



Curtain wall systems

Professionalism and profit in one facade

Passion for innovation to classics of tomorrow

H99-hybrid

Typical applications & smart solutions

TABLE OF CONTENTS



Prologue by Eric Claeys, Founding Chairman	3
Reference documents	4
Fassada hybrid curtain wall technologies®: what is it?	5
Continuous curtain wall & window wall	6
Corner and faceted wall solutions	7
Basic vertical sections	8
Faceted wall solutions	9
Corner wall solutions	10
Standard bracket solutions	11
Operable vents	
other window & door systems	12
Architectural cladding	
general features of Fassada smart architectural cladding solutions	13
metal cassettes	14
natural stone	15
brick slips	16
thin stone cladding	17
H99-hybrid: basic installation steps	18

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."

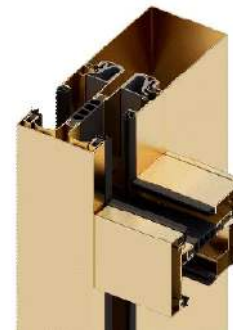
Fassada Smart Solutions brochure

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

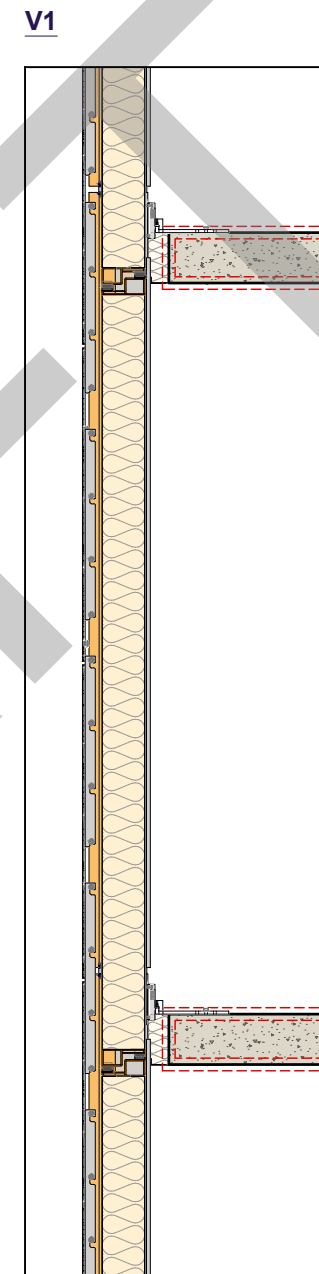
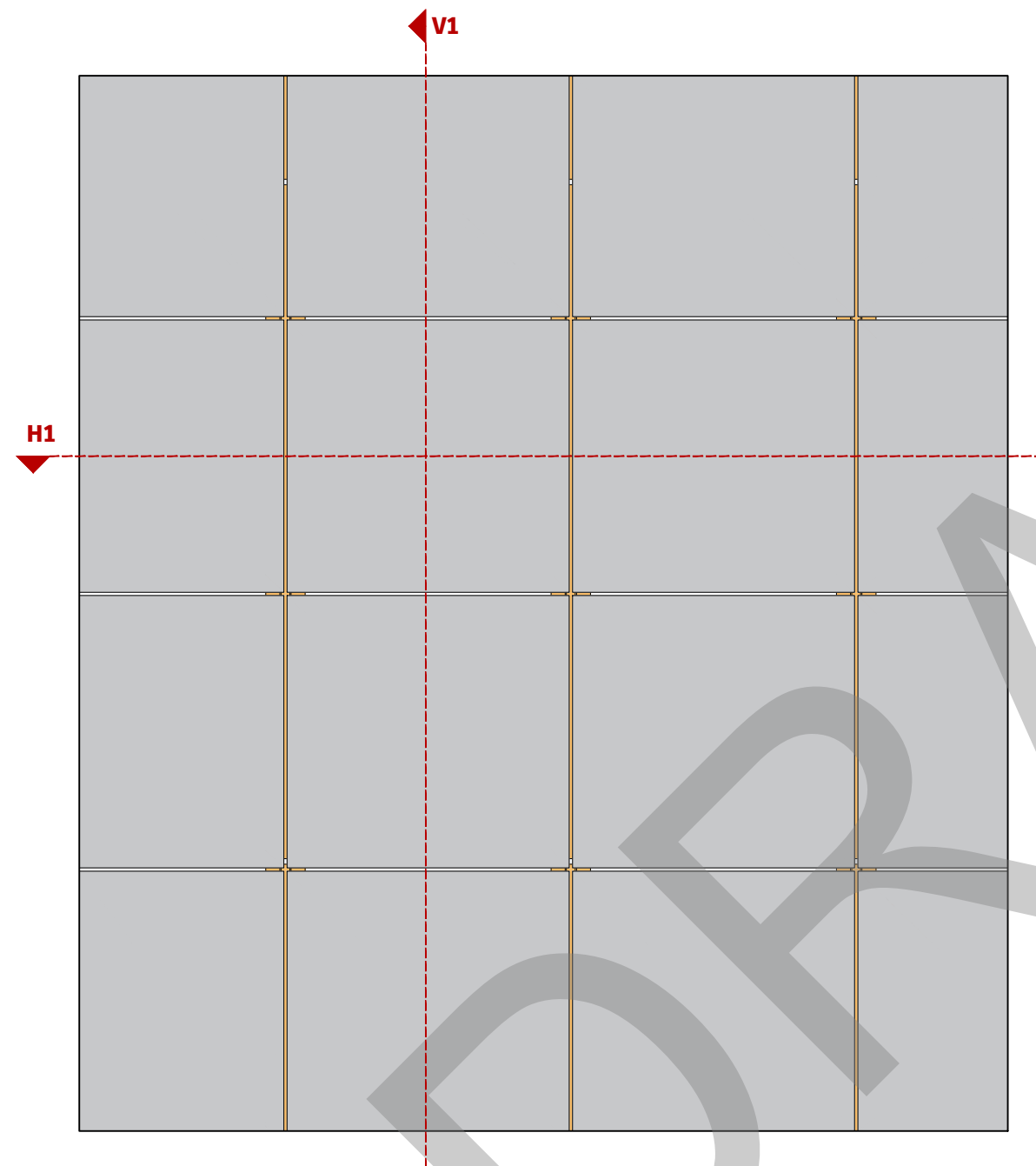
- glass replacement: cost!
- if leakage: big issue!

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.

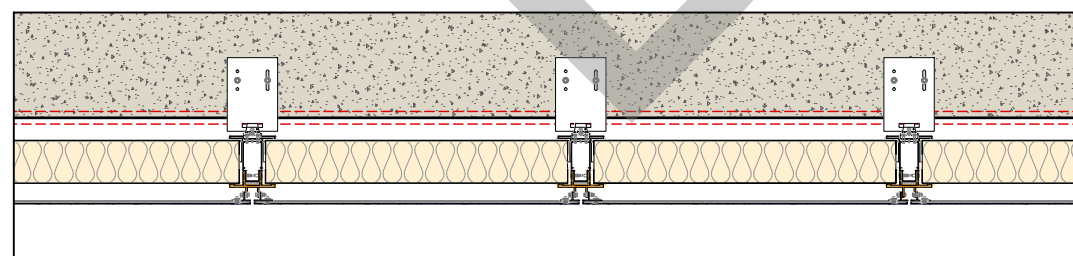
The result is a game-changing curtain wall solution that sets the new standards in performance, reliability, and last but not least, cost efficiency - transforming the way facades are designed, built and delivered through

- 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



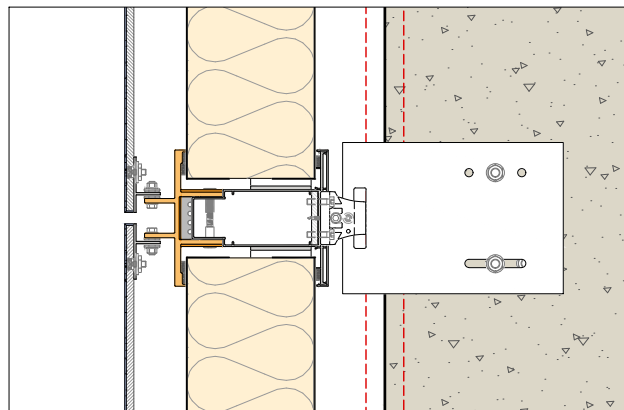
H1



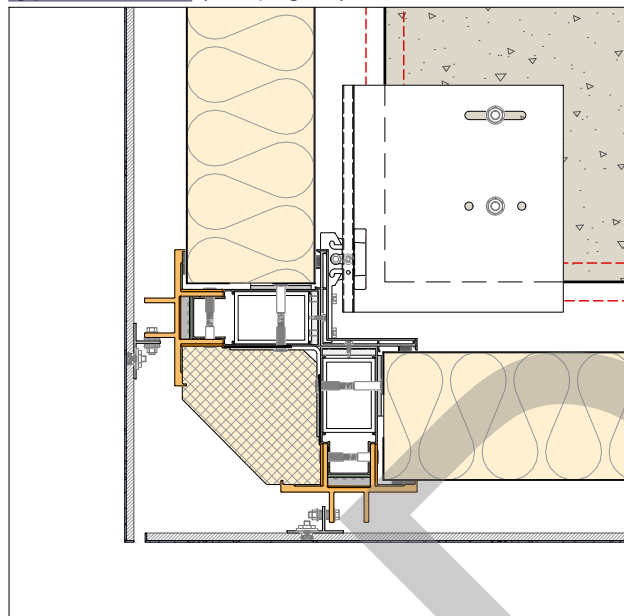
Curtain wall in front of the floor slabs

- 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.

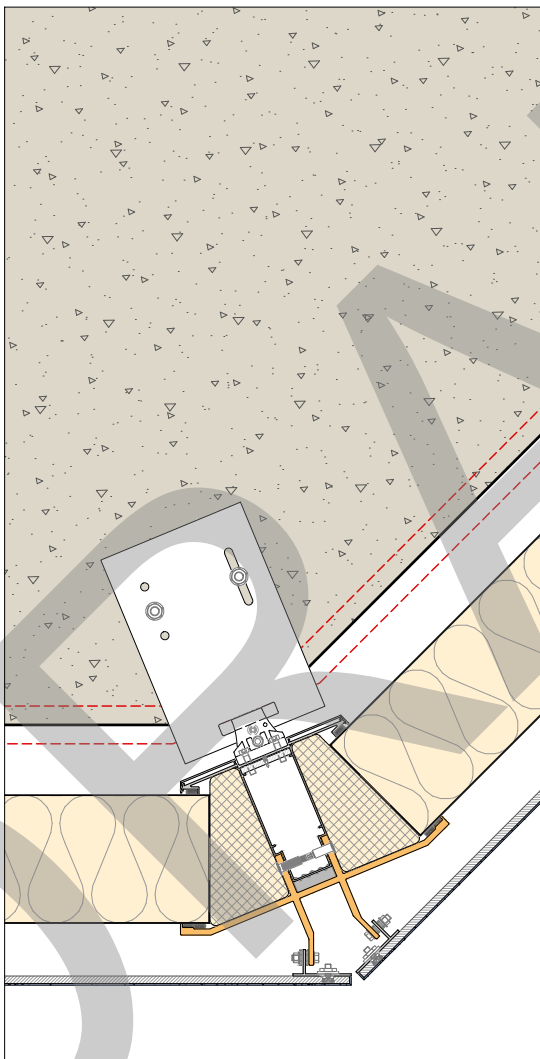
Corner and faceted wall solutions



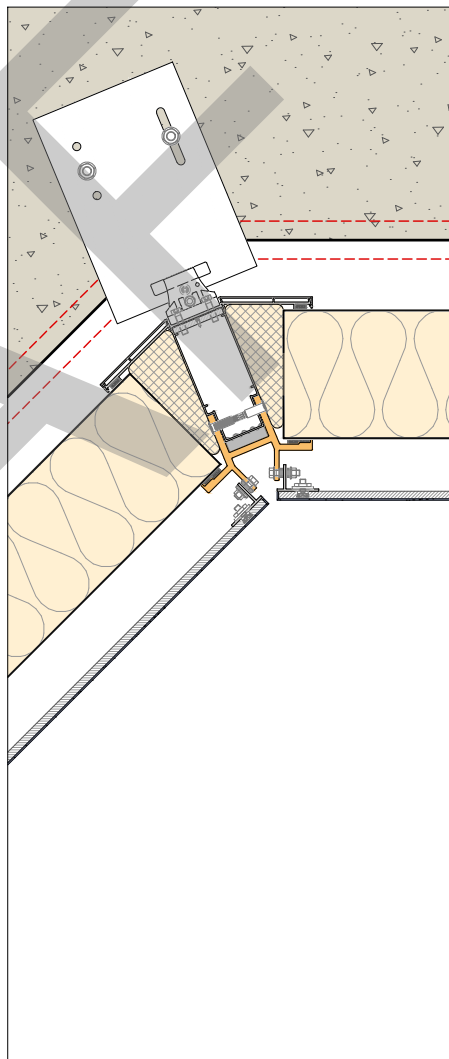
typical section (see page 8)



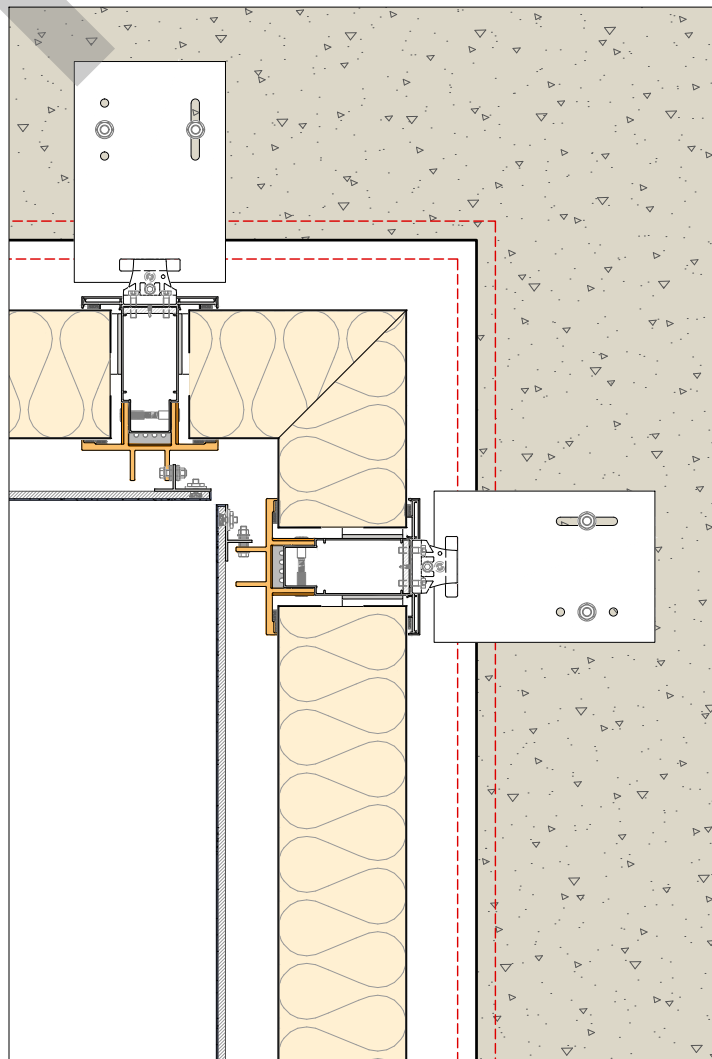
outside 90° corner (see page 10)



outside faceted corner (see page 9)

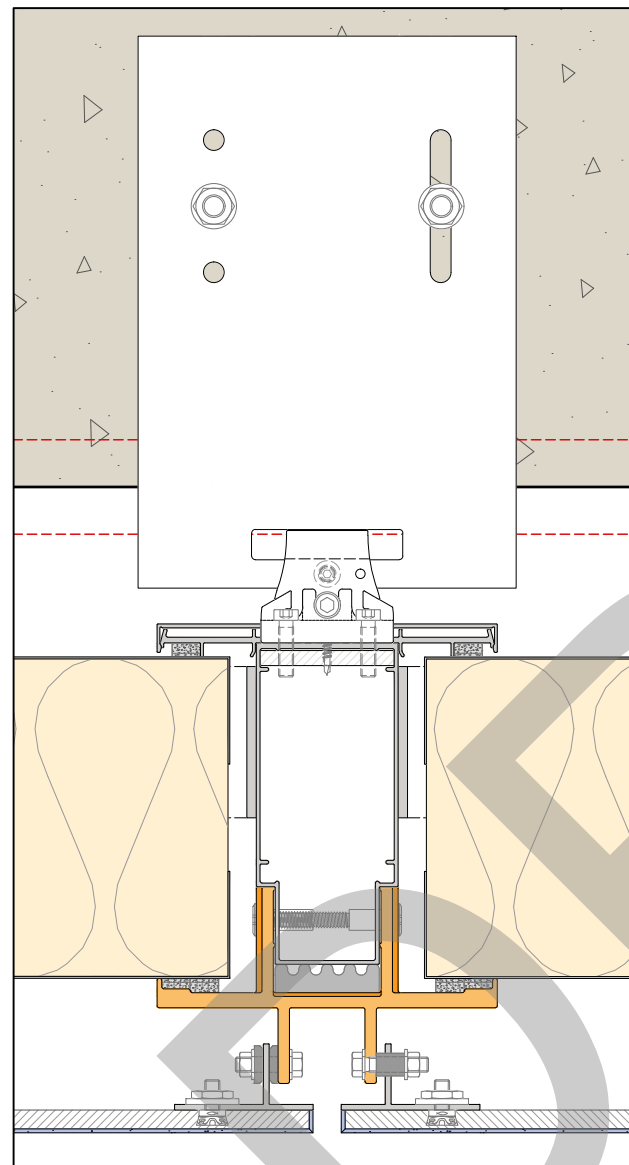


inside faceted corner (see page 9)



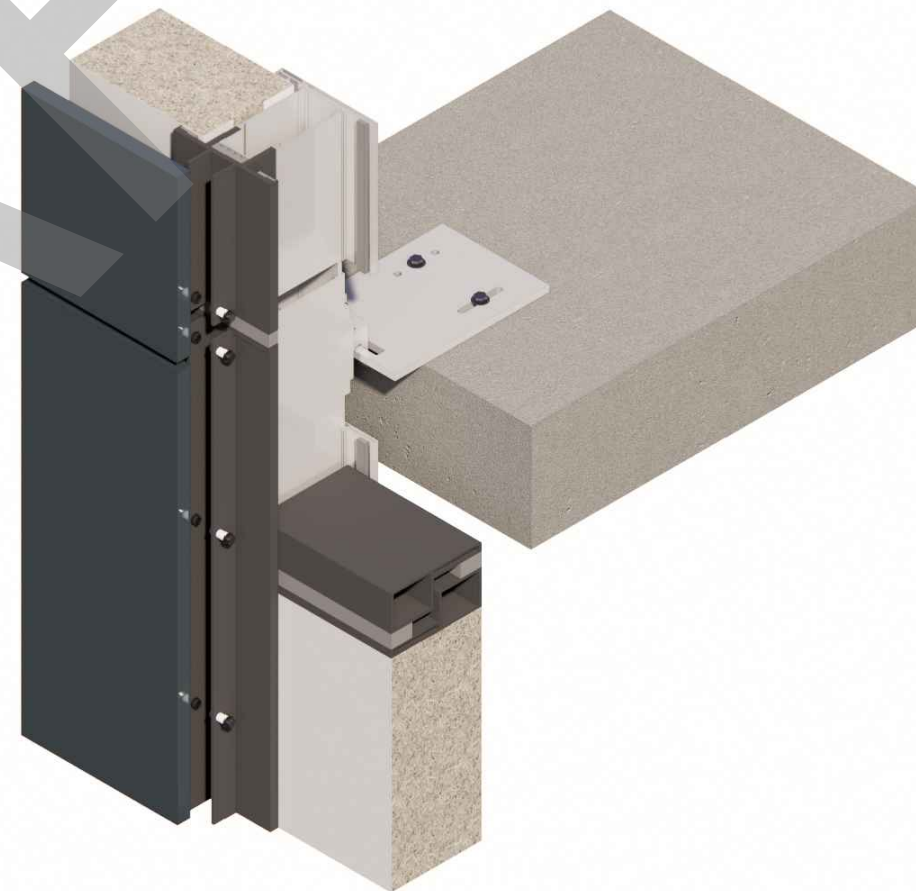
inside 90° corner (see page 10)

Typical vertical sections

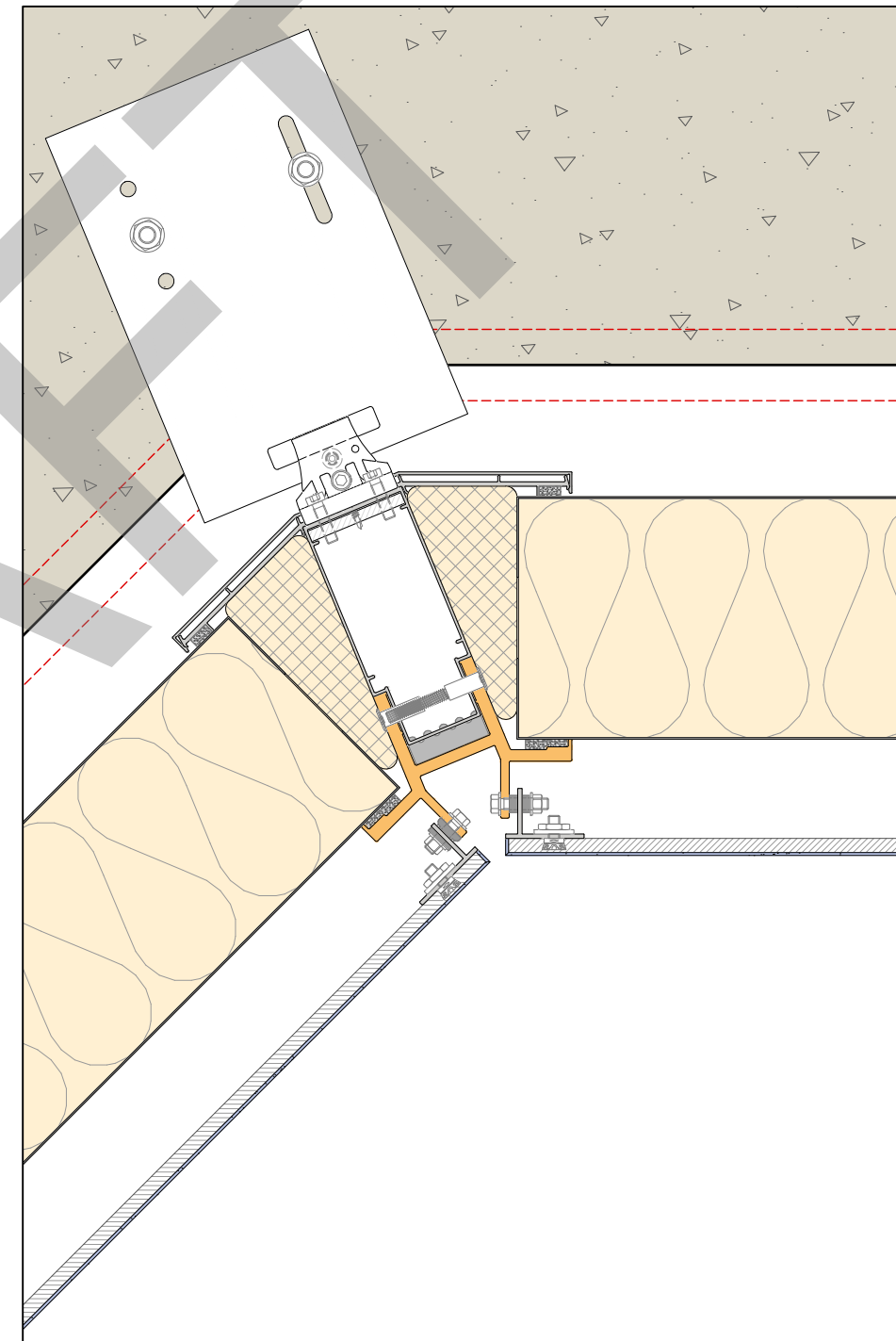
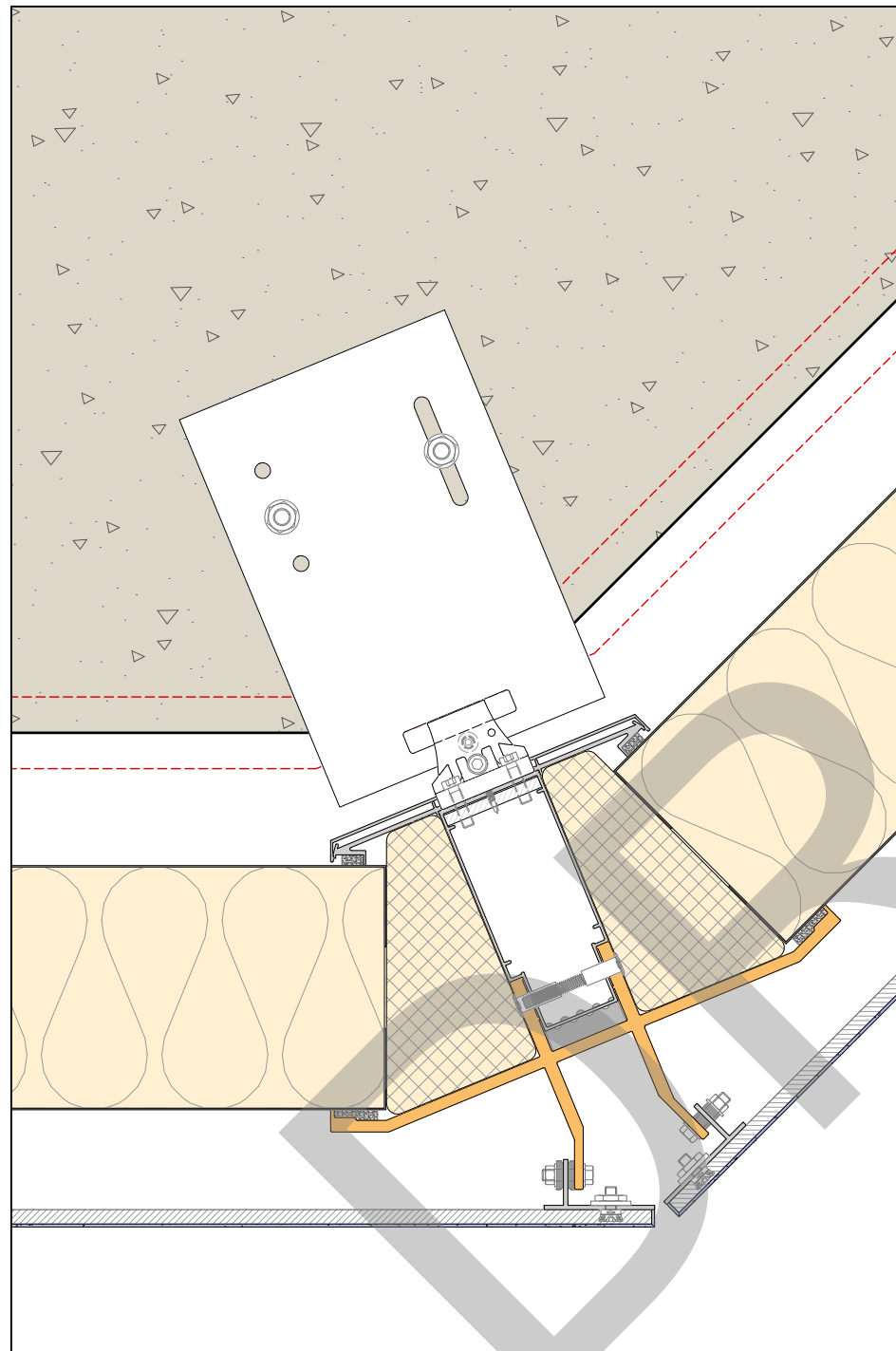


H99-hybrid mullion

The H99-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.

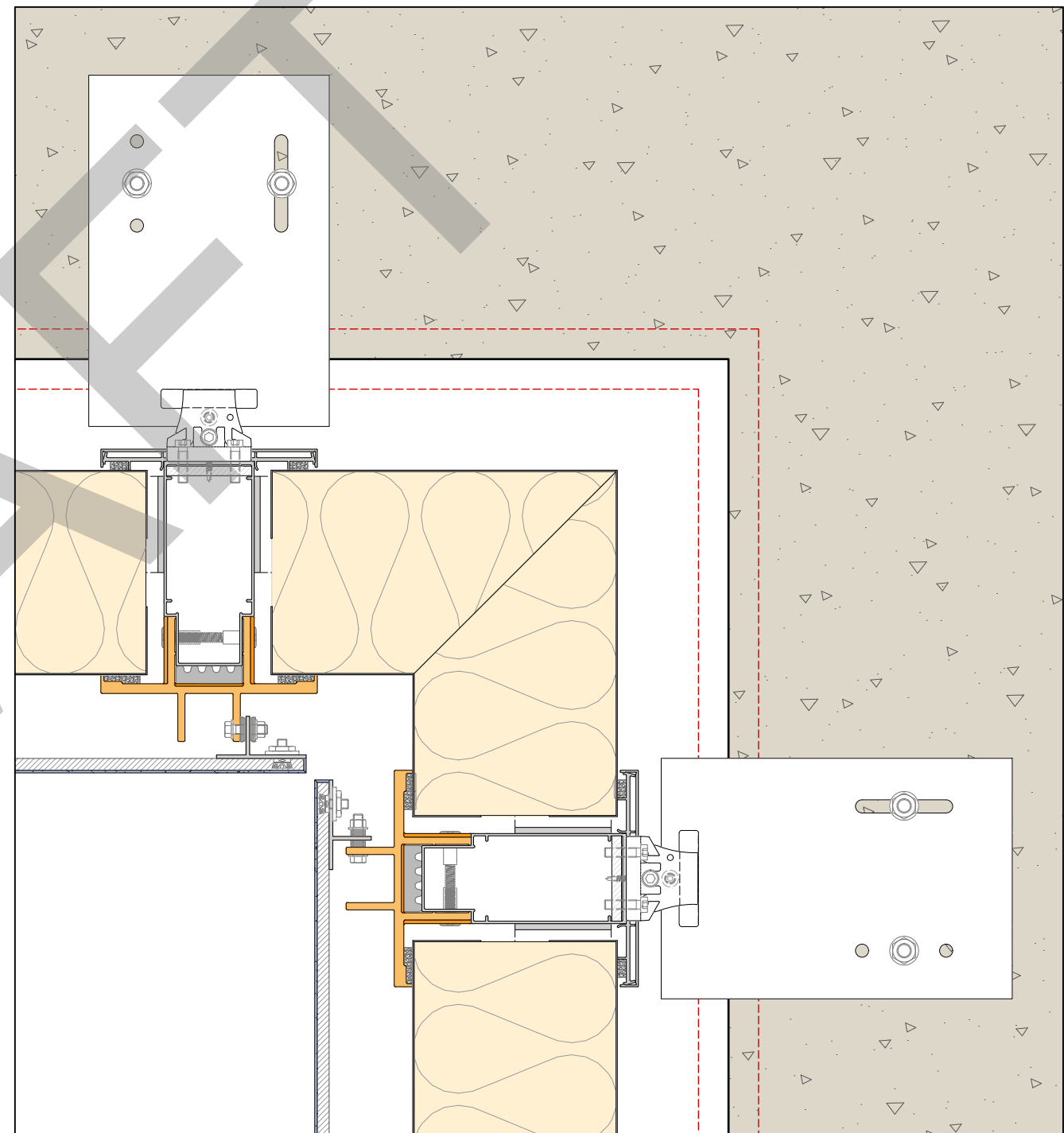
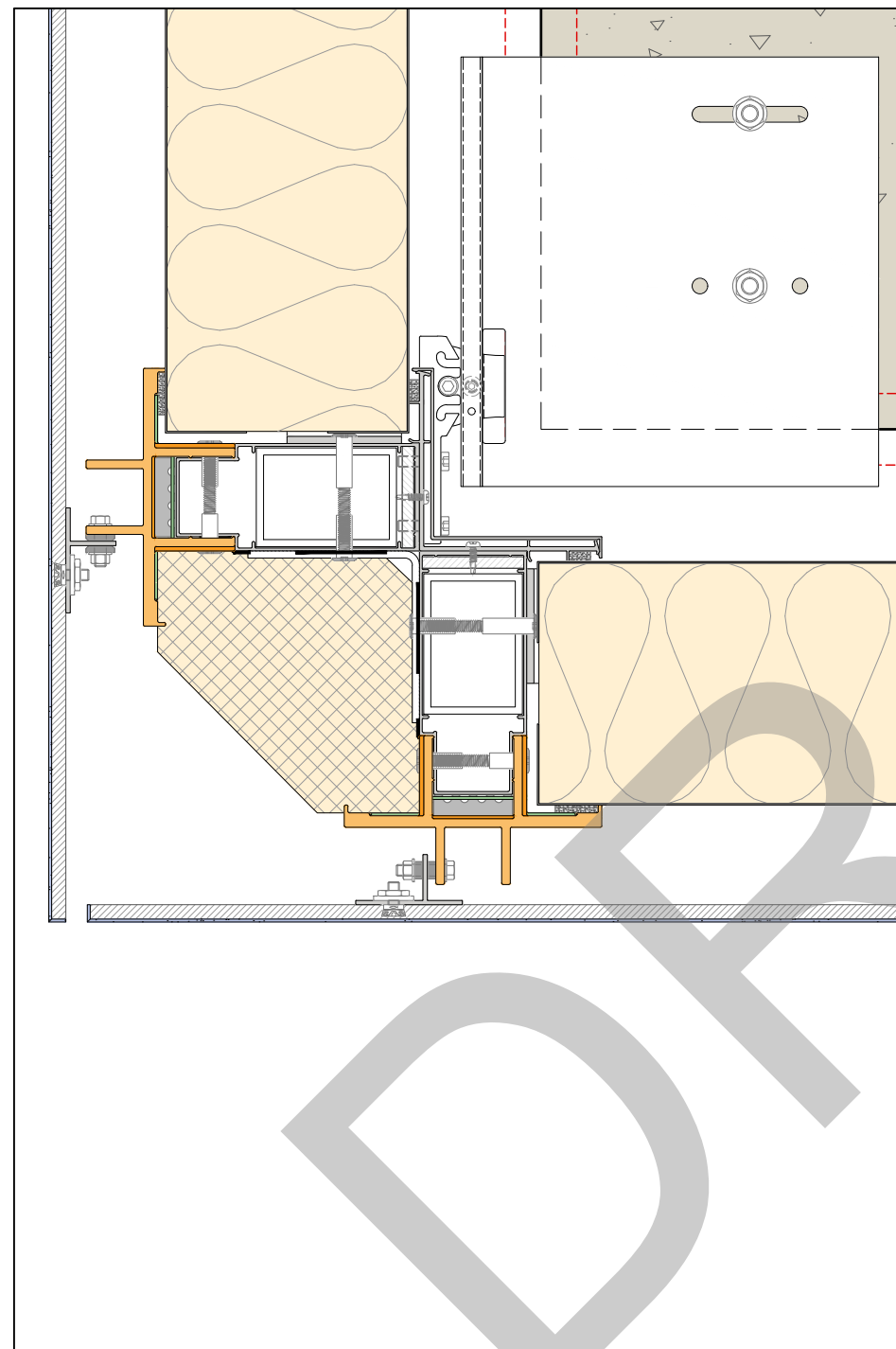


Faceted sections



The H99-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.

Corner sections



The H99-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.

H99-hybrid: standard bracket solutions of continuous curtain wall



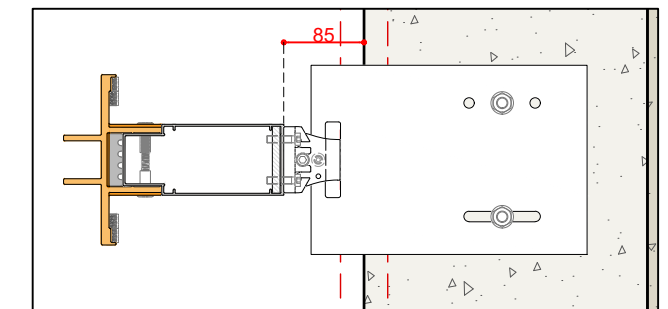
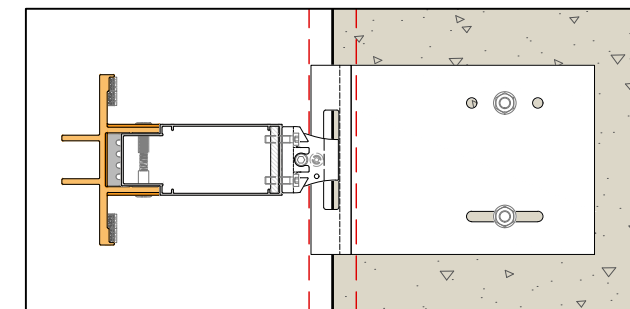
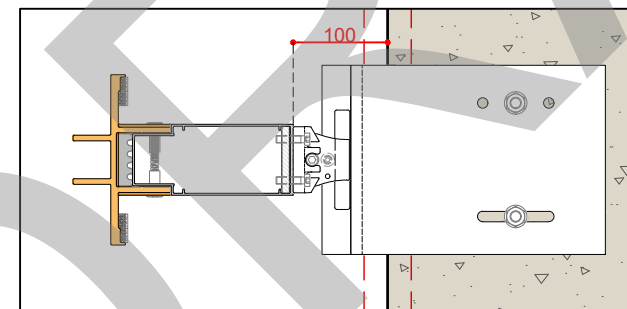
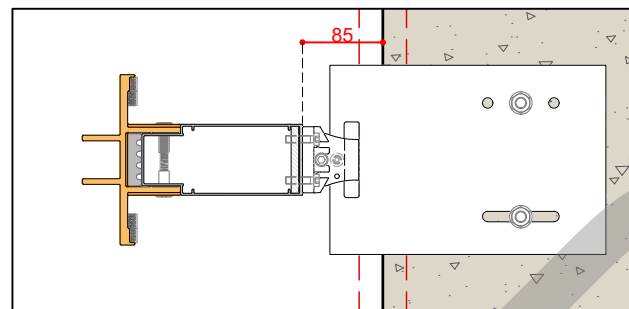
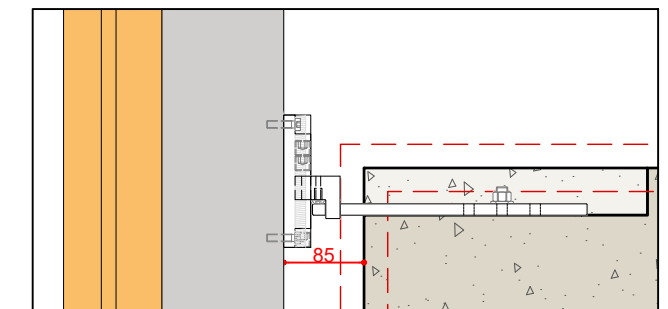
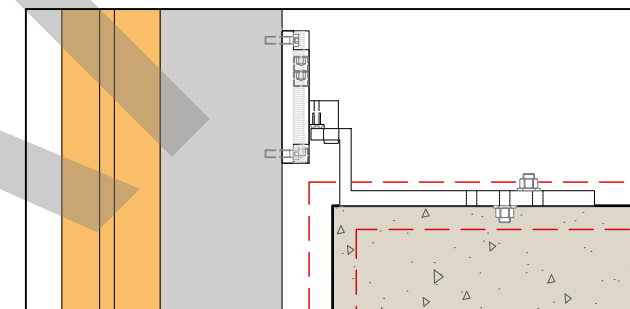
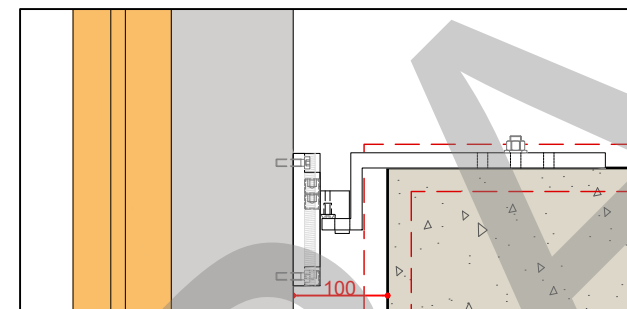
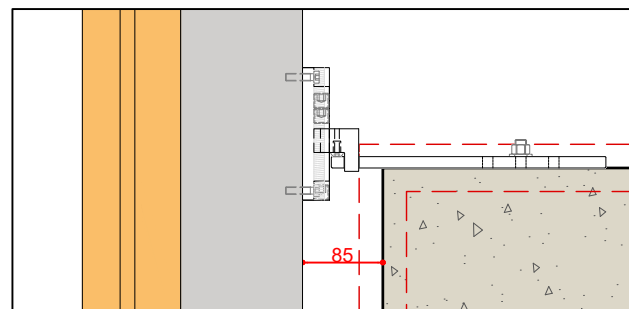
Some relevant bracket criteria (ref Fassada manifest)

- 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)



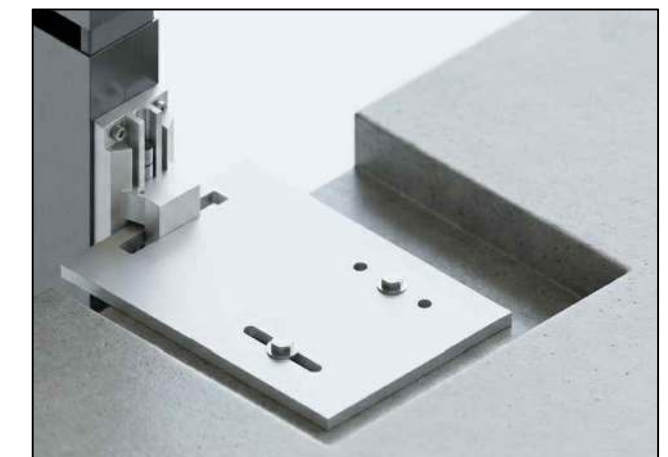
H99-hybrid flat bracket



H99-hybrid lowered bracket



H99-hybrid raised bracket

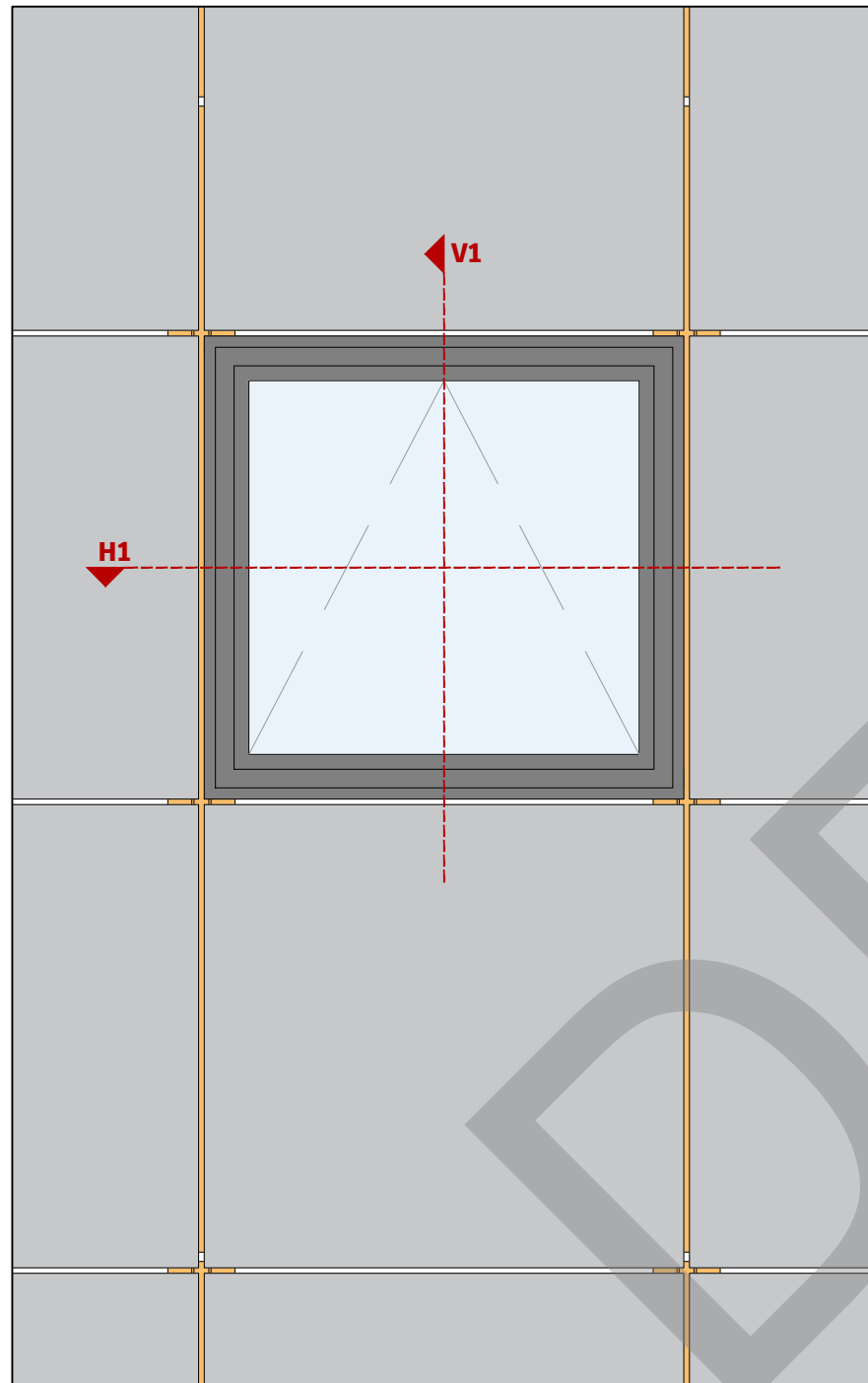


H99-hybrid pocketed bracket

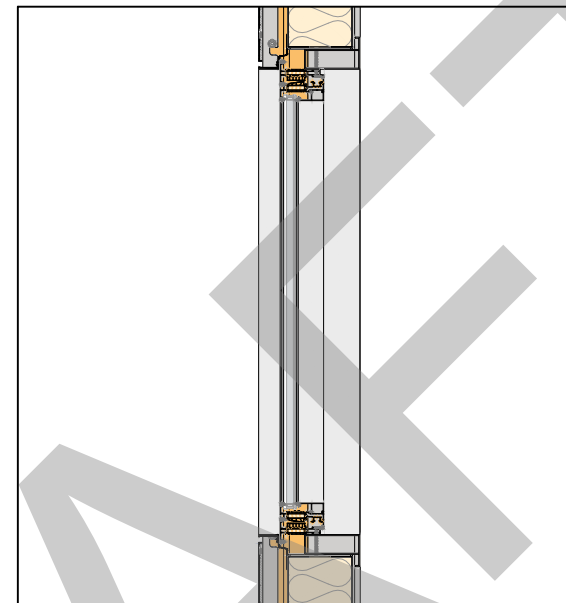
Operable vents: other window & door systems



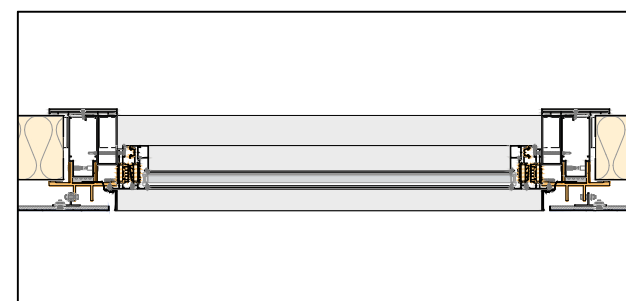
Fassada hybrid curtain wall technologies® offers 100% flexibility in integrating all possible types of operable elements, including doors and windows - even PVC frames.



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 leakagerisk and therefore best avoided

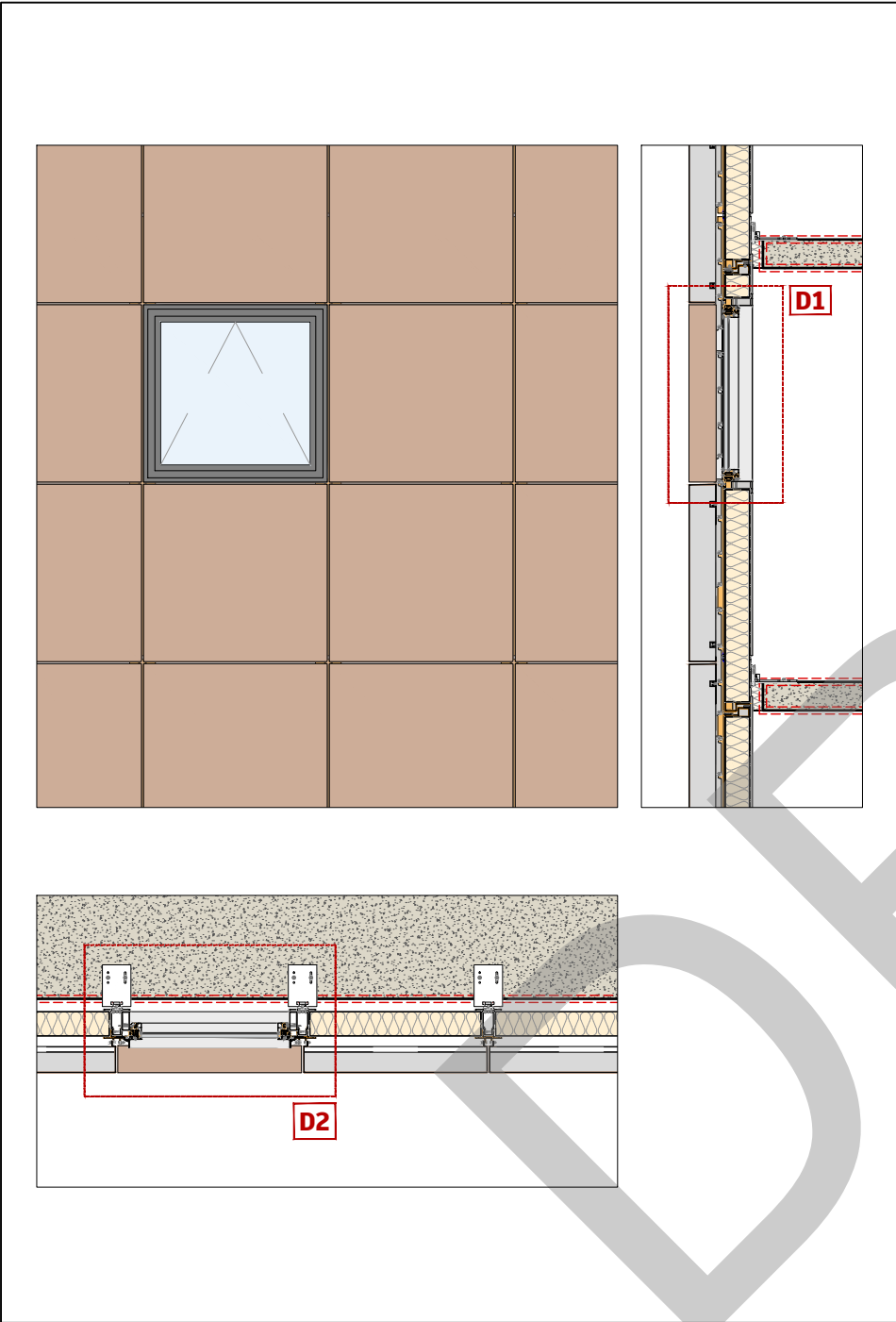
Architectural

- 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

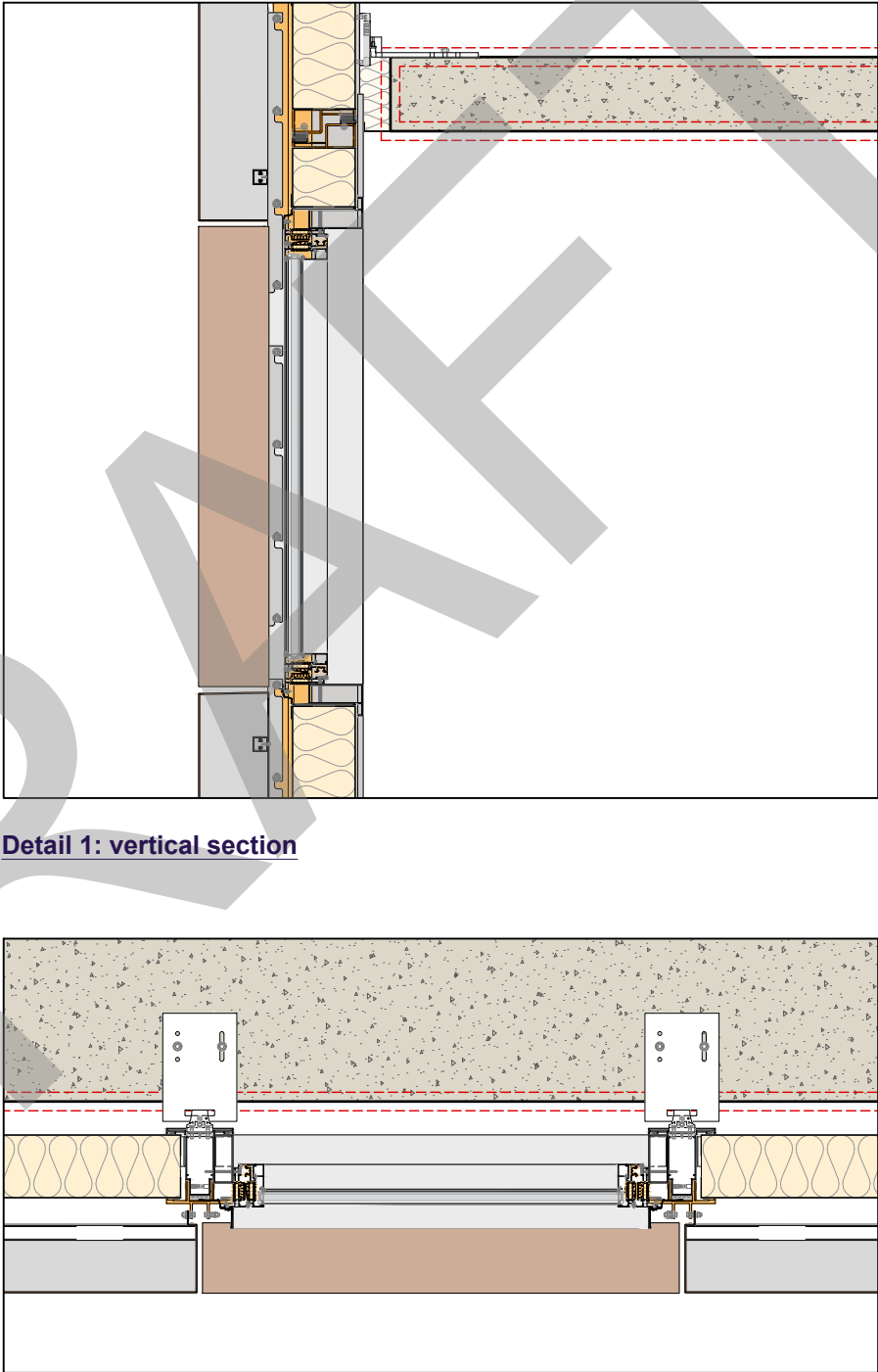
Cost savings

- 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



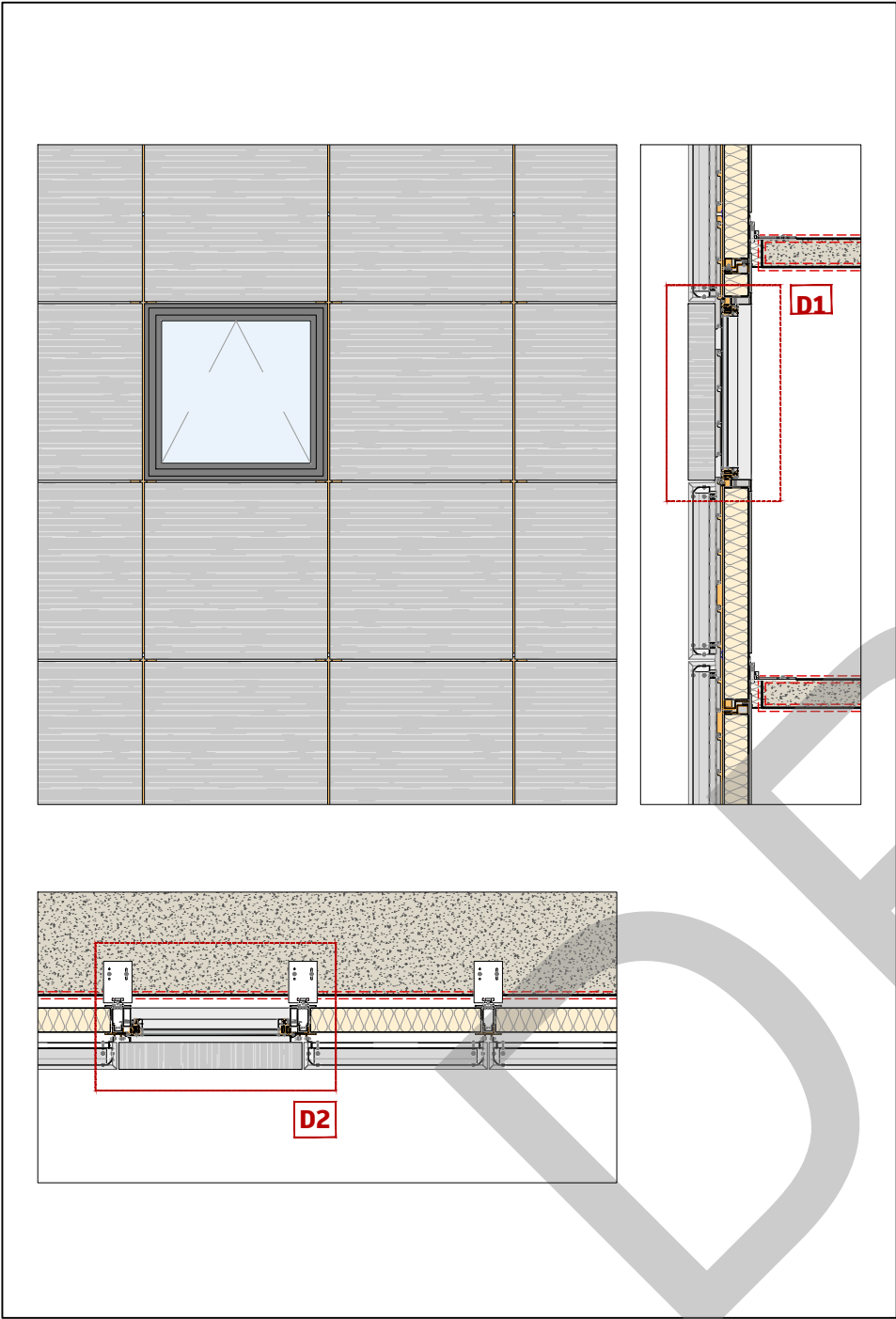
Detail 1: vertical section

Detail 2: horizontal section

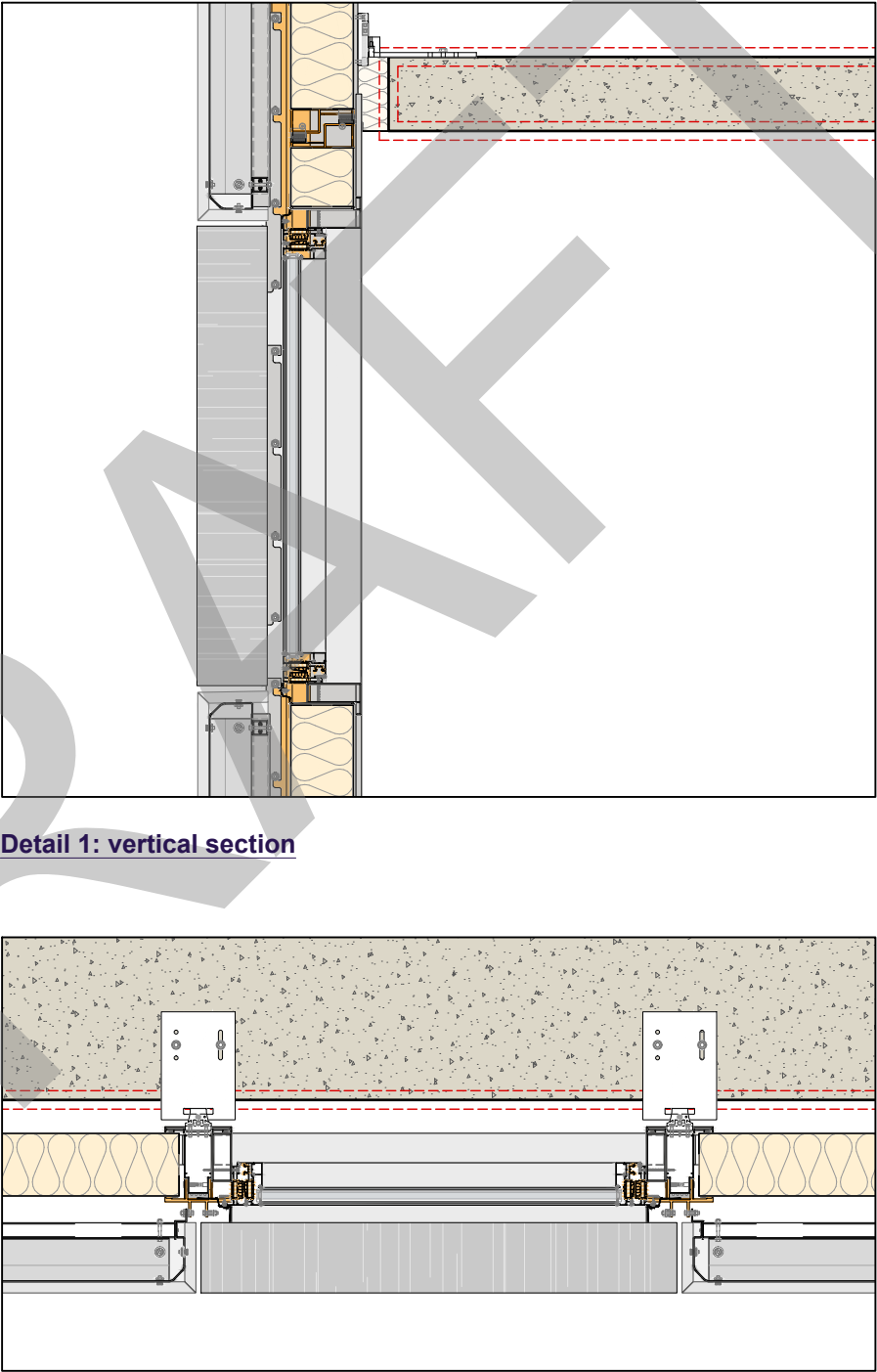


3D view

Architectural cladding: natural stone



Elevation & sections

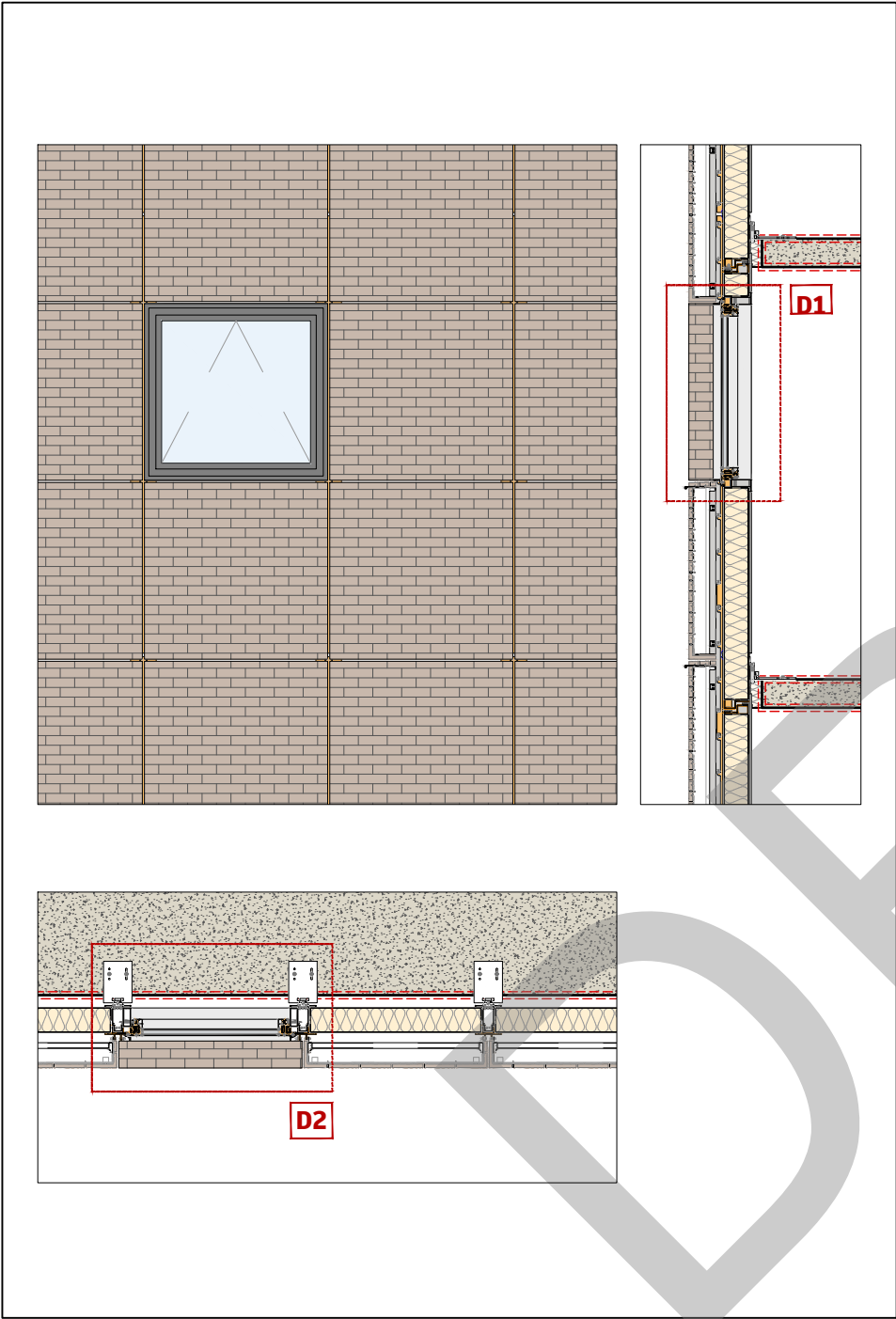


Detail 2: horizontal section

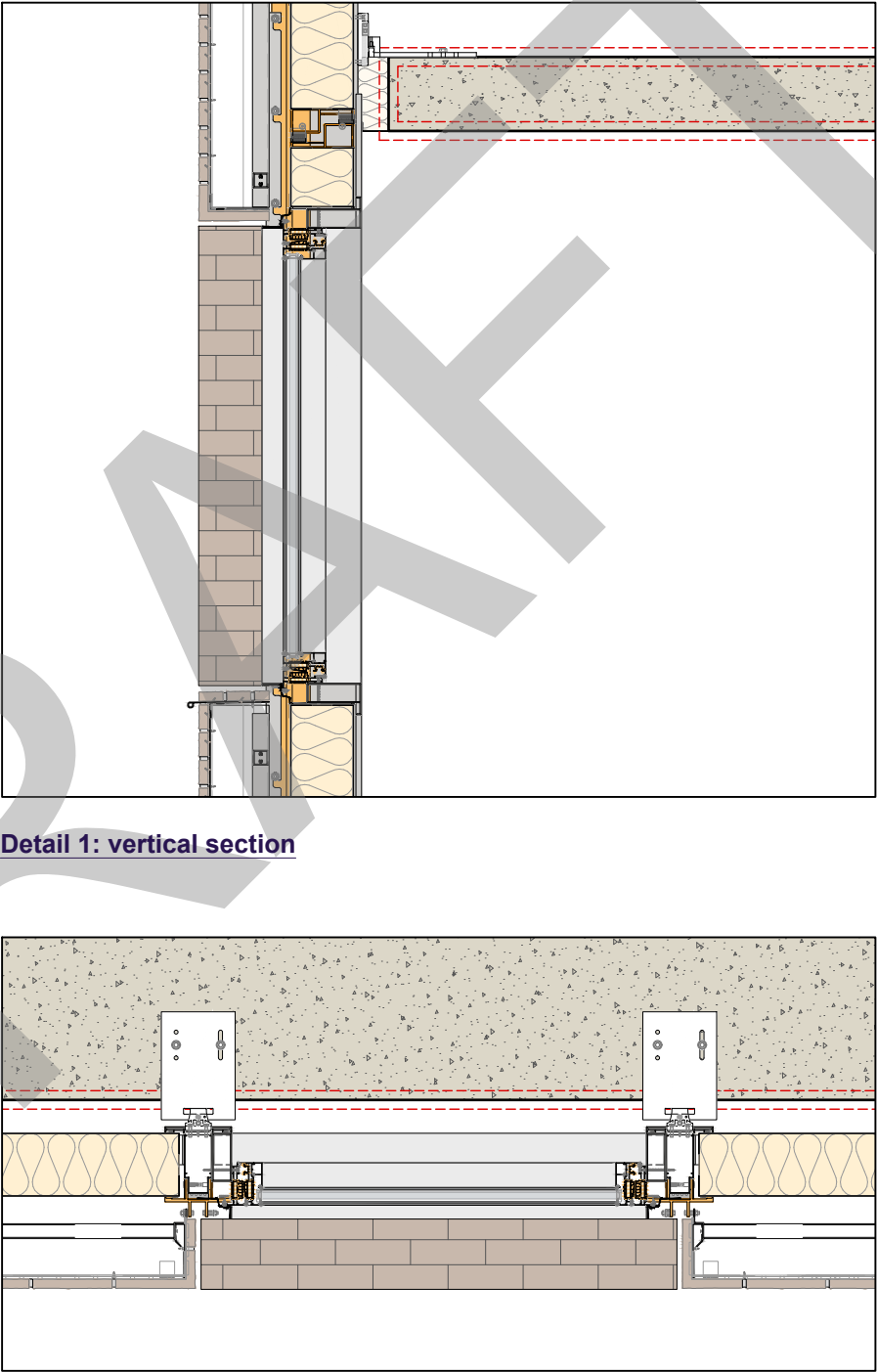


3D view

Architectural cladding: brick stone slips



Elevation & sections

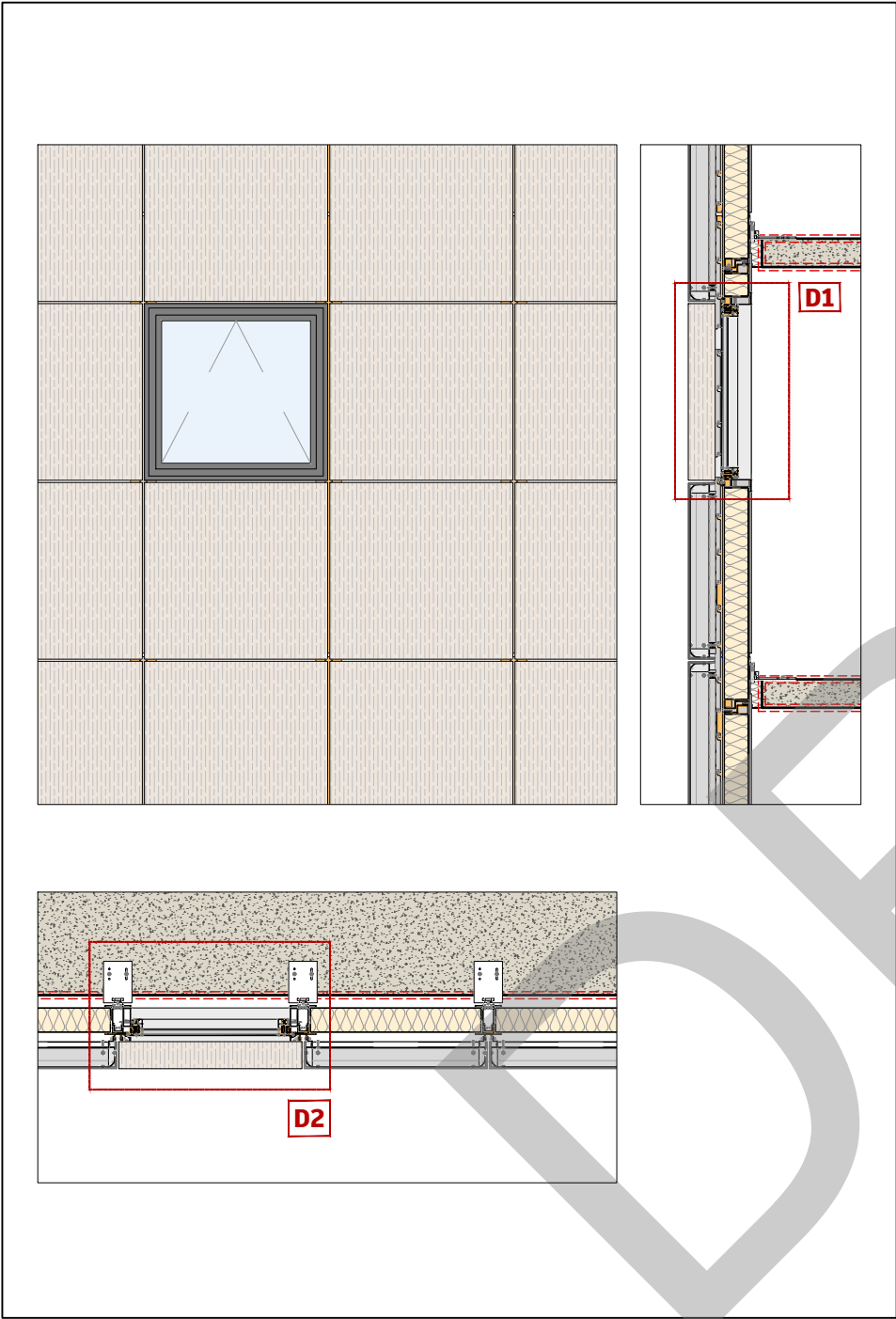


Detail 2: horizontal section

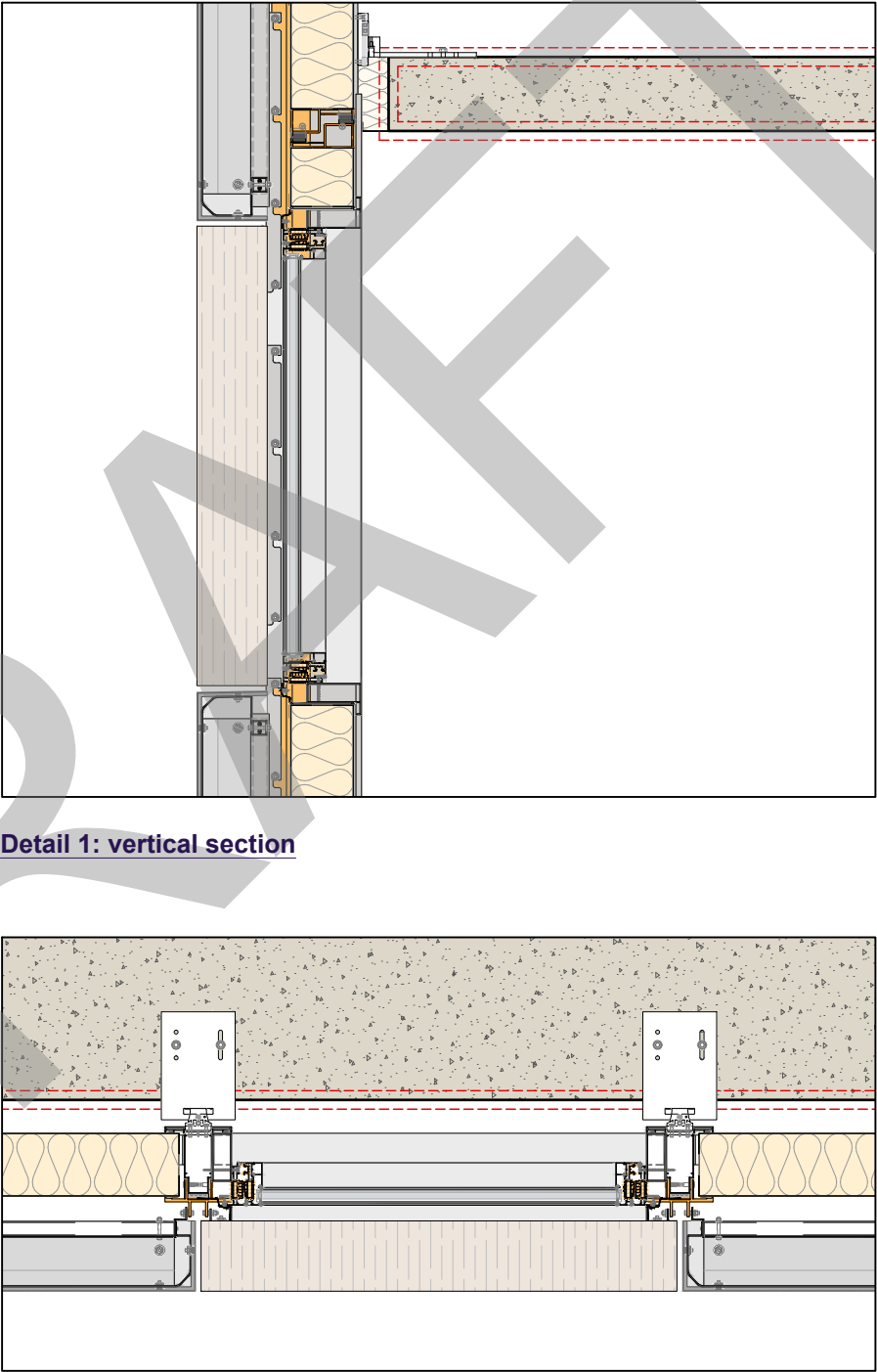


3D view

Architectural cladding: thin stone cladding



Elevation & sections



Detail 2: horizontal section

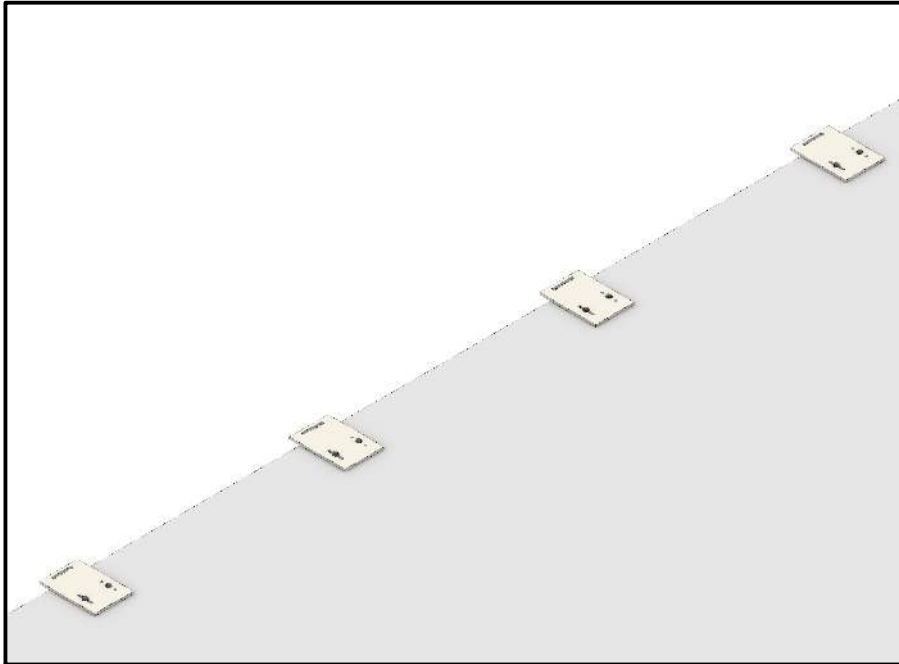


3D view

H99 hybrid: Basic installation steps



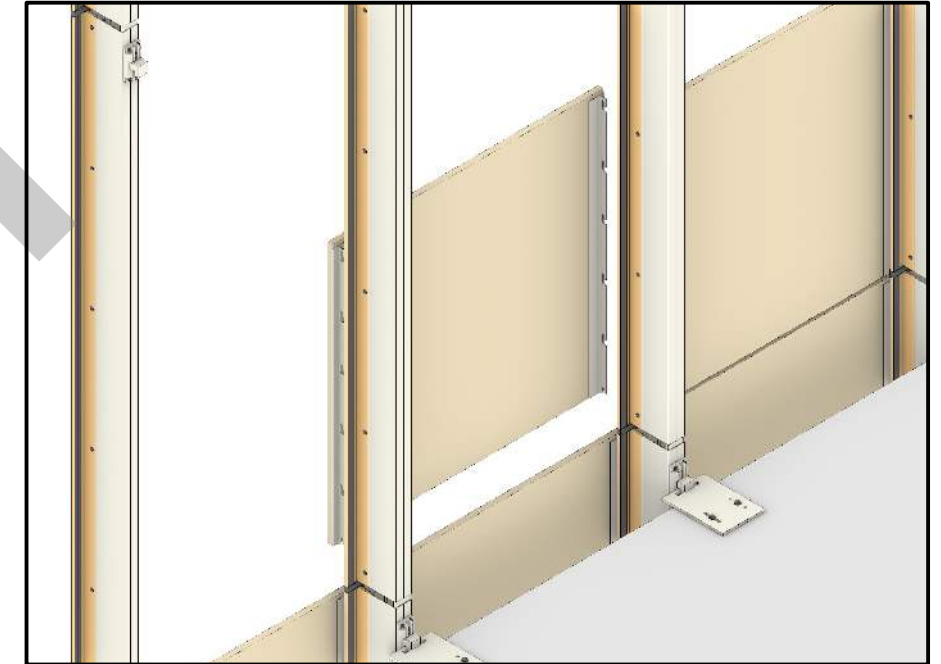
All works are done from the inside of the building



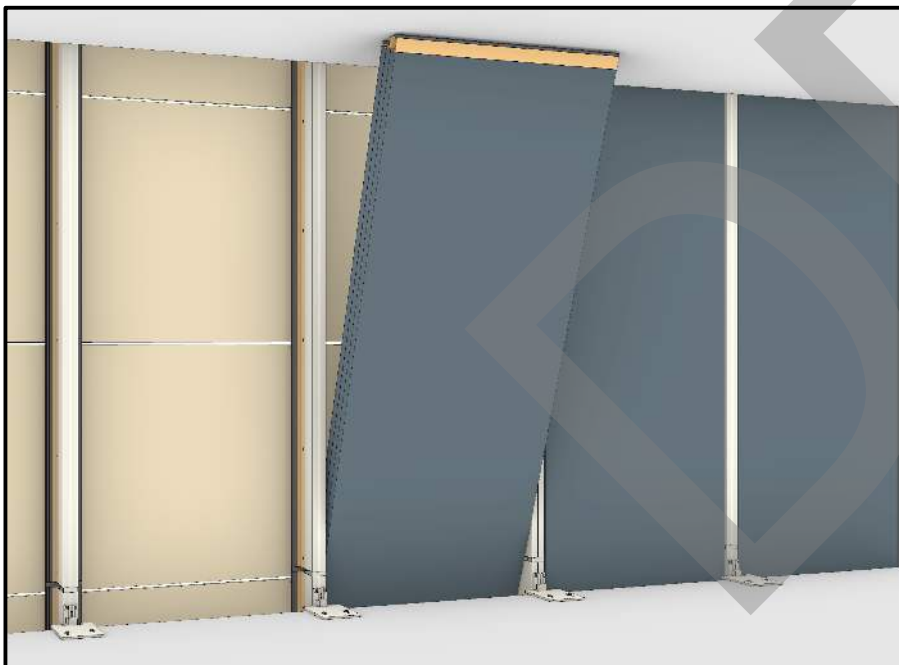
Install all brackets



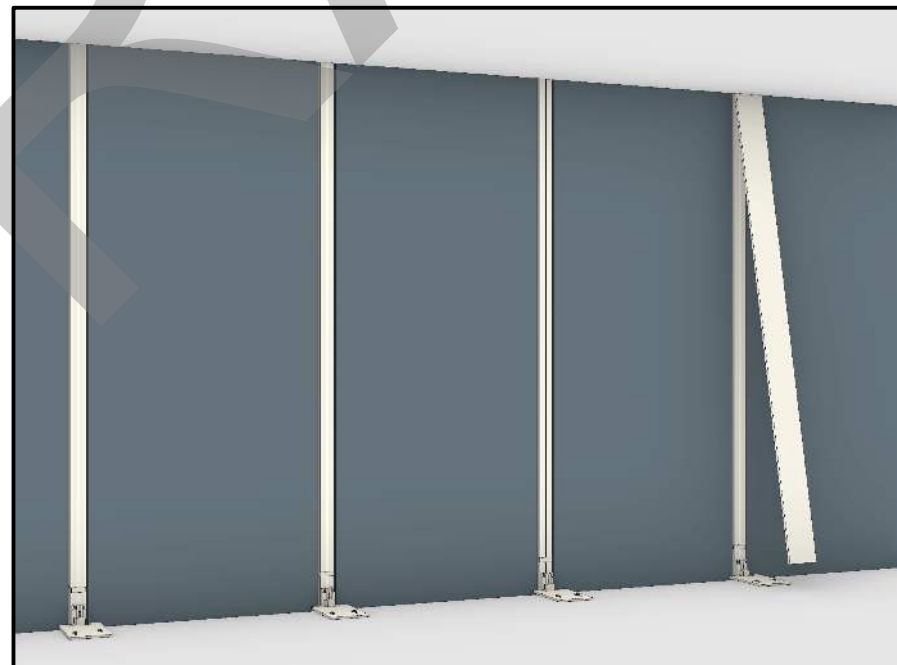
Lower the mullion into position and align it to the one below



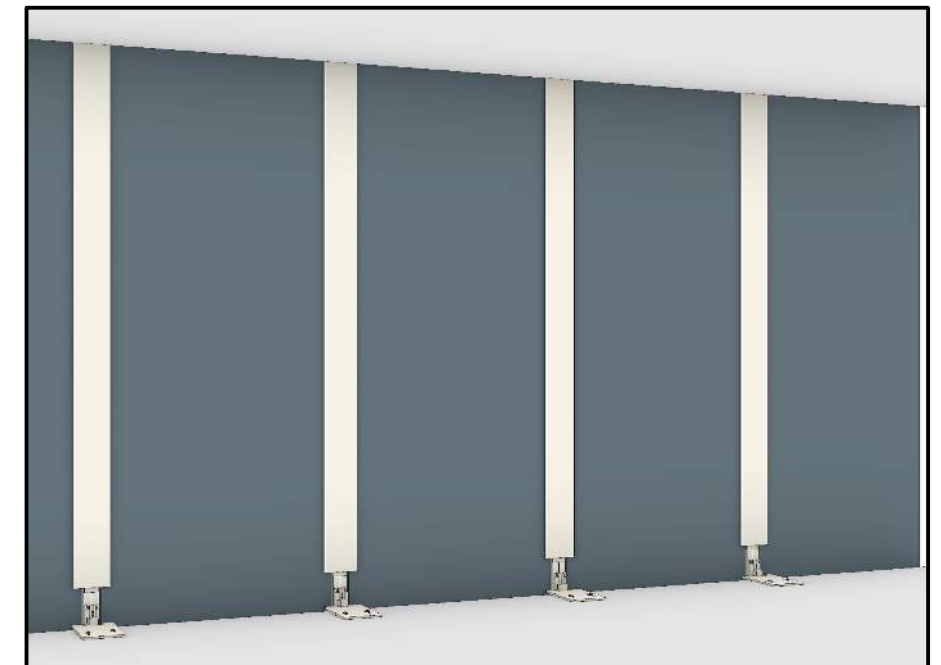
Install the exterior cladding using the shuffle method and hang it on the exterior side



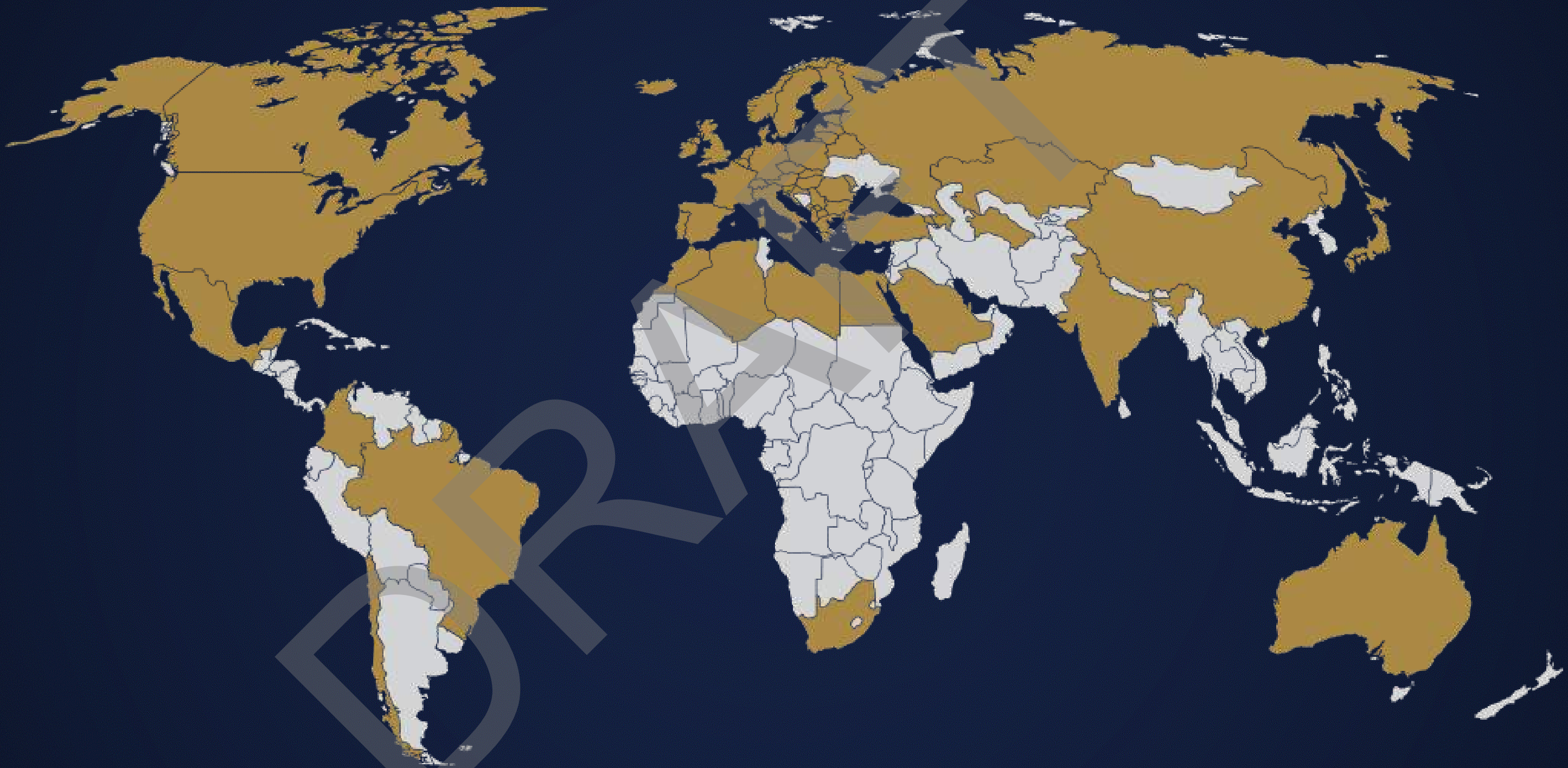
Insert the bottom side of the insulation panel between the mullions and then align it into position



Secure the insulation panels by installing the interior cover caps



Installation of H99-hybrid is complete



Patented in over 70 countries

