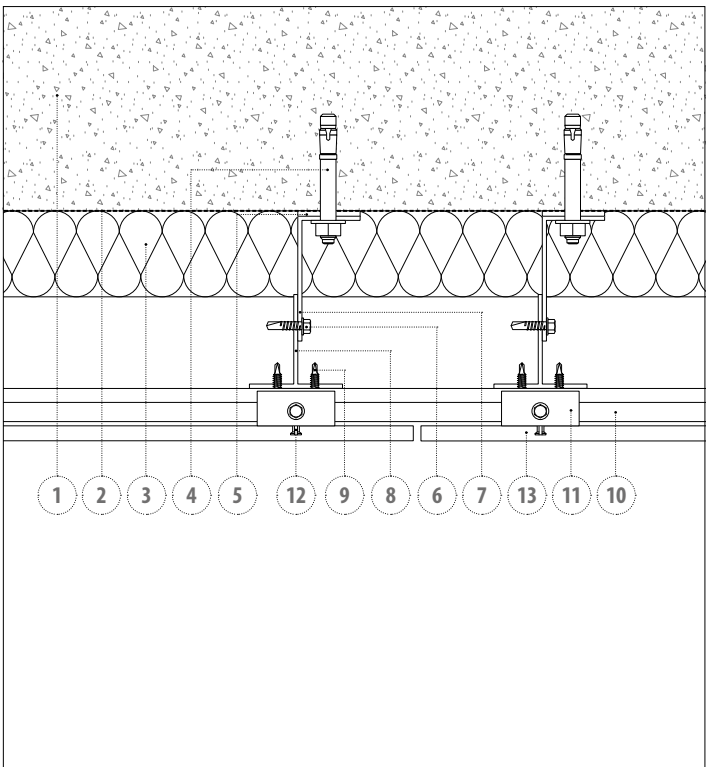
Vertical cross-section



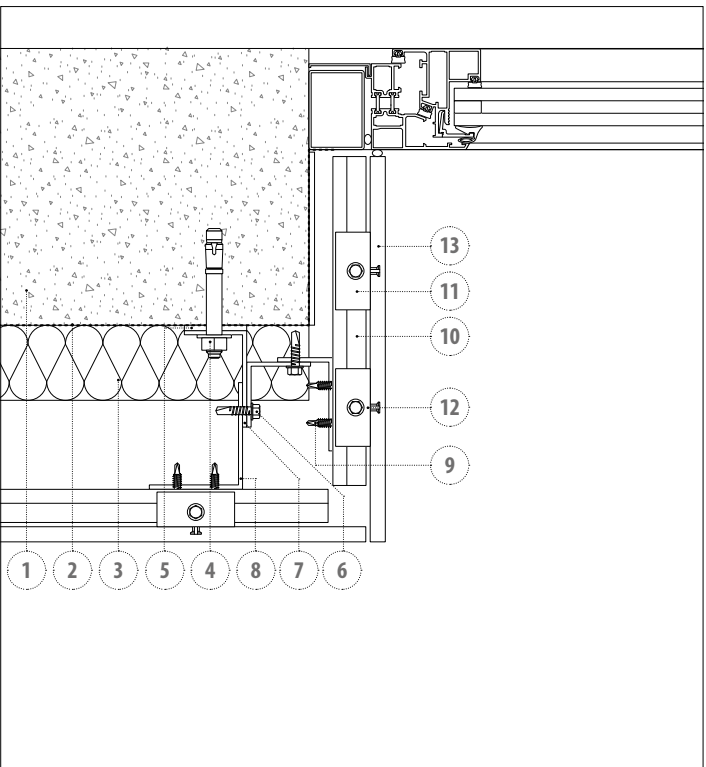
Horizontal cross-section



Lintel



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 two outer FERMACELL PANEL panels and an inner core consisting of three 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 XLIGHT or XTONE 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 m²/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.

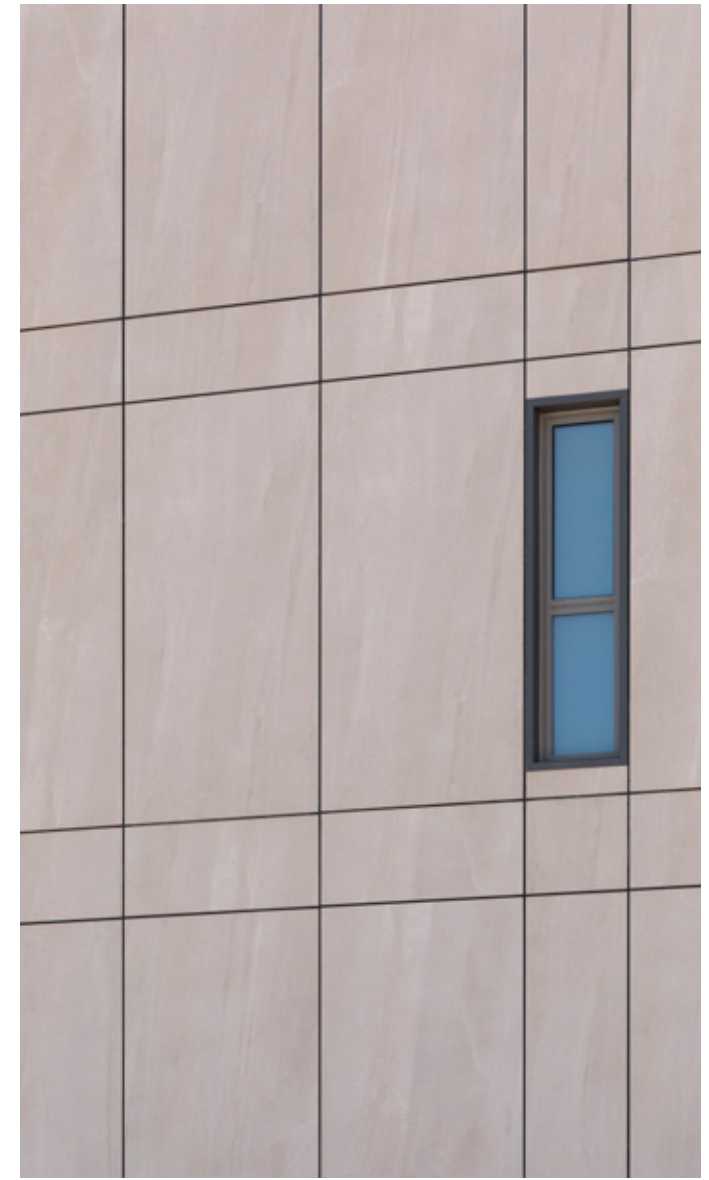
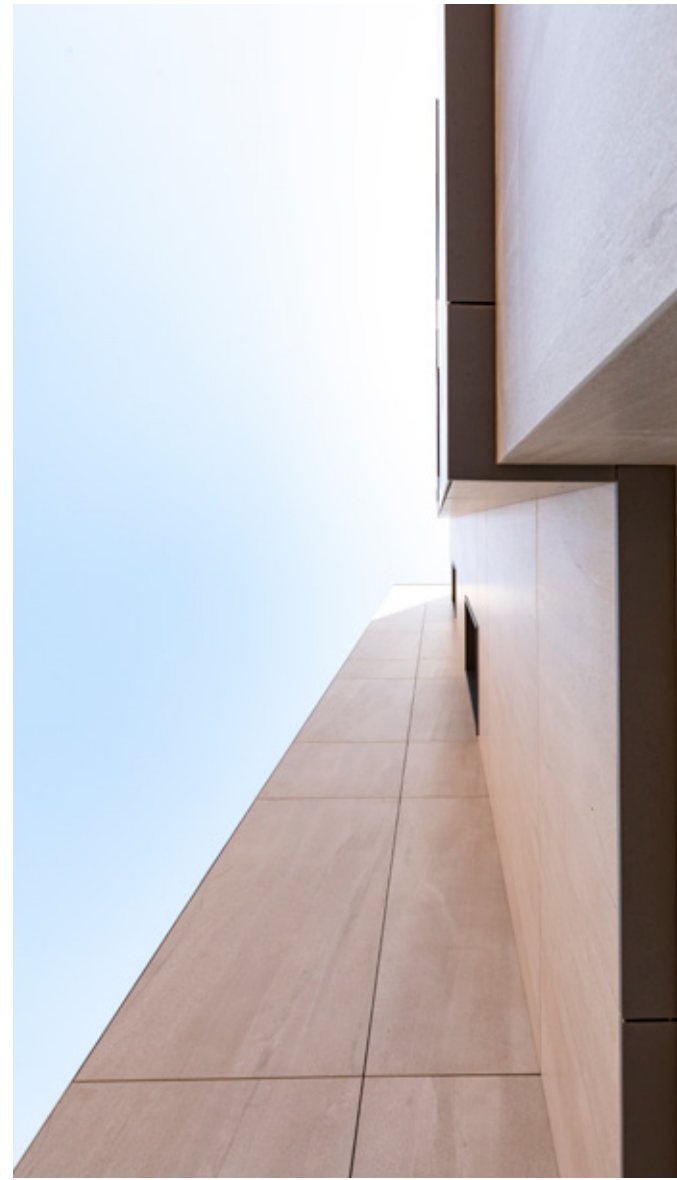
Certifications and technical testing

Air permeability (UNE-EN 12153:2000) >600Pa - Clase AE	Water tightness under static air pressure (UNE-EN 12153:2000) >600Pa - Clase AE	Wind load resistance (UNE-EN 12179:2000) 1500Pa y -1500Pa	Fire resistance EN 13501-2:2016 EI 60	On-site façade watertightness test PO. DRC. 06/23 DEL IVE Satisfactory
Reaction to fire (EN 13823:2010+A1:2014) >600Pa - Clase AE	Acoustic resistance with cladding RA, tr: 51,7 dBA EN ISO 10140-2:2021 RA,tr=51.7dBA	Wind load resistance (UNE-EN 12179:2000) 1500Pa y -1500Pa	Thermal transmittance UNE-EN ISO 12631 U=0.3W/m2K	In situ airborne sound insulation evaluation DB HR / UNE-EN ISO 13283-3:2016 Satisfactory



HOTEL & SPA CASTILLO PEÑÍSCOLA

Peñíscola, Spain
MODFACADES system
Architect: GRY Asociados



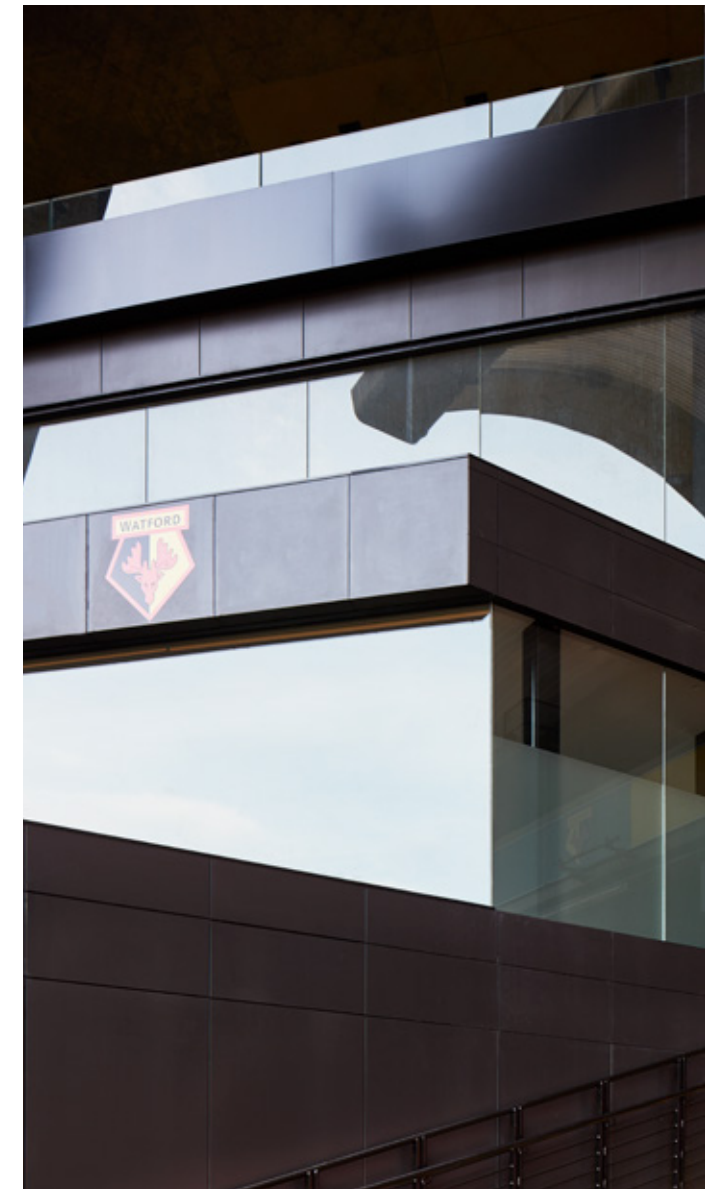
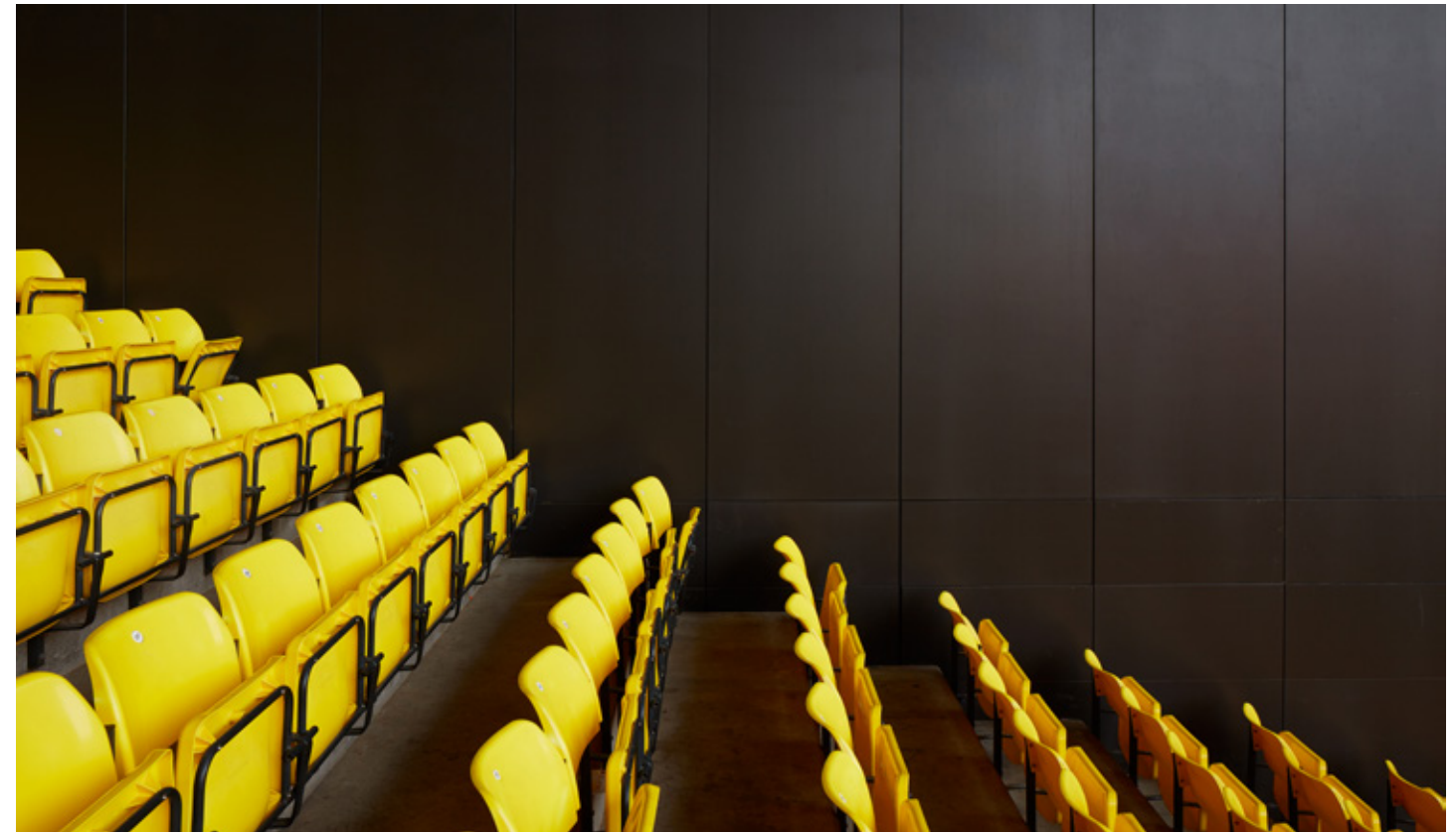


BERKSHIRE HOUSE

Maidenhead, United Kingdom
MODFACADES system
Architect: Goddard Manton Architects
Photography: AA Creative

WATFORD FOOTBALL STADIUM

Hertfordshire, United Kingdom
MODFACADES system
Architect: D. Guillermo Sánchez Galdó
Photography: Joel Knight





MILLWORKS

New York, U.S.A.
MODFACADES system
Architect: Butech Technical Department
3D Render: Pb3drender

MODSQUARE

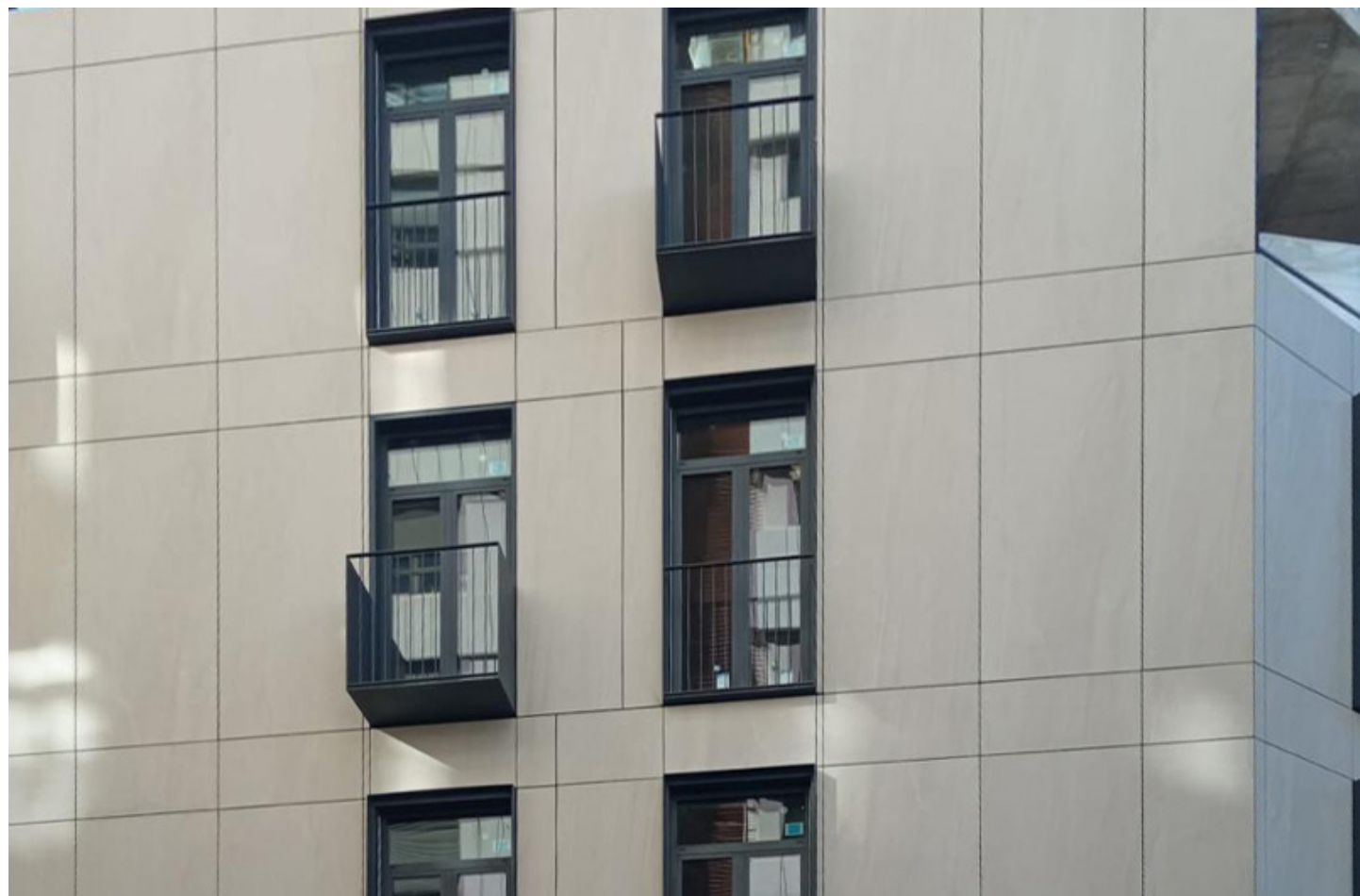
New York, U.S.A.
MODFACADES system
Architect: Butech Technical Department
3D Render: René Bolea



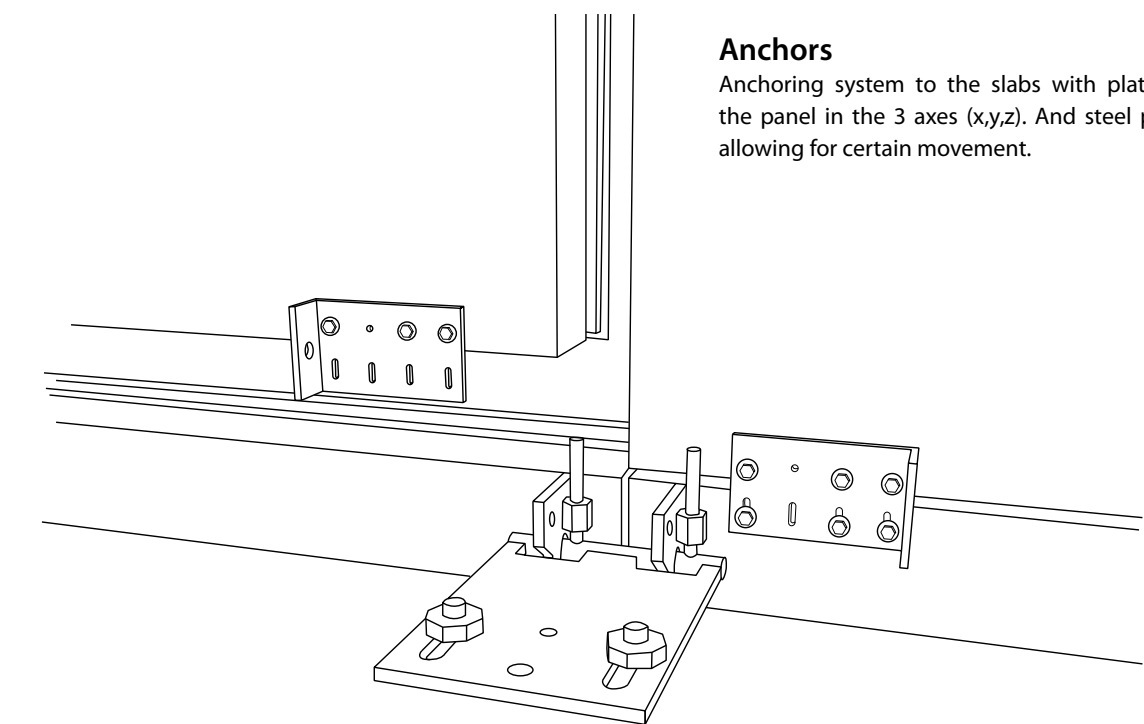
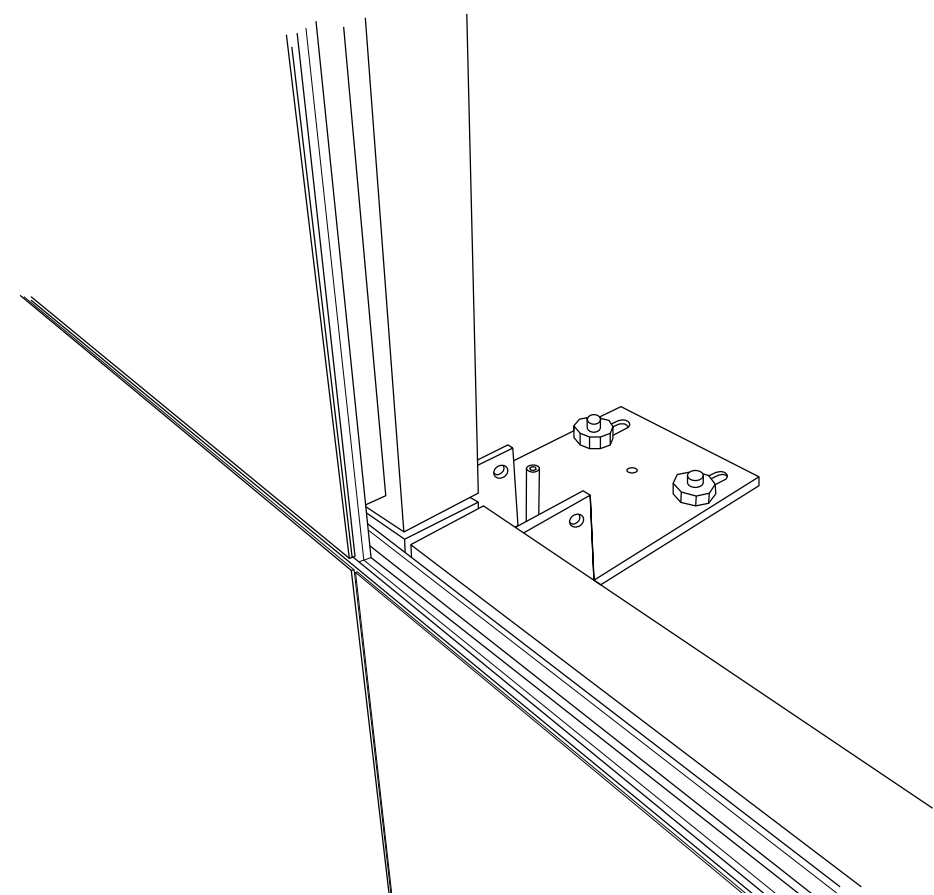
HOSPITAL CLÍNICO

Valencia, Spain
MODFACADES system
Architect: FJ Jiménez Arquitectura & AIC Equip





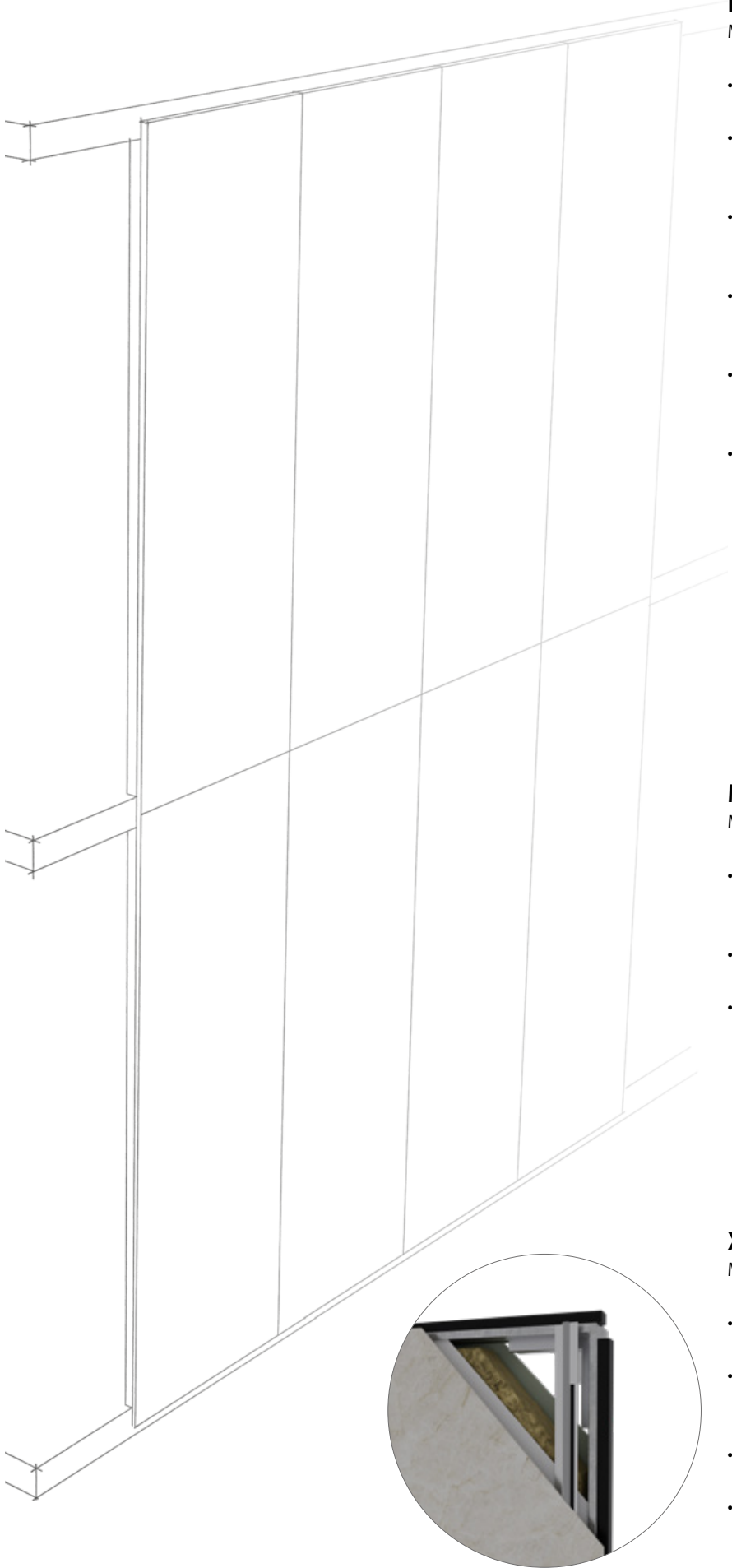
Characteristics



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.

XLITGHT or XTONE panels

Main Features:

- Exclusive design by PORCELANOSA Grupo.
- Large format: up to 1600 mm x 3200 mm. For other dimensions, please consult Butech.
- Extremely light tiles: 7-15 kg/m2.
- 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.

Production • FV MODFACADES



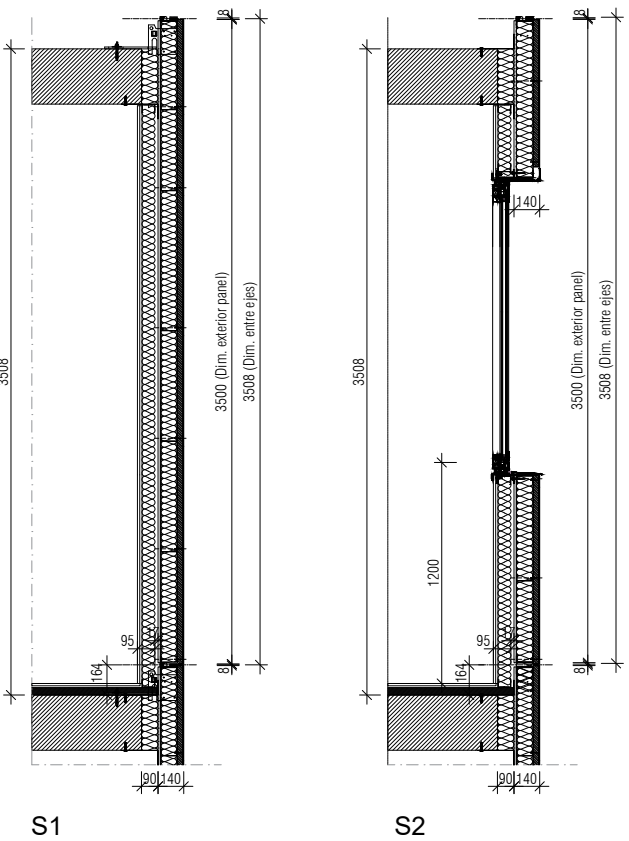
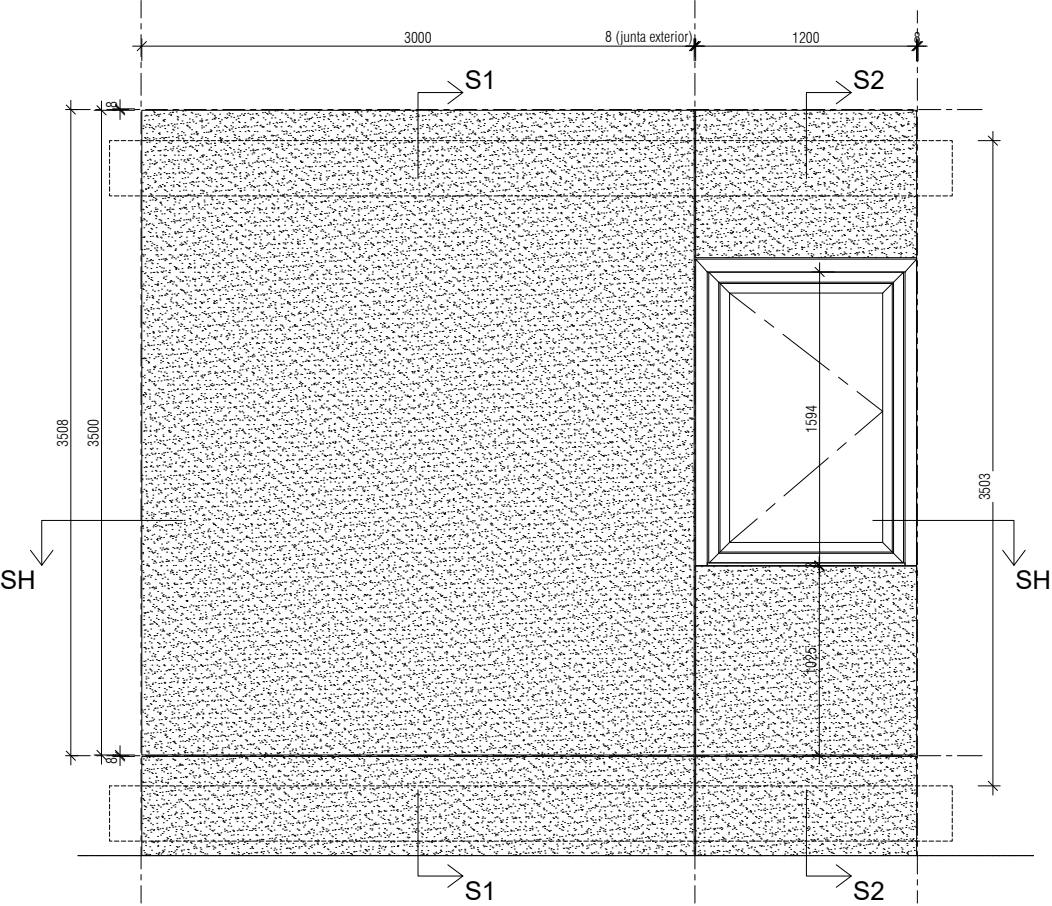
After the collection and prior control of the components, the assembly of the modules is carried out over several phases along the industrialized production line: at preparation tables, one side of the modules is assembled, and through a system of flipping machines, the modules move to the finishing tables completing the placement of the horizontal finishing elements (Ceramics and framing). Through production tables with motorized hinges, the panels are transferred to vertical flipping machines which pass the modules to an overhead rail where the joinery, glass, and the rest of the framing and finishing elements necessary for the completion of the module are placed. Subsequently, they are rearranged

horizontally on special storage and transport cages, where the protective and packaging elements are placed, to be sent to the construction site. The transport cage system allows for direct unloading and loading of the modules for their lifting and placement on site.

Throughout the entire process, an optimization and quality control of the components and processes is carried out to minimize manufacturing and finishing errors. This leads to production yields of 1000 m2 of facade per day.

Production • FV MODFACADES





Modular system with SATE

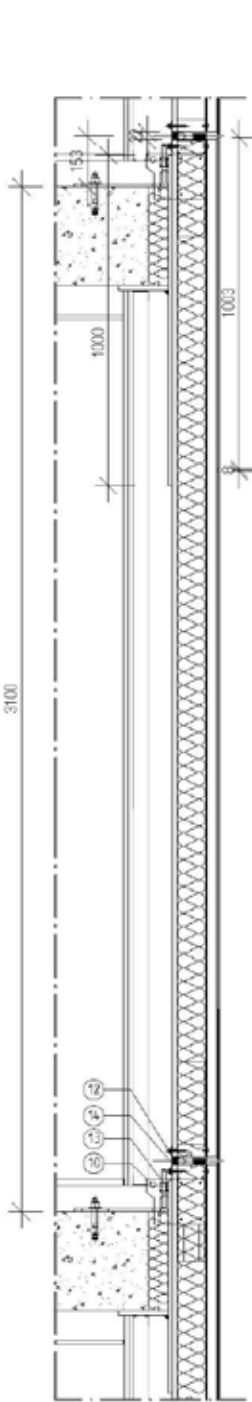
Industrialized system of multilayer panels and anchoring system to the main structure. The panels are composed of a cold S275 galvanized steel metal frame: formed by 1.2mm thick “C” perimeter profiles and horizontal “C” crossbars of 1.2mm thickness. Interior composed of an inner layer of mineral wool (e=9cm, d=40kg/m³), closed with a gypsum-cardboard plate. External finish of SATE. The 3cm thick XPS panel is fixed to the frames with screws and has an aluminum perimeter metal frame. External SATE finish with acrylic paint on mesh and mortar. Includes perimeter sealing of the panel with a 22mm neoprene joint system (horizontal and vertical joints) and internal sealing. Joints between modules of 10mm (horizontal and vertical joints). Includes fixing to slabs using hot-dip galvanized steel S275 anchoring plates that allow adjustment in the three Cartesian axes. Includes ceramic shrinkage, setting out of anchors on site, installation of modules and internal sealing of joints between panels.

Includes pre-window frame. Perimeter metal profile in window opening, as support for carpentry fixation and window surround. Cold galvanized steel S275 profile.

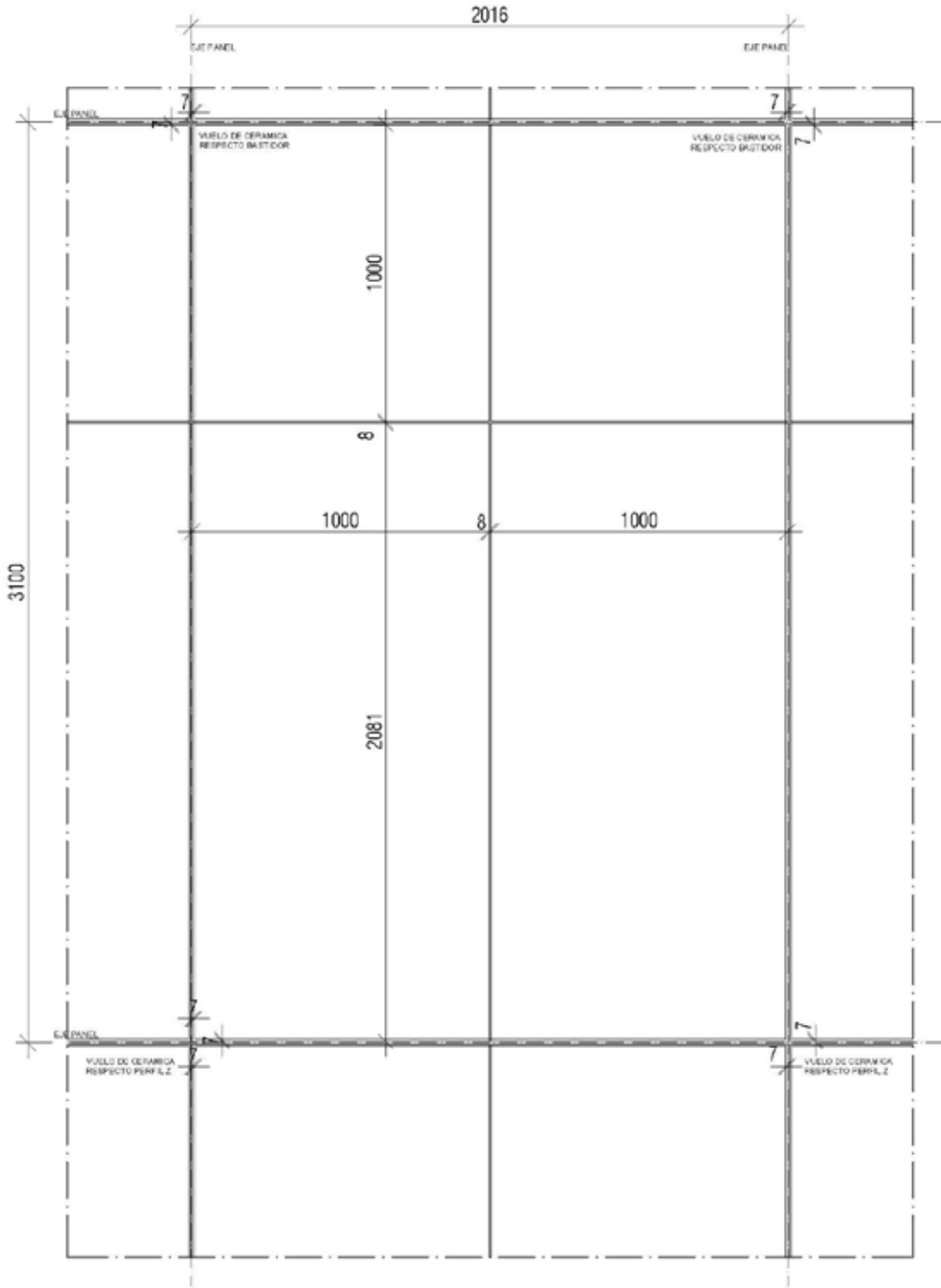
Includes metallic reinforcement in corner panels, both for “L” shaped panels and chamfered panels, using cold S275 galvanized steel profiles.



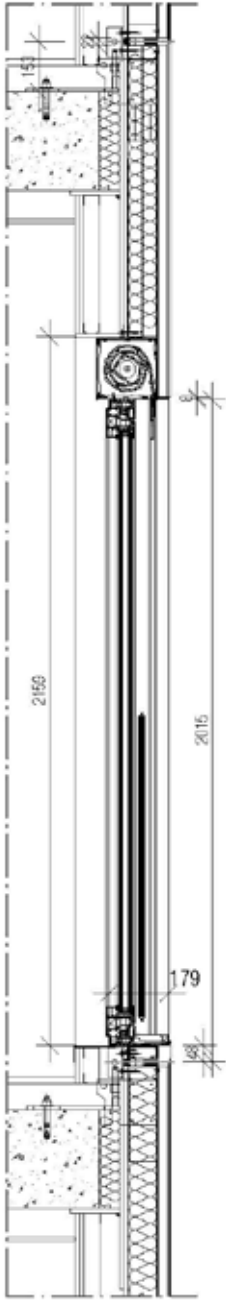
VERTICAL SECTION TYPE
OPAQUE AREA



ELEVATION TYPE



VERTICAL SECTION TYPE
WINDOW AREA



WINDOW TYPE

