



**Curtain wall systems**

**Professionalism and profit in one facade**  
**Passion for innovation to classics of tomorrow**

**H70-hybrid**

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**Typical applications & smart solutions**



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# Founders perspective: the spark behind the shift

Dear Reader,

Innovation is a rare sight in an industry as traditionally rooted as construction. True game-changers, those capable of sending shockwaves through the sector, are even rarer, often dismissed as unrealistic dreams.

Yet the global facade market is in desperate need of change. Facade contractors disappear faster than they can start, and curtain walls without leaks are more the exception than the rule.

In 2005, the year I began developing the idea of hybrid, now 20 years ago, I felt it was my responsibility to act. At Fassada, innovation isn't just a buzzword, it's our DNA.

This conviction led to the creation of a cutting-edge, high-performance, and globally patented technology, rooted in an engineering philosophy that places maximum cost efficiency and risk control

at its core. Innovation is good, but disruption is better.

Our aluminium and cold-rolled steel curtain wall systems are designed to disrupt the market, setting new standards, solving persistent challenges, and making the impossible possible. We offer tangible, proven answers to the climate crisis and deliver sustainable, energy-efficient solutions for the buildings of tomorrow.

Our mission is simple: build better, smarter, and far more cost-effectively. Guided by Garry Kasparov's words, "At the end of the day, it's all about money," we live by our motto: "Professionalism and profit in one facade."

By combining globally patented USPs with unique financial advantages, such as drastically reduced labour, installation, and fabrication costs, we've created a formula for real disruption.

This unique blend is what sets our technologies apart; some might even call them incomparable.

We take pride in developing solutions that endure, inspire, and help shape the future of facade construction. As you read through this manifesto, I invite you to explore the thinking, engineering, and vision behind the Fassada hybrid system.

Because the future of facades does not belong to those who keep improving the candle. It belongs to those who dare to design the light bulb.

Eric Claeys, ir. MSc MBA  
Founding Chairman



**"It is better to believe than to disbelieve,  
in so doing you bring everything to the realm  
of possibility" - A.E.**

## Reference documents

### Fassada hybrid shift manifest

Across 150+ pages, this manifesto challenges conventional thinking and redefines the future of curtain walls and building envelopes. It delivers a holistic analysis paired with truly disruptive solutions, built around two uncompromising convictions:

"At the end of the day, it's all about money. It's all about financial performance."

"Quality, quality and quality again. Success is determined at the end of the chain - the installed facade - not at the starting point with the initial profiles."

### Fassada Smart Solutions brochure

This brochure provides a comprehensive overview of the architectural possibilities offered by Fassada Hybrid Technologies®.

# Fassada hybrid curtain wall technologies®: what is it?



**Stick**



**FASSADA Hybrid**



**Unitized**

- +** **Cost**
  - low material cost
  - low fabrication cost
- Time**
  - short fabrication time
- **Cost**
  - scaffoldings
  - need for skilled workers
- Time**
  - outside installation: weather
  - long installation time
  - EPDM membranes
- Technics**
  - replacement broken glass: cost!
  - if leakage: cause?

## Combined advantages

- +** **And**
  - ground breaking performance
  - suitable for seismic areas
  - high design freedom for external cladding
  - suitable for smart glazing
  - no EPDM membranes

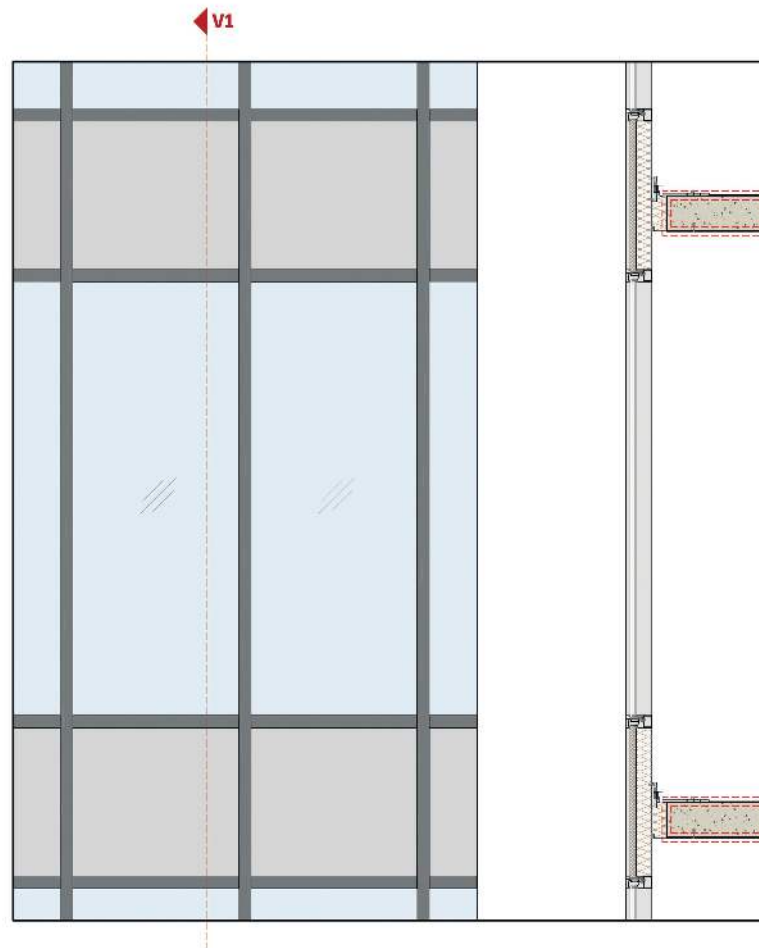
- +** **Cost**
  - no scaffoldings & mast climbers
- Time**
  - fast installation on site
- Maintenance**
  - absorption of slab deflections
- **Cost**
  - high material costs
  - astronomic transport costs
  - high and long prefinance
  - high storage costs
- Time**
  - very long production time
  - long lead time
- Technics**
  - glass replacement: cost!
  - if leakage: big issue!

In short, the Fassada hybrid system® bridges the traditional stick-built and unitized facade systems by combining the best of both worlds, delivering state-of-the-art technical performance while minimizing risk at every stage of construction.

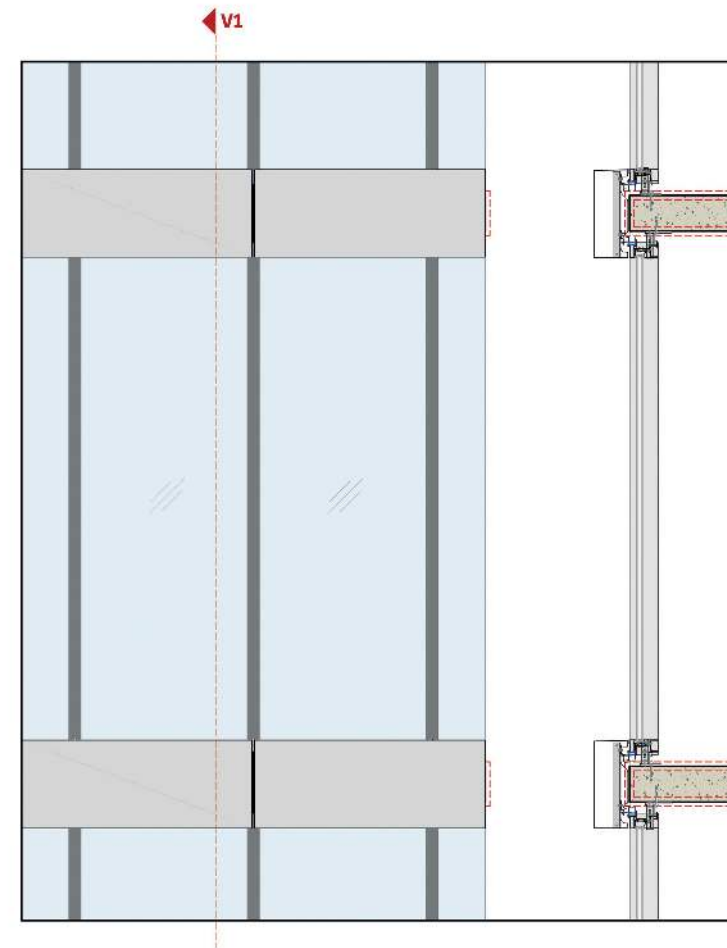
The result is a game-changing curtain wall solution that sets the new standards in performance, reliability, and last but not least, cost efficiency - transforming the way facades are designed, built and delivered through

- reduced material costs (through smart engineering and monolithic mullions)
- decimated fabrication costs (up to 20x less compared to unitized)
- decimated installation costs (approximately 35% lower compared to unitized)
- decimated transport costs (up to 10x lower compared to unitized)

## Continuous curtain wall & window wall



Curtain wall in front of the floor slabs



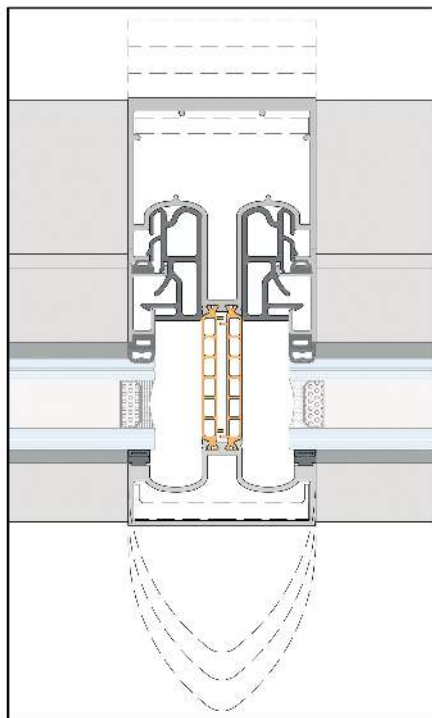
Curtain wall between the floor slabs

Fassada hybrid curtain wall technologies® can be installed either

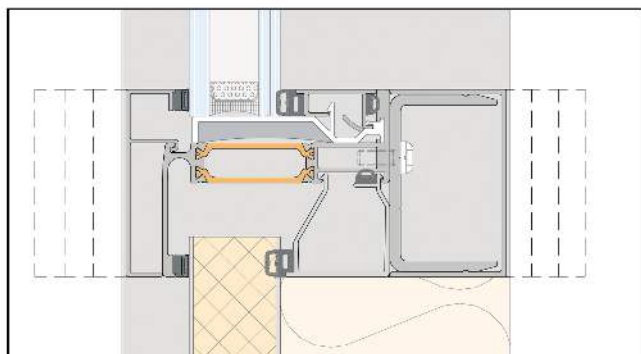
- as a continuous curtain wall, in front of the slab edges
- or as a window wall, built between the slabs

Smart bracket solutions are available for both options.

## Basic vertical & horizontal sections



H70-hybrid mullion



H70-hybrid transom

The H70-hybrid offers a sleek visible width of 70 mm, while other hybrid systems are available with widths ranging from 60 to 350 mm. Mullion and transoms can be crafted in a wide variety of shapes, including fully bespoke designs, all while preserving the integrity of the interior hybrid technology. Standard glazing thicknesses range from 10 to 64 mm, with bespoke solutions available for greater thicknesses.



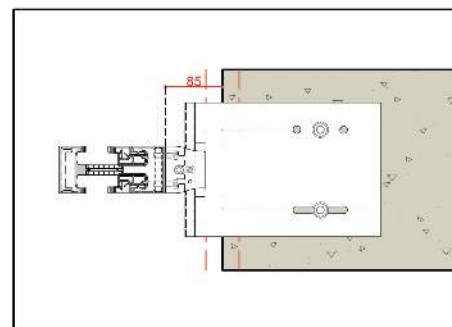
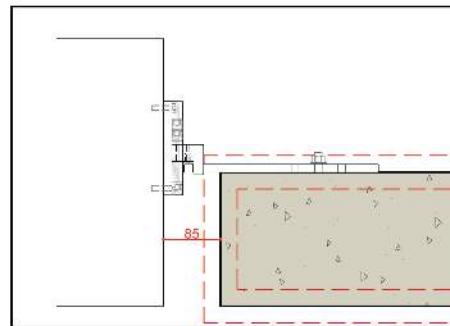
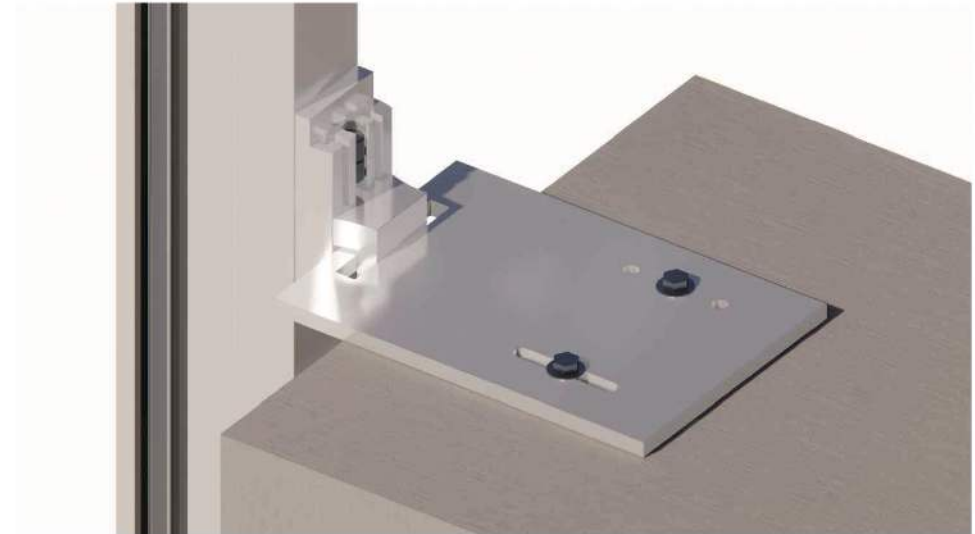
## H70-hybrid: standard bracket solutions of continuous curtain wall

Some relevant bracket criteria (ref Fassada manifest)

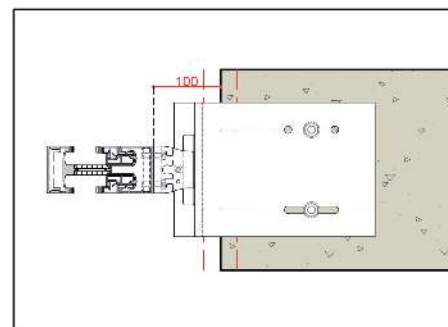
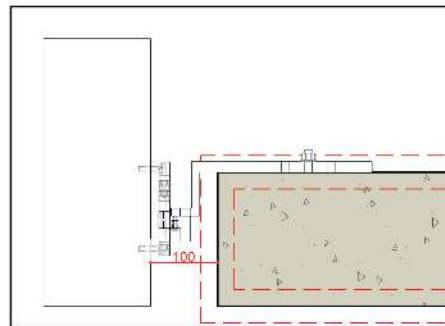
- Optimum load transfer to the primary structure
- Real slab deformations, as explained in topic 6: "Building statics: no single building is rigid"
- Specific movements, as explained in topic 30: "Seismic zones"
- Minimizing on-site work, installation tolerances, and therefore fixing key components to the mullions in the workshop
- Ensuring vertical mullions remain perfectly vertical
- Addressing potential facade uplift in case of excessive deflections caused by improperly constructed primary structures, not respecting applicable standards (which happens a lot..., the so called "lasagna - structures")

Pocketed bracket: in some cases, due to a combination of one or more factors

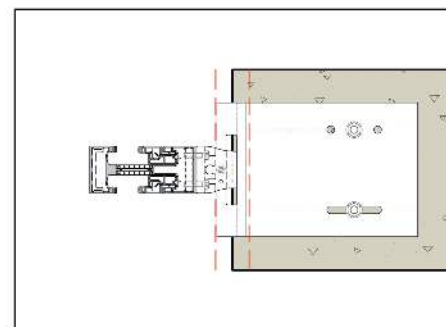
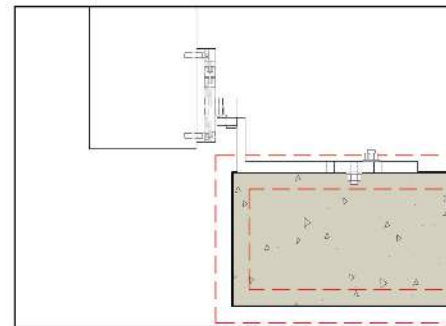
1. the thickness of the anchor plate as a result of the wind and dead loads
  2. deformations of the floor slabs and differential movements and
  3. the limited thickness of the floor build-up
- creating a pocket in the floor slab may be the only solution to conceal the anchor (a fairly common practice in the USA)



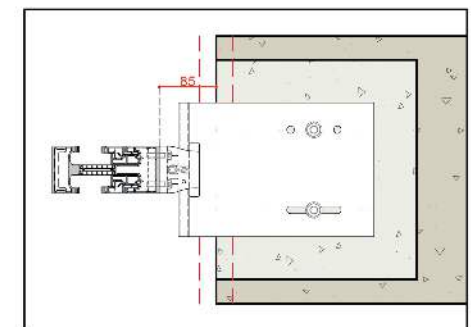
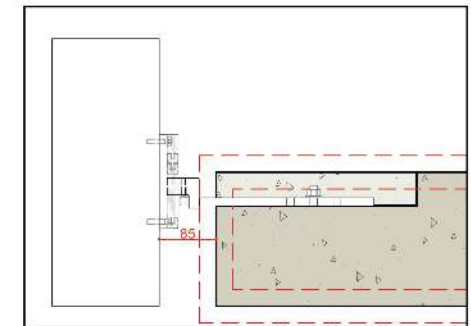
H70-hybrid flat bracket



H70-hybrid lowered bracket



H70-hybrid raised bracket

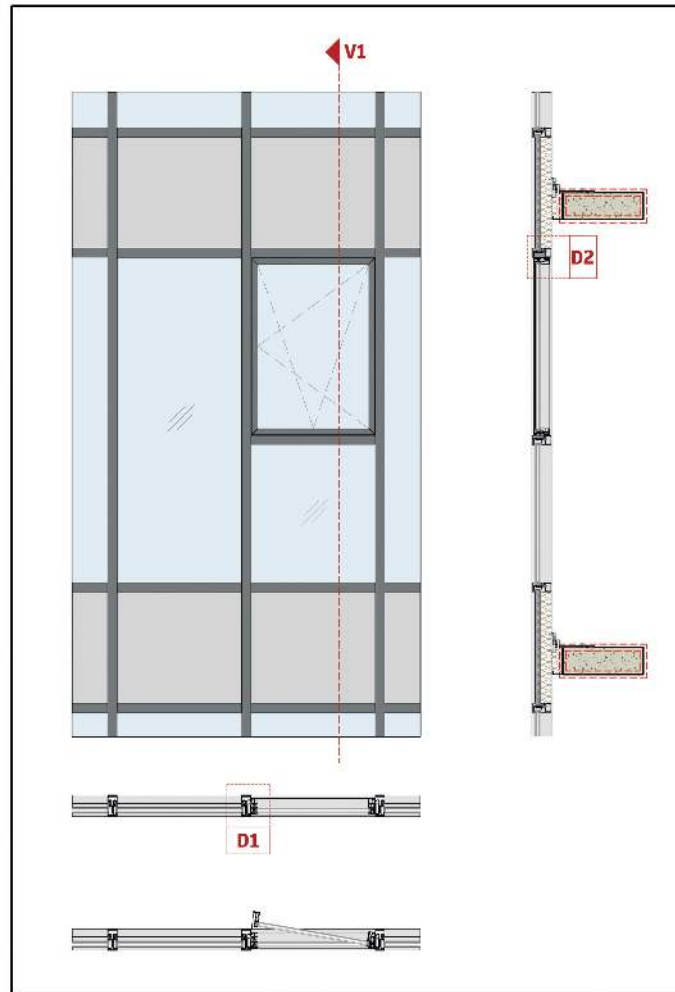


H70-hybrid pocketed bracket

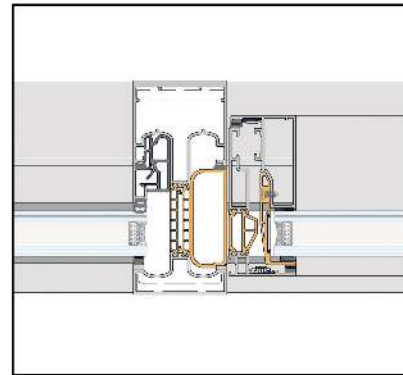
## Operable vents: HV50-hybrid



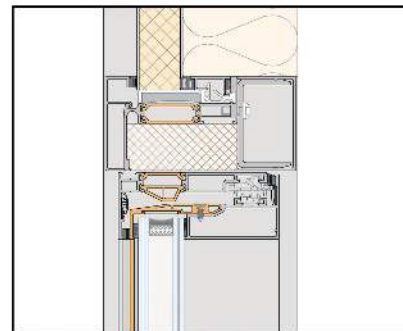
The Fassada HV50-hybrid turn and tilt window has a visible width of 50 mm.



Elevation & sections



Detail 1: vertical section

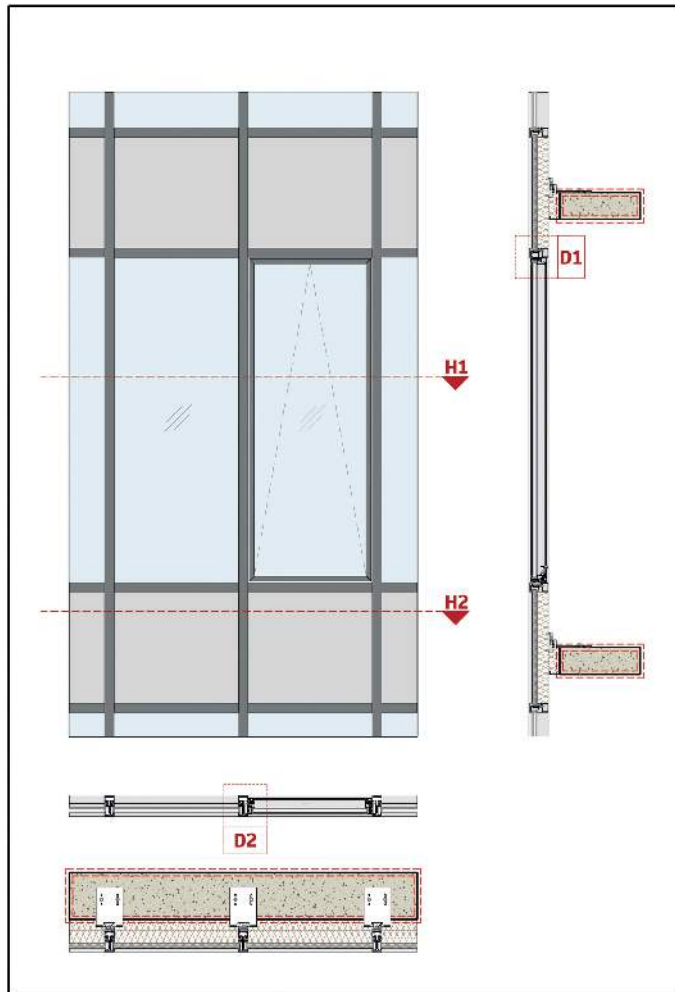


Detail 2: horizontal section

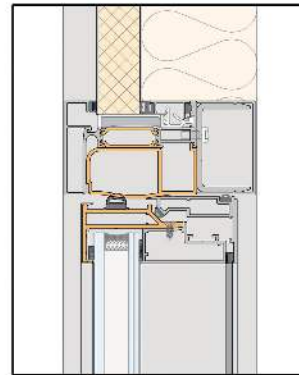


3D view

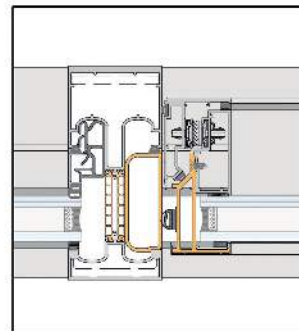
## Operable vents: top hung push out & pantograph



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section



3D view of top hung push out

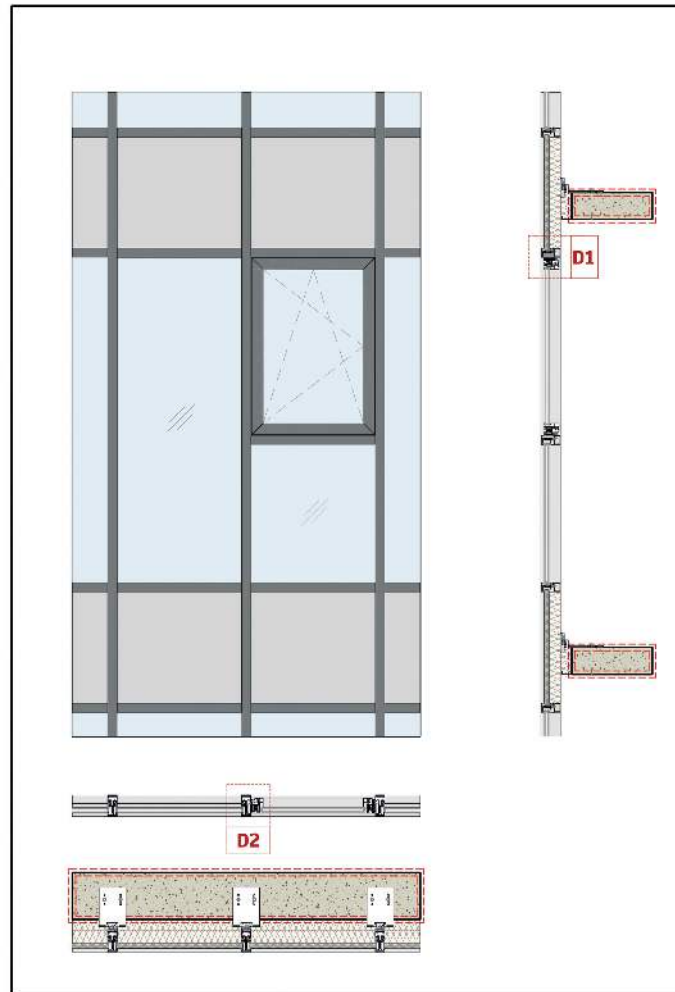


3D view of pantograph

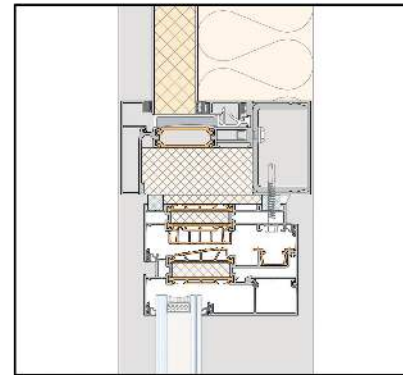
## Operable vents: other window & door systems



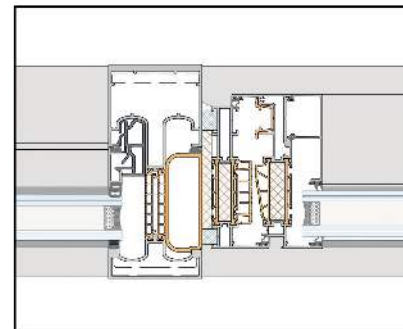
Fassada hybrid curtain wall technologies® offers 100% flexibility in integrating all possible types of operable elements, including doors and windows - even PVC frames.



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section



3D view

## General features of Fassada smart solutions for architectural claddings

See chapter 17 of [Fassada hybrid shift manifest](#) 

### Technical

- No need for a separate substructure - meaning not a single perforation of the facade (eliminating thermal or acoustic bridges and avoiding the risk of water leakage)
- No membranes required at the interfaces with glazed zones. Membranes are known to pose a long-term leakage risk and therefore best avoided

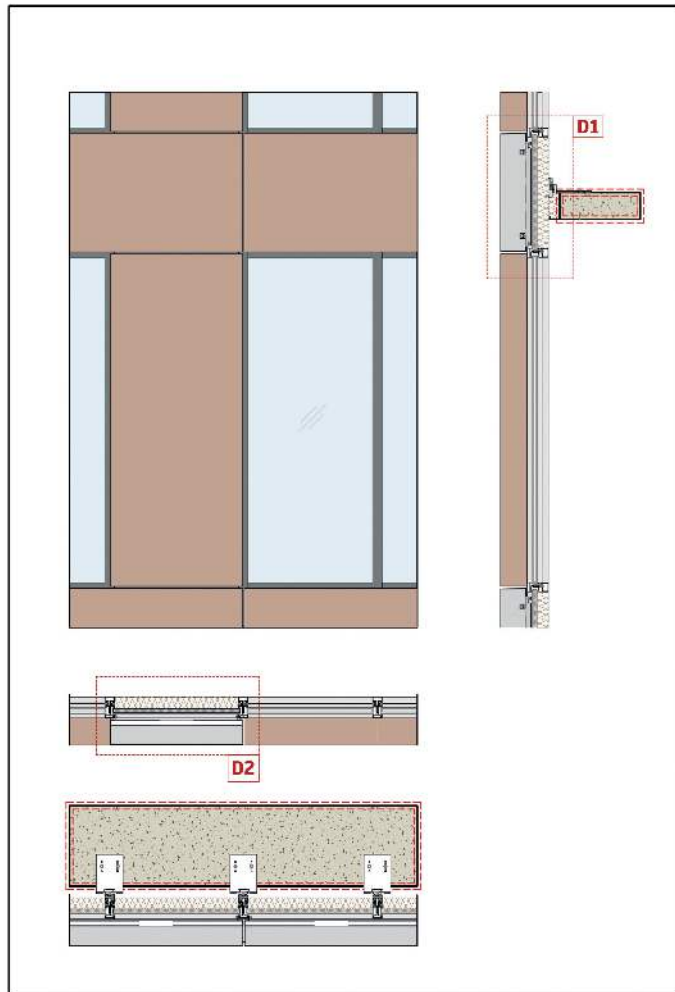
### Architectural

- Since the cladding is fixed directly to the locking points on the mullions, there is no installation tolerance between the cladding and the curtain wall. The result: near-perfect precision
- Combined with the smart pivot anchors (see topic 20), architects finally achieve what they aim for: vertical lines that are truly vertical

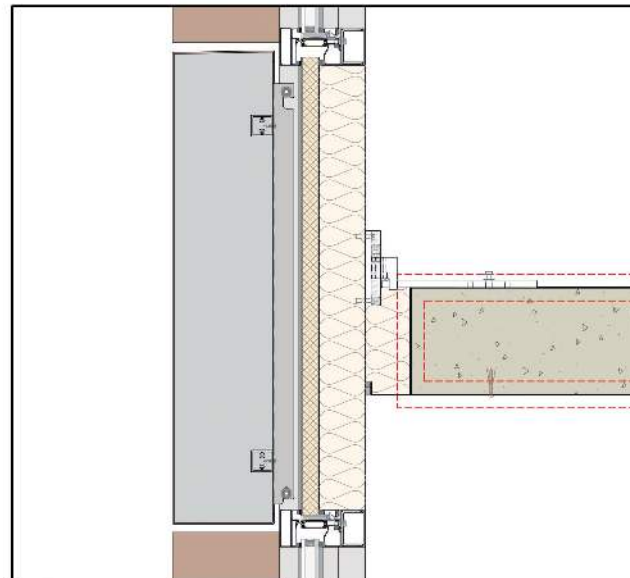
### Cost savings

- No separate substructure
- Decimated installation costs, as the cladding simply hooks onto the locking points and all happens from the inside of the building
- No need for highly skilled installers - alignment of the cladding is built into the mullion design
- No scaffolding or external mast climbers needed

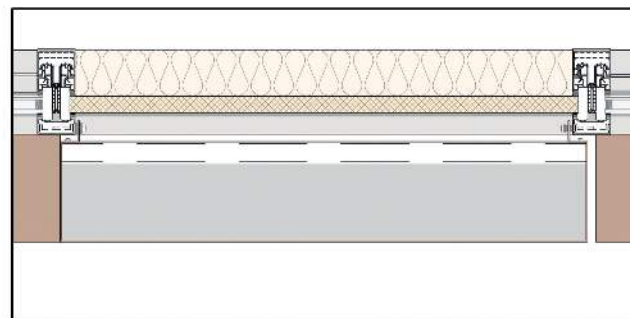
## Architectural cladding: metal cassettes



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section

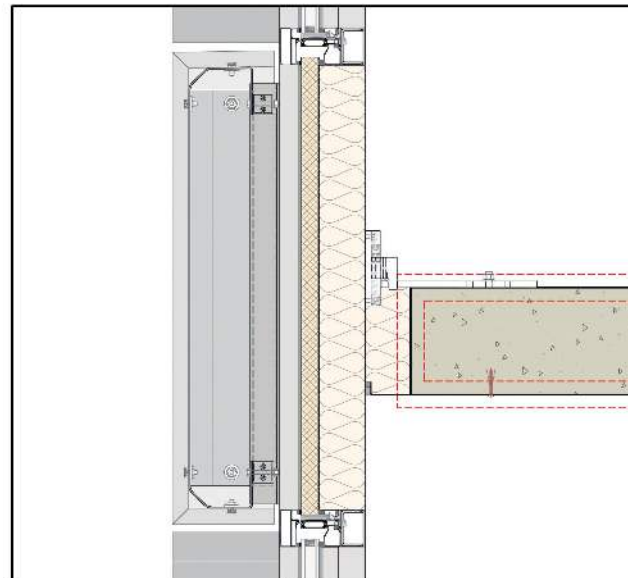


3D view

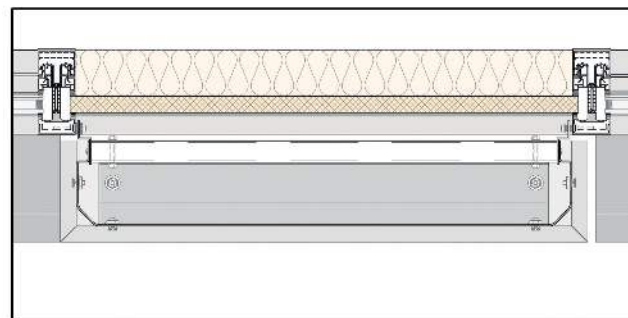
## Architectural cladding: natural stone



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section

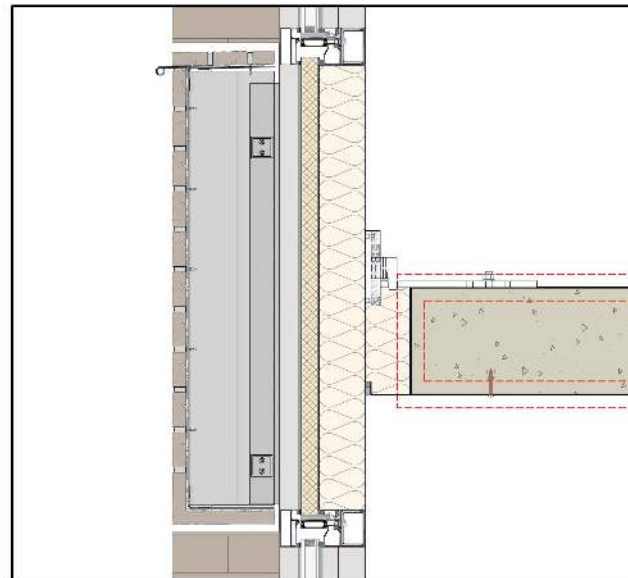


3D view

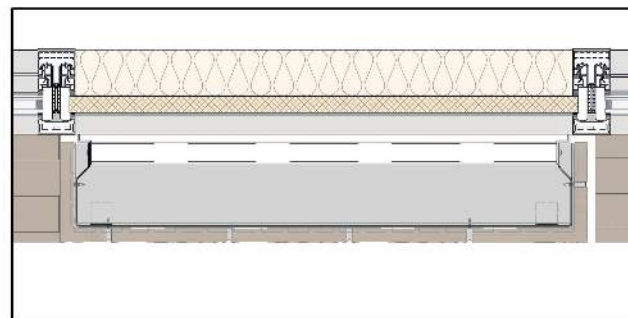
## Architectural cladding: brick stone slips



Elevation & sections



Detail 1: vertical section

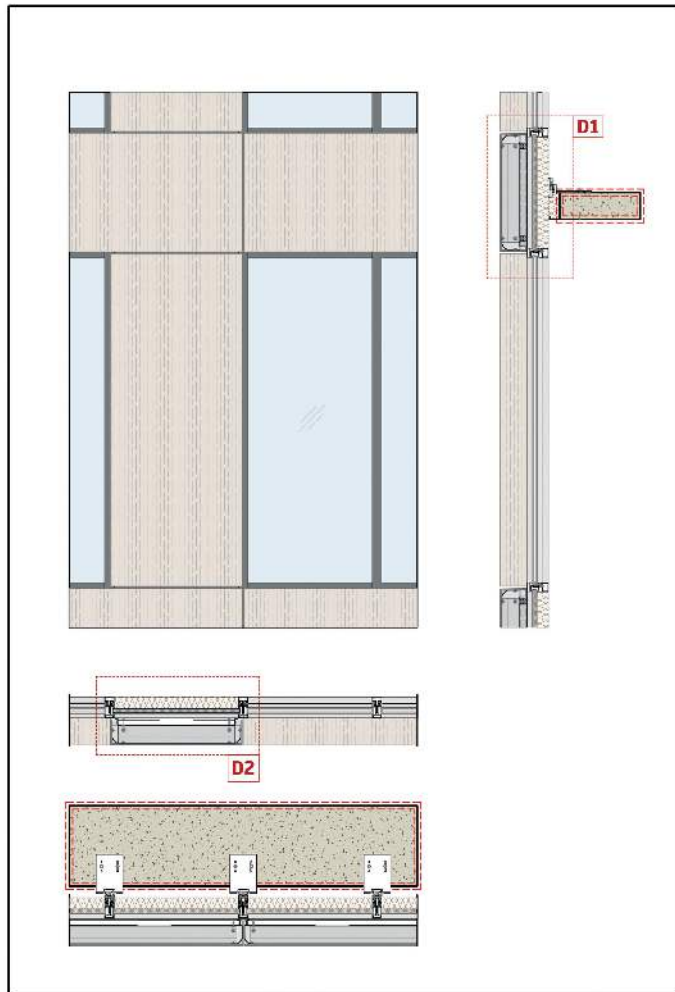


Detail 2: horizontal section

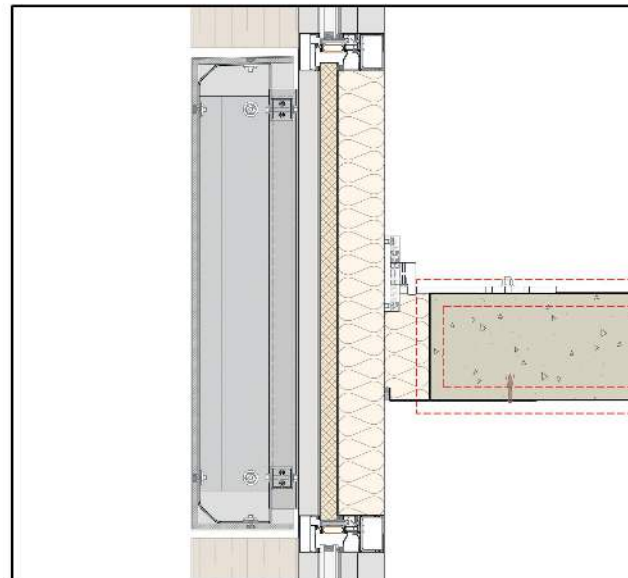


3D view

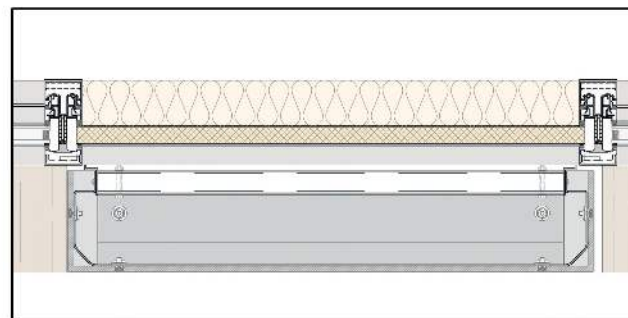
## Architectural cladding: thin stone cladding



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section



3D view

## General features of Fassada smart sun shading solutions

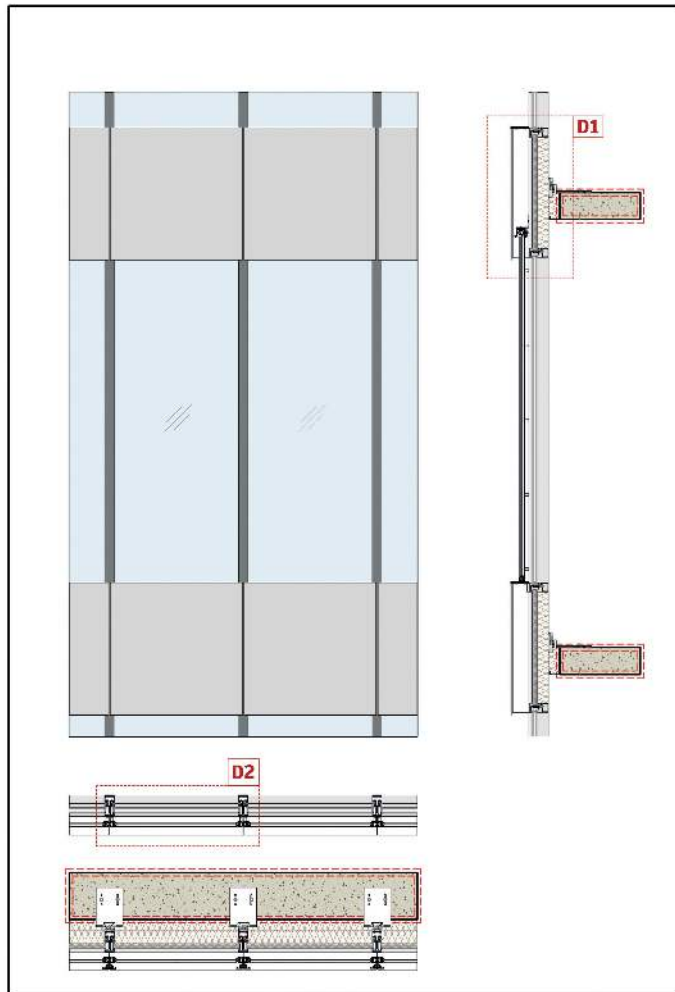
See chapter 41 of [Fassada hybrid shift manifest](#) 

To minimize the solar heat gains – “keeping the sun out” – the amount of solar radiation that induces overheating in both indoor spaces and buildings’ structure need to be reduced.

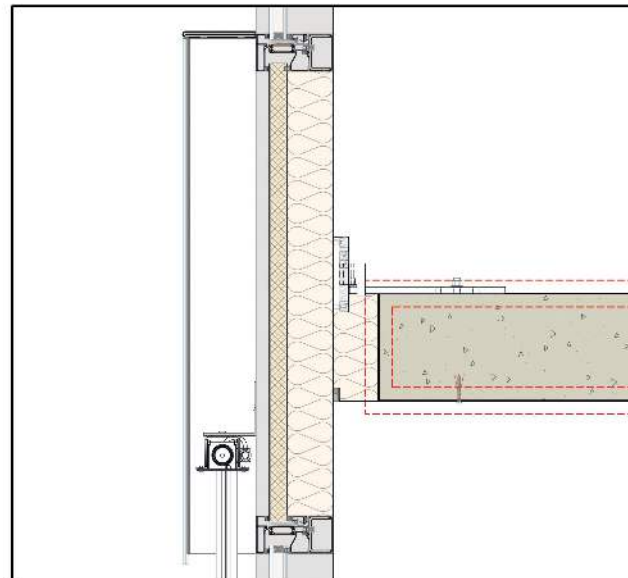
Fassada smart sun shading solutions are featured by

- Installation from the inside.
- the monolithic mullion which allows to fix any kind of external structure, such as sunscreens, WITHOUT perforating the rain barrier of the curtain wall, NEITHER creating any thermal bridge
- a state-of-the-art concealed sunscreen with the semi-ventilated configuration

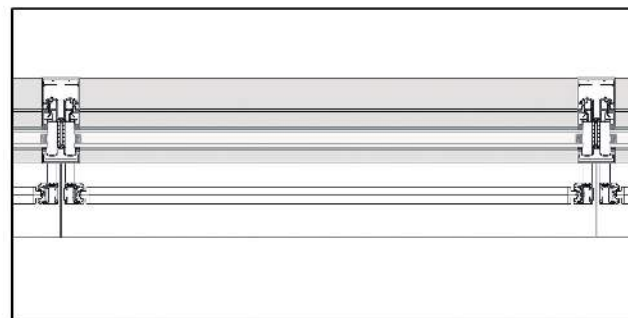
## Sun shading solutions: sunscreens



Elevation & sections



Detail 1: vertical section

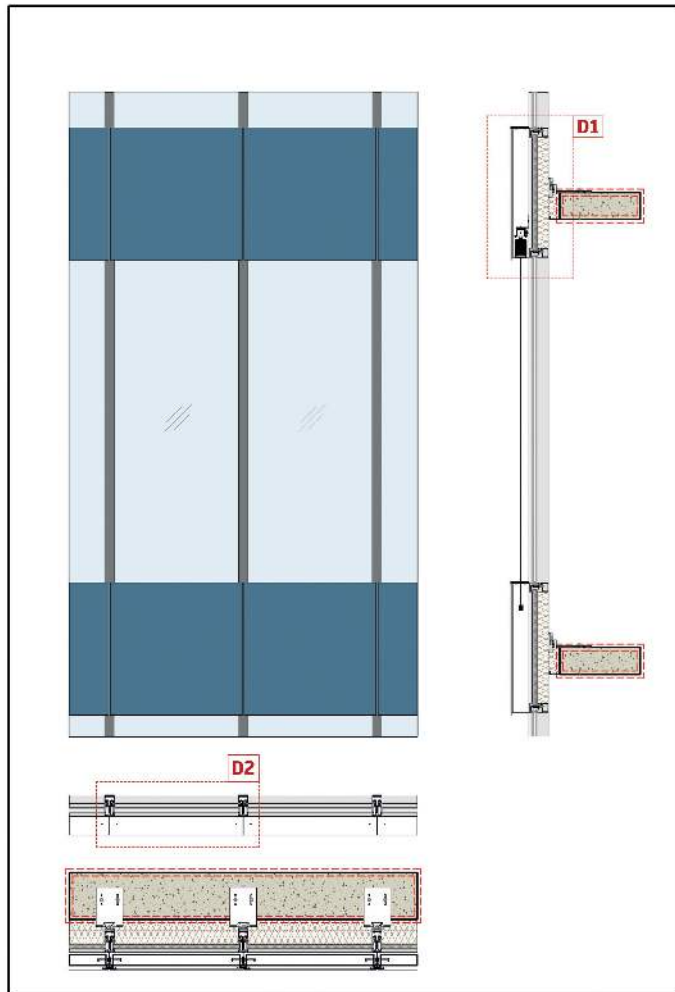


Detail 2: horizontal section

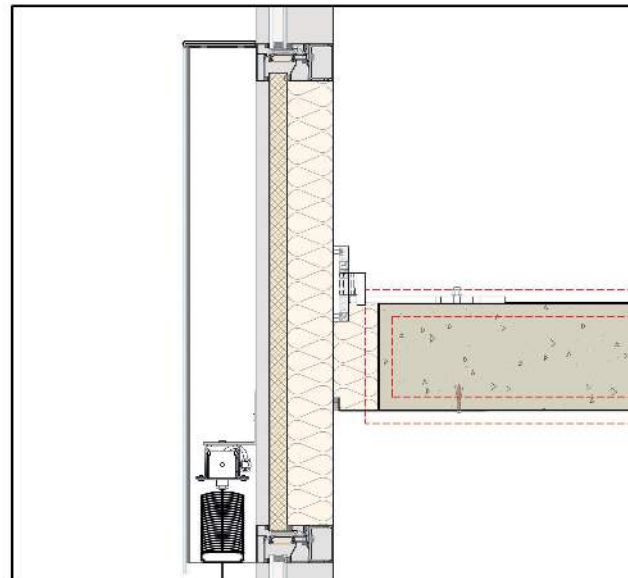


3D view

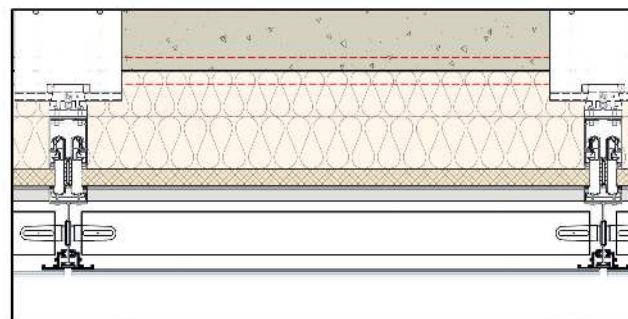
## Sun shading solutions: venetian blinds



Elevation & sections



Detail 1: vertical section

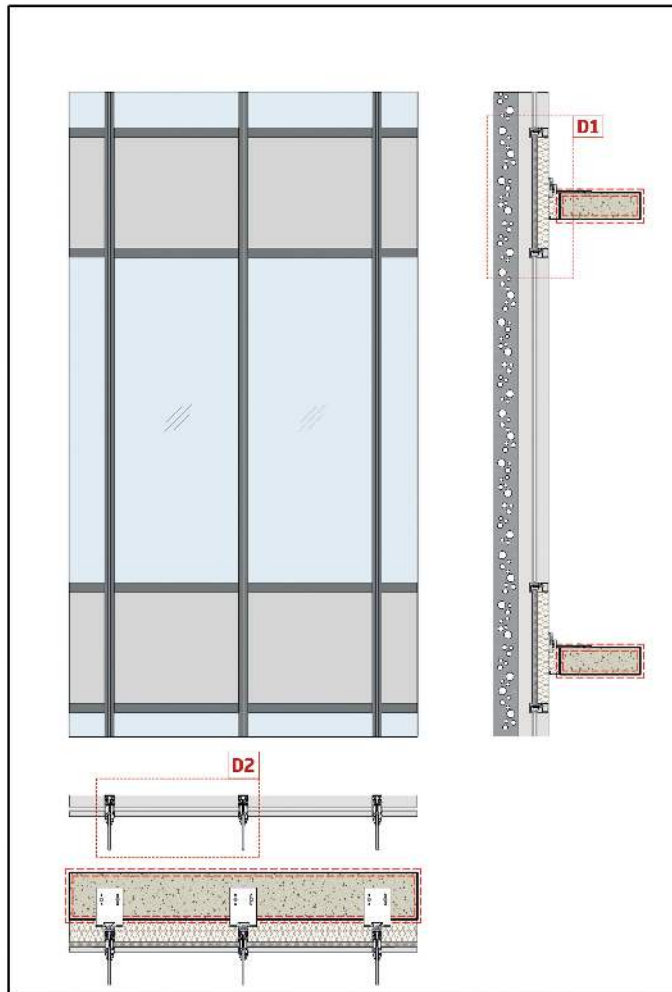


Detail 2: horizontal section

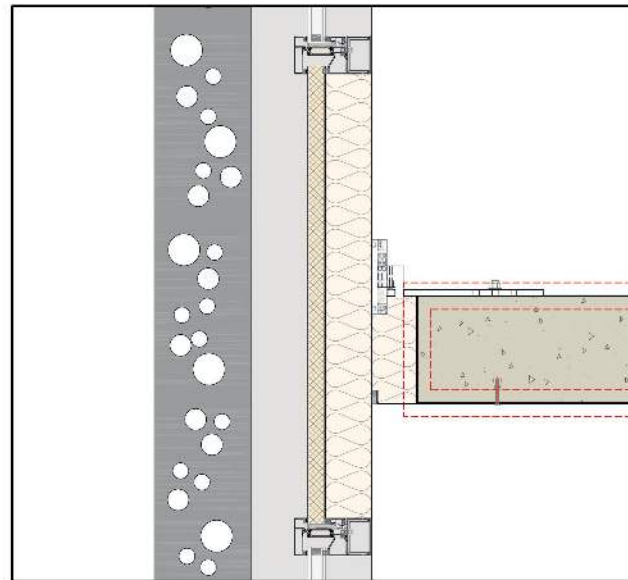


3D view

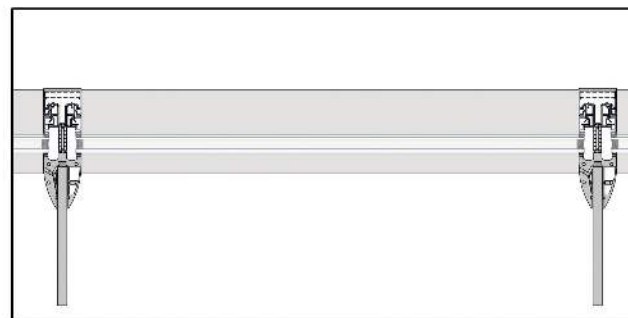
## Sun shading solutions: metal fins



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section



3D view

## Sun shading solutions: smart glazing

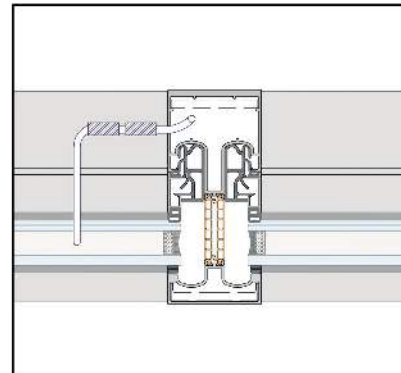
Fassada unique smart glazing solution is featured by

- No perforation of the mullions
- The water barrier integrity of the facade remains fully intact. No holes, no weak spots through the water barrier.
- No silicone used
- The installation is completely independent of weather conditions, surface cleanliness, and installer variability.
- No risk of leakage
- Without perforations and silicone, there are no pathways for air or water ingress, eliminating a critical source of long-term failure.
- Installation from the inside

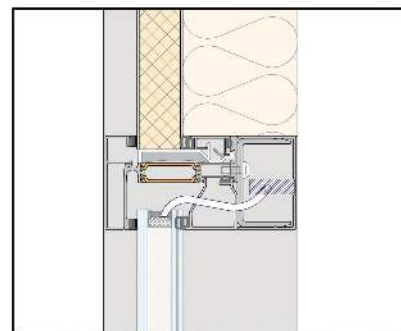
All connections are made from the safe, dry interior of the building, not from precarious external platforms. This also means:

- Work can continue in any weather
  - Quality control is easier and more precise
  - The BMS (Building Management System) integration is done in optimal conditions
  - Cables and connectors stay dry
- Unlike traditional systems where connectors often sit in the wet glazing pocket, the Hybrid system ensures that all electronic components are housed on the inside of the building envelope, far from moisture and condensation risks.
- Easy maintenance and repair
- In case of technical failure, whether it's a damaged cable or faulty connector, access and replacement can happen entirely from the interior. There's no need to deconstruct panels or deploy expensive external access equipment.
- Glass replacement? Also done from the inside.

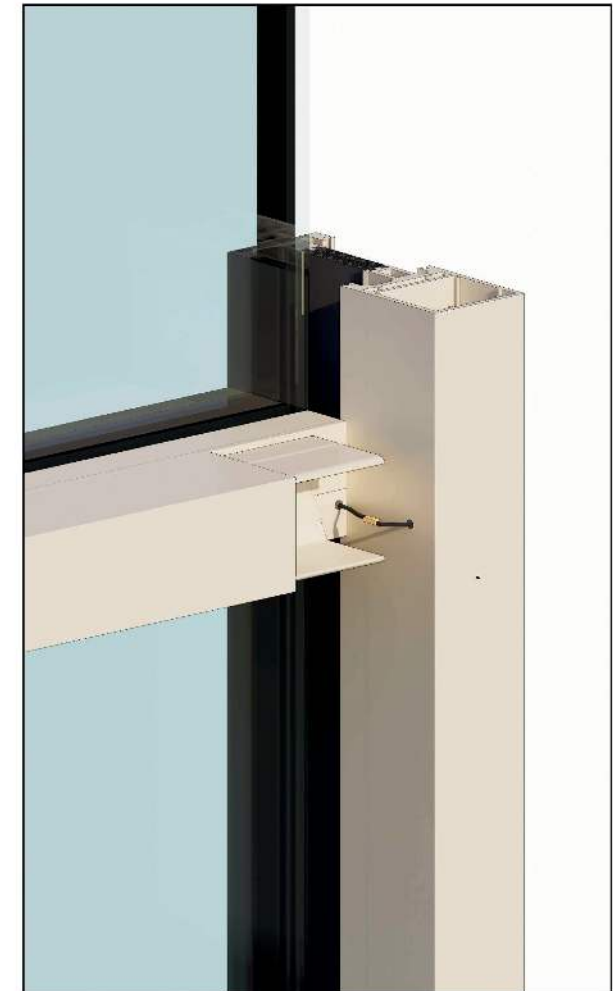
Even if the panel must be changed due to breakage or failure, the entire operation is done internally, reducing cost, time, and risk.



Detail 1: vertical section

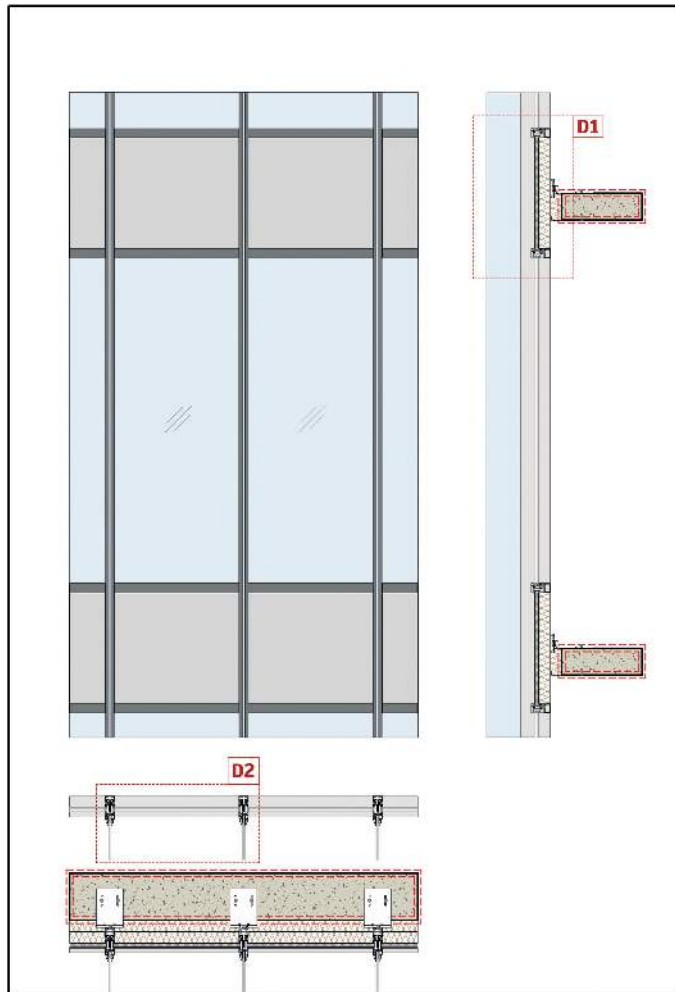


Detail 2: horizontal section

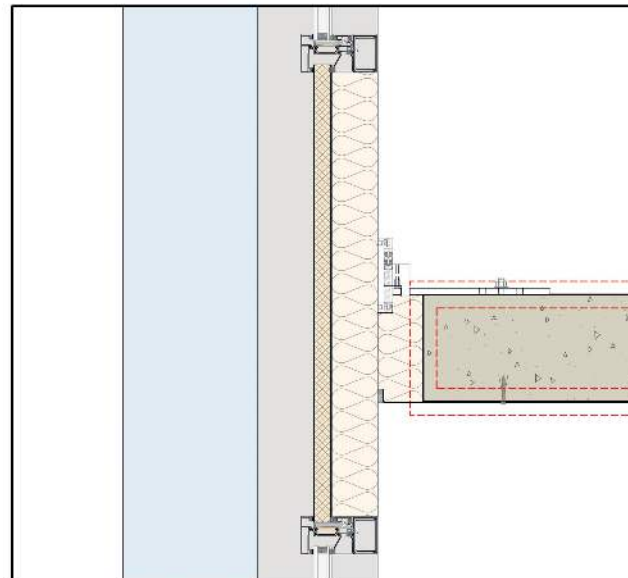


3D view

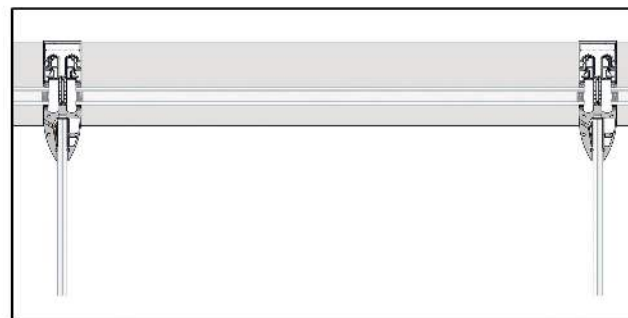
## Sun shading solutions: glass fins



Elevation & sections



Detail 1: vertical section

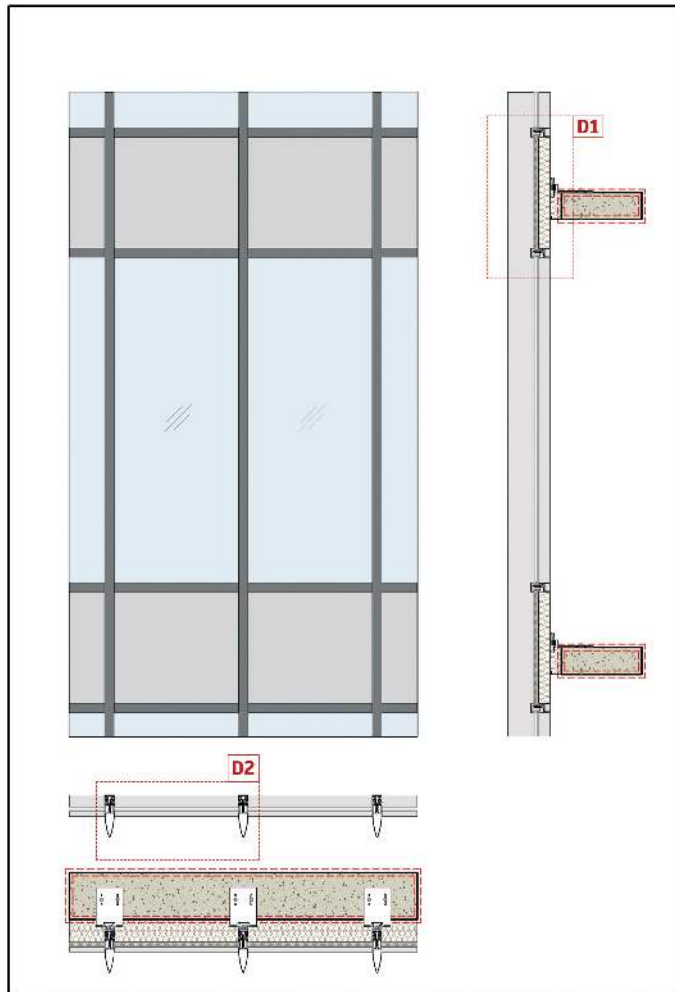


Detail 2: horizontal section

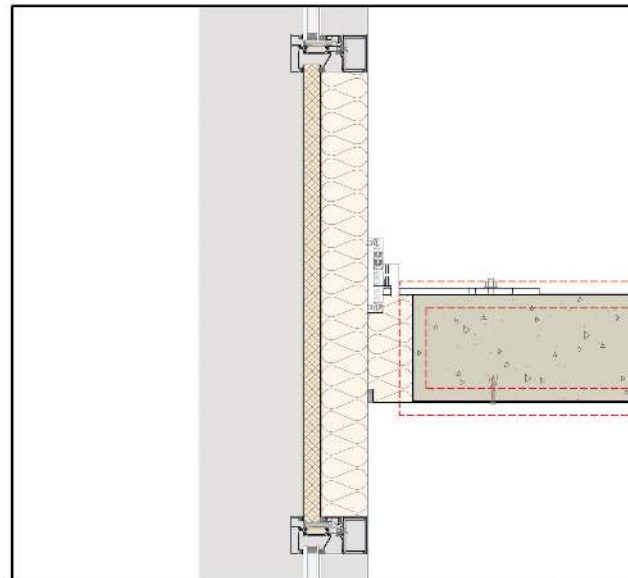


3D view

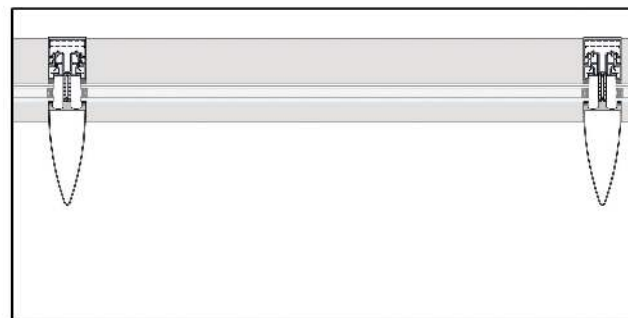
## Sun shading solutions: vertical aluminium louvres



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section



3D view

## General features of Fassada smart double skin solutions

See chapter 17 of [Fassada hybrid shift manifest](#) 

### Smart load transfer

The load is transferred to the inner shell of the mullion. An inserted tube, directly fixed to the fork piece of the smart bracket, channels all permanent and dynamic loads to the primary structure - without placing any additional stress on the curtain wall mullion itself.

### Fully installed from the inside

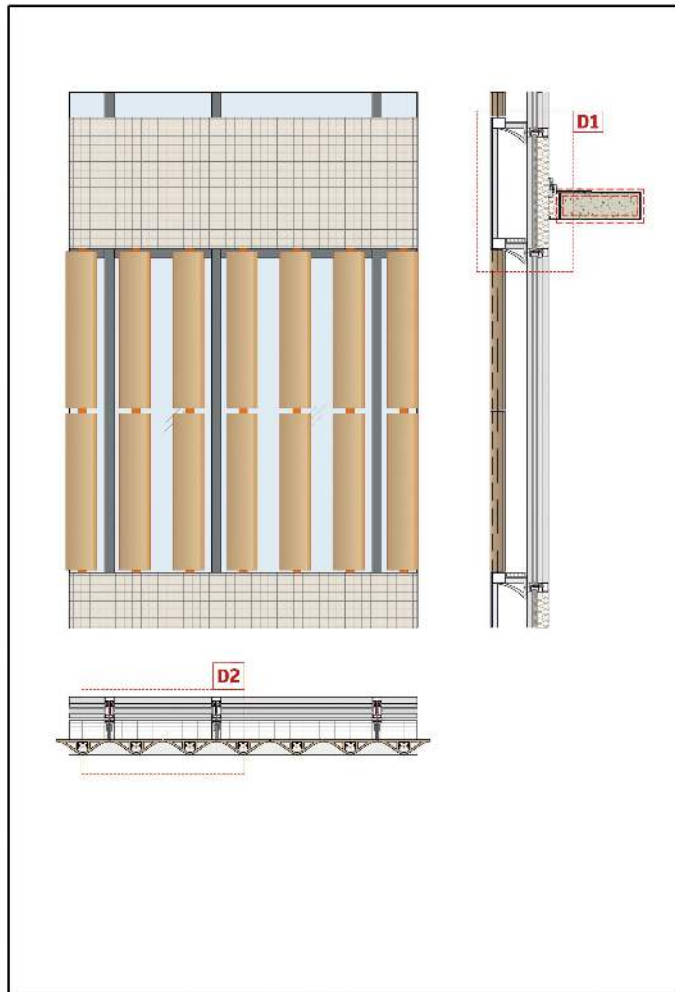
Every double skin facade consists of three main elements:

- The interior, insulated skin
- A spacer bracket, which may also serve as support for a walkway
- The exterior skin

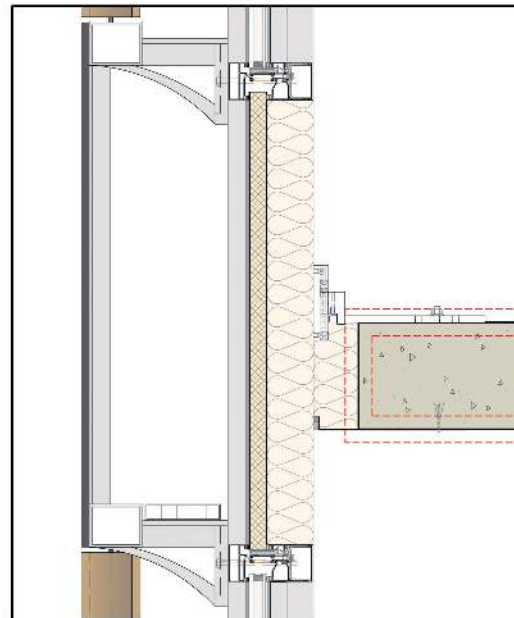
Installation of a double skin wall has never been so easy:

1. Fix the spacer bracket to the mullion, using the pre-installed and pre-aligned devices in the mullion
2. Install the mullion
3. If applicable, place the walkway elements (in any material such as glass, walkway grating, etc) onto the spacer brackets
4. Install the exterior skin

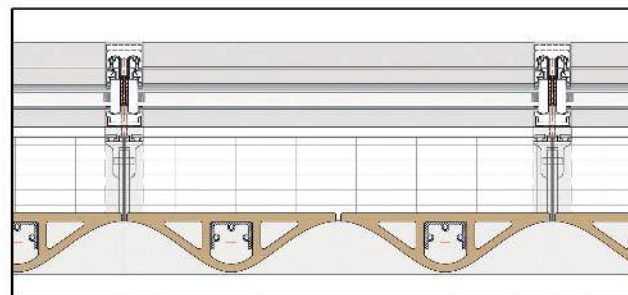
## Double skin facades: sunscreen with walkways



Elevation & sections



Detail 1: vertical section

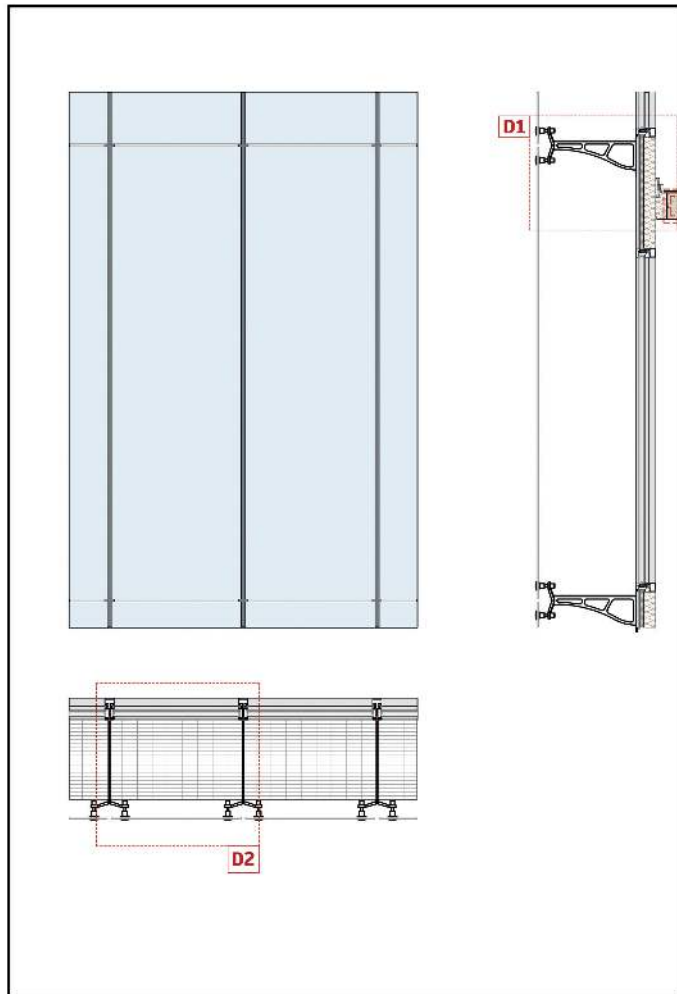


Detail 2: horizontal section

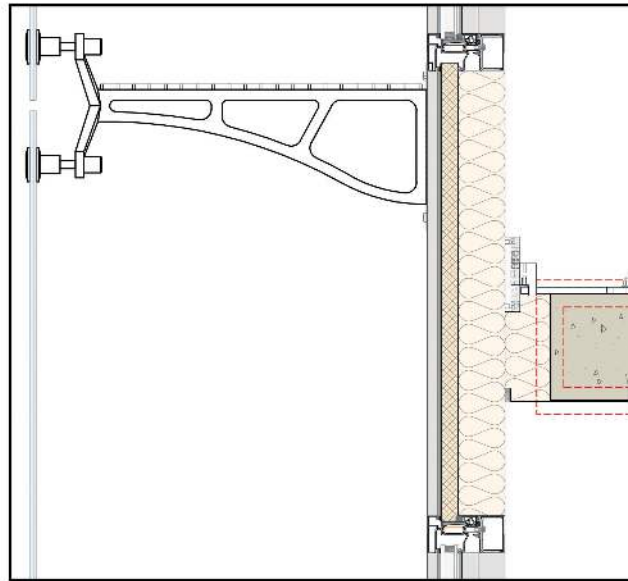


3D view

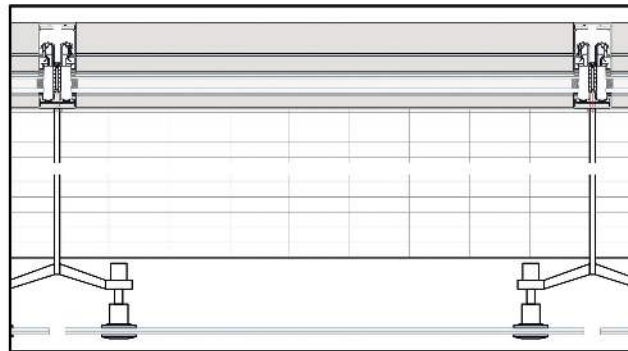
## Double skin facades: glazed double skin



Elevation & sections



Detail 1: vertical section



Detail 2: horizontal section

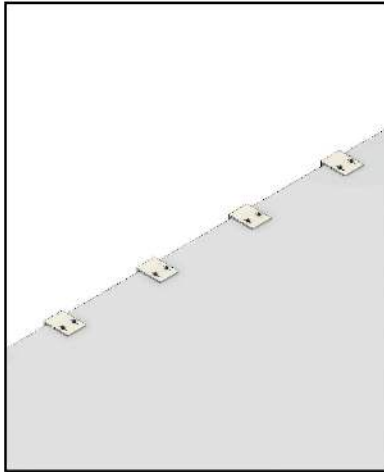


3D view

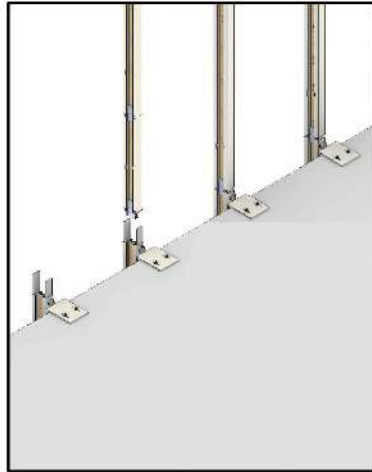
## H70 hybrid: Basic installation steps



All works are done from the inside of the building



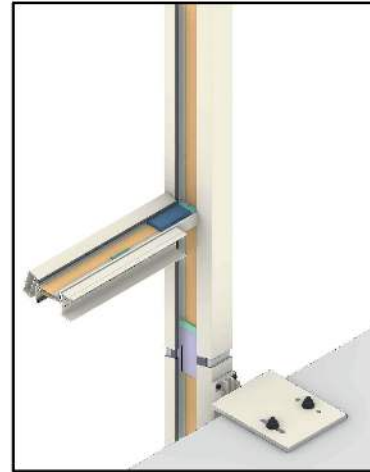
Install all brackets



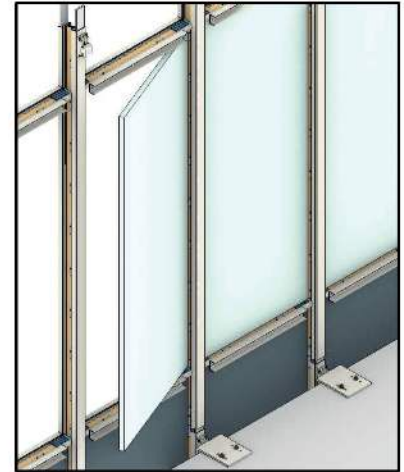
Lower the mullion into position and align it to the one below



Bring the transom into a horizontal position, rotate and click it in the mullion cutouts



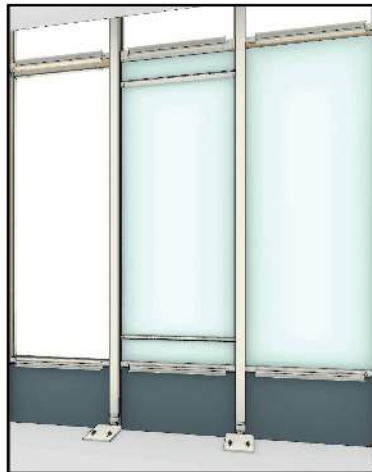
Present the external glazing bead on top of the transom and rotate it outwards



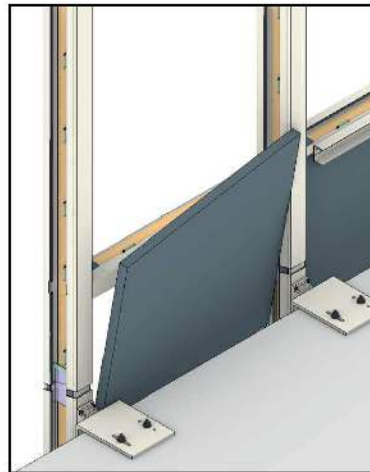
Install the glazing using the shuffle method



Install the interior vertical glazing beads



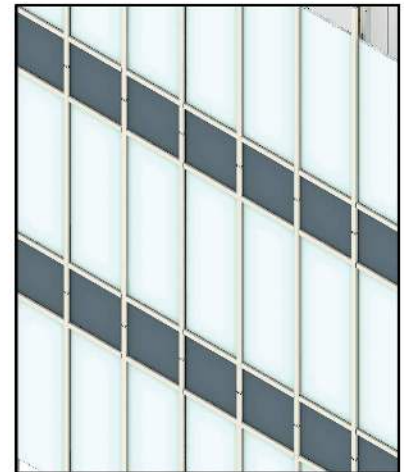
Install the interior horizontal glazing beads



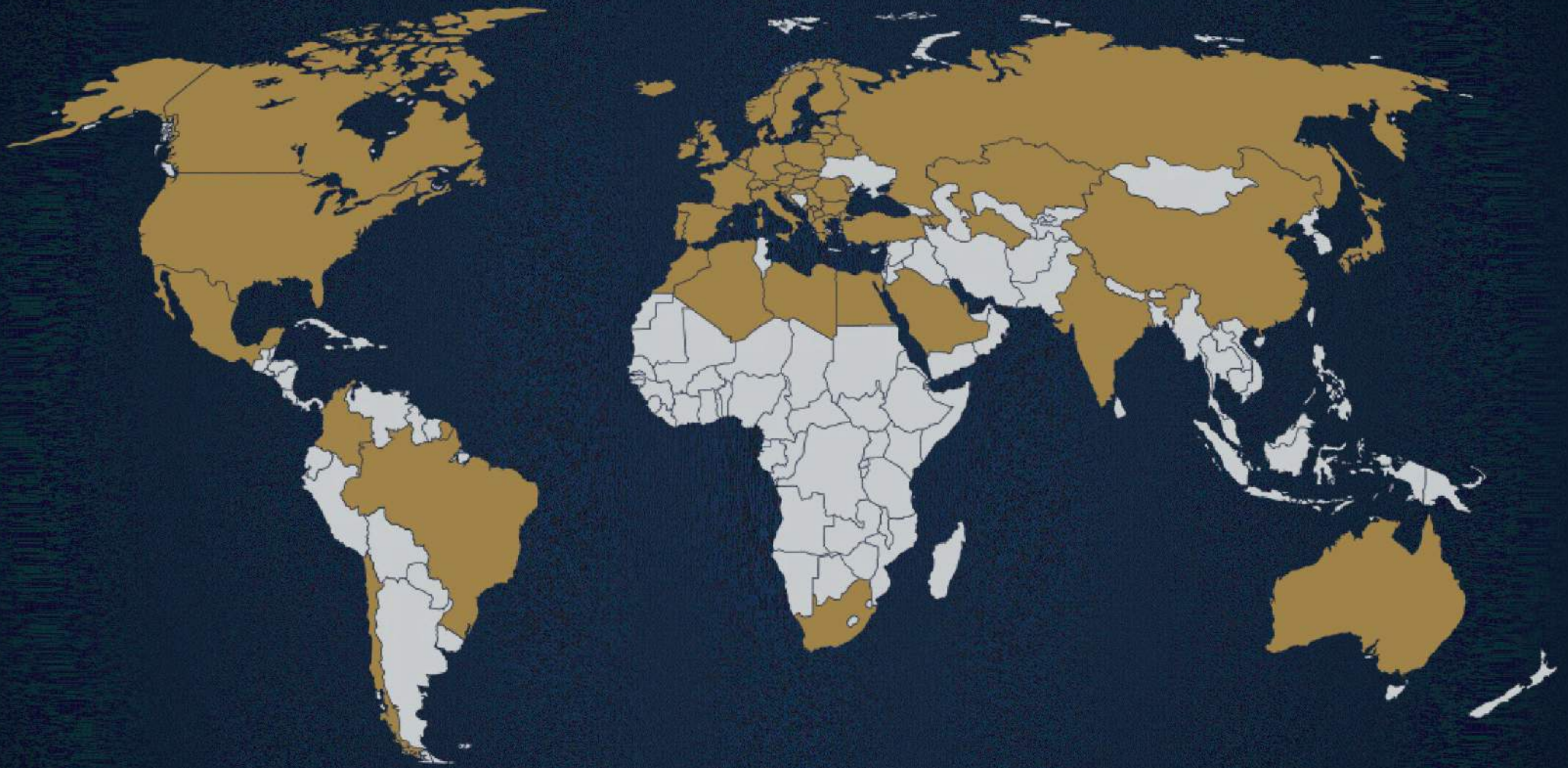
Insert the panel between the mullions using the shuffle method and then install the interior glazing beads



Install the interior cover cap



Installation of H70-hybrid is complete



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