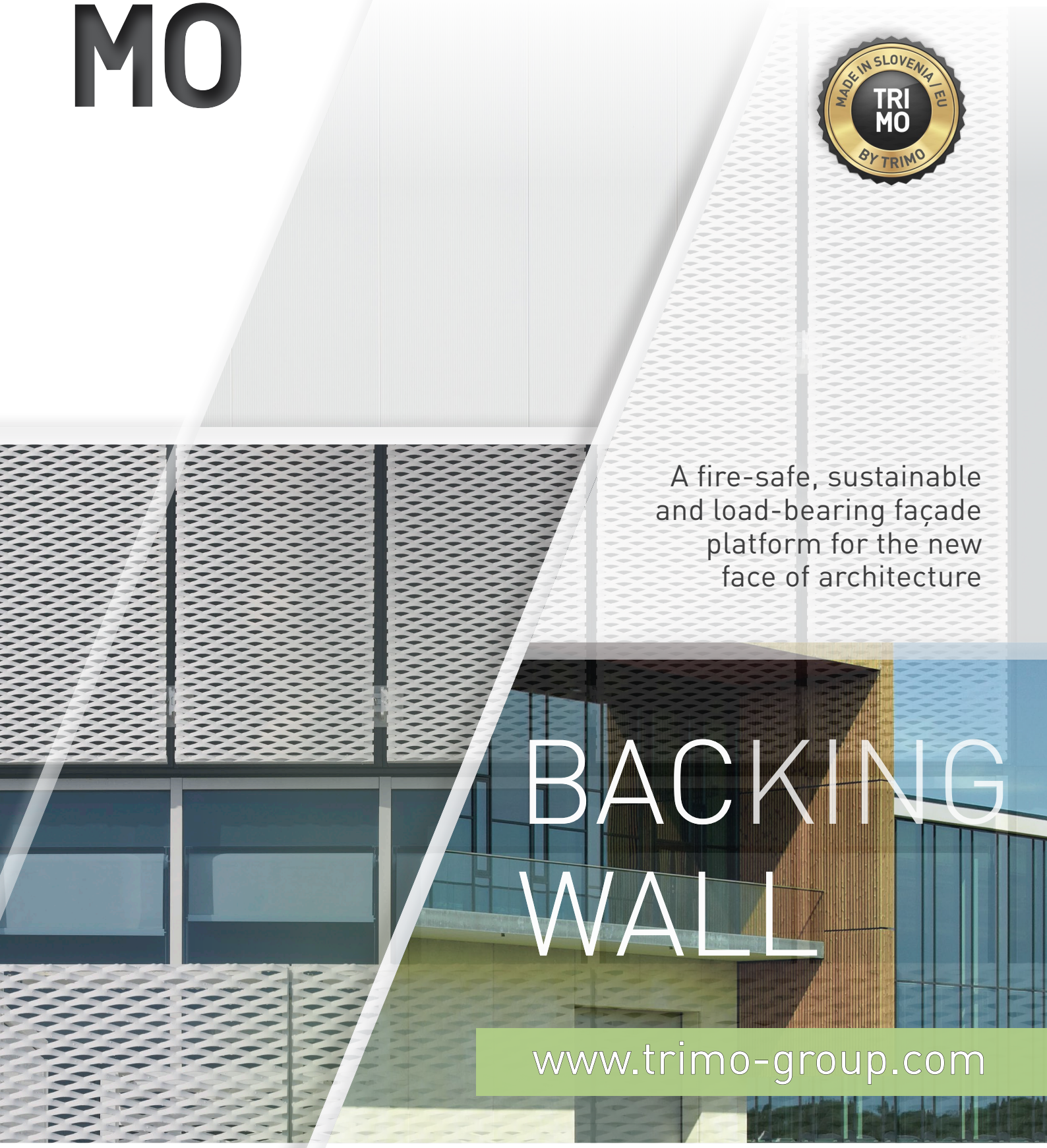
TRIMO



A fire-safe, sustainable and load-bearing façade platform for the new face of architecture

BACKING WALL

www.trimo-group.com

HANDBOOK

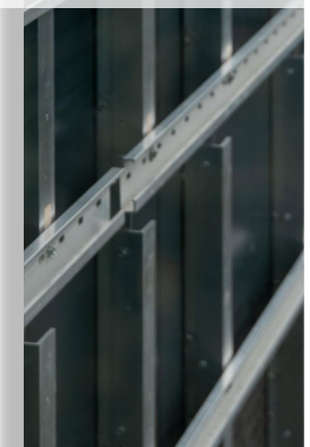
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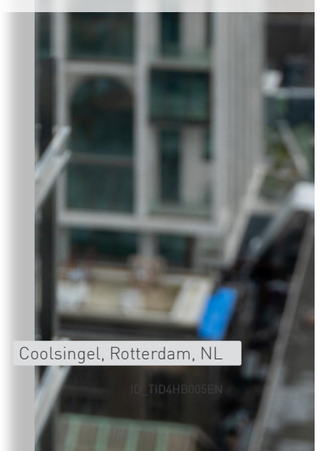
Backing Wall

A façade platform for endless possibilities.

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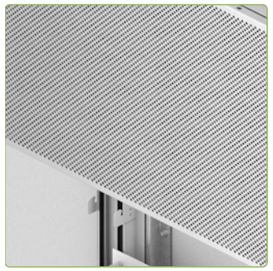




Coolsingel, Rotterdam, NL

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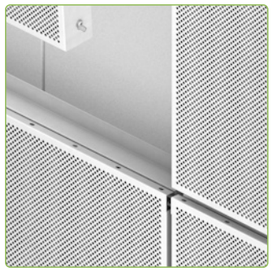
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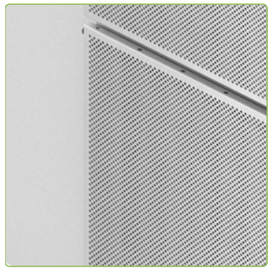
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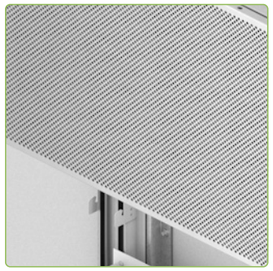
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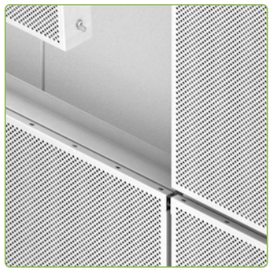
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You design the façade.

We deliver the performance behind it.

Duna arena, Budapest, Hungary

www.trimo-group.com

The new face of modern architecture

One wall. Multiple possibilities

Architectural expression today is no longer defined by a single material. Designers increasingly combine metal, ceramics, timber, glass, mesh and photovoltaic elements to create unique building identities.

Behind every successful façade lies a high-performance supporting structure. Trimo Backing Wall provides a fire-safe, airtight and load-bearing insulated wall solution that acts as the foundation for virtually any exterior cladding system. It enables architects to focus on creativity while ensuring proven engineering performance.

Whether designing a logistics centre, commercial building, data centre or landmark architectural project, Trimo Backing Wall delivers the freedom to create without compromise.

Requirements

Behind every architectural façade should be a single system capable of delivering all the essential building-envelope functions:

Absolute architectural freedom

The Trimo Backing Wall provides a reliable, airtight, and structurally robust core. It allows architects to apply virtually any external cladding material without compromising the building's physical performance.

Thermal efficiency & airtightness

Pre-engineered insulated panels featuring non-combustible mineral wool cores guarantee a continuous thermal envelope.

Fast track construction

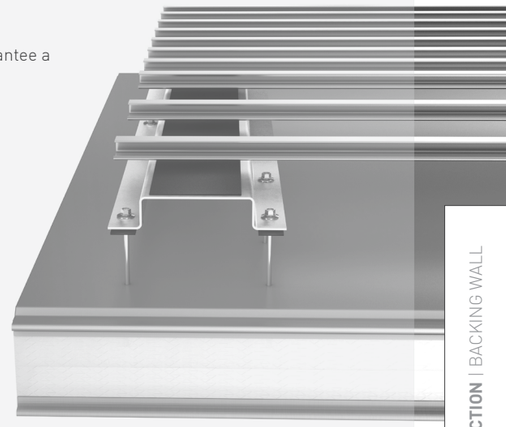
Because the Backing Wall panels are installed rapidly, the building envelope is sealed against weather conditions in record time.

Fire protection

The integrated non-combustible mineral wool core provides premium fire protection (Class A1).

Sustainability & the circular economy

The system utilizes optimized, lightweight materials with a low embodied carbon footprint. It upports modular construction principles, allowing high-rate recycling of steel and mineral wool components at the end of the building's lifecycle.



INTRODUCTION | BACKING WALL

What do you get with the Backing Wall system?

Trimo Backing Wall transforms a complex build-up façade into a predictable engineered platform.

By integrating quality thermal insulation, airtightness, fire safety and weather protection into a single prefabricated panel, it enables architects to focus on design while engineers rely on a proven load-transfer system for virtually any external cladding.

More than appearance

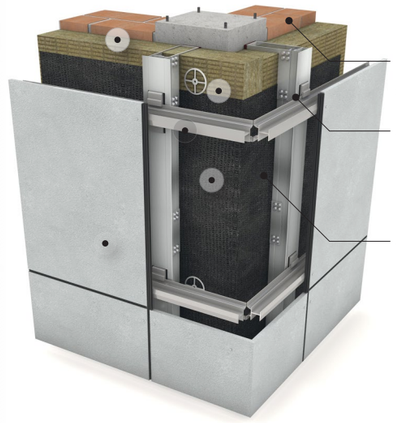
Trimo Backing Wall combines the benefits of an insulated panel with the flexibility of a ventilated rainscreen façade. The system acts simultaneously as:

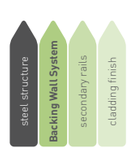
- Building envelope
- Thermal insulation
- Airtight layer
- Fire-safe barrier
- Structural carrier for external cladding

This integrated approach dramatically reduces complexity compared to traditional built-up wall assemblies.

Installation complexity comparison.

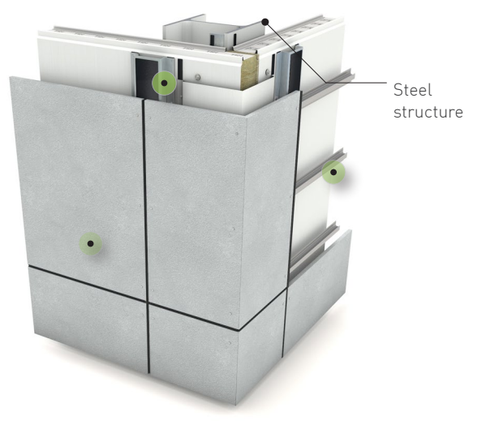
Traditional build-up wall (section)





8 stages

Trimo Backing Wall (section)



4 stages



The combination above is for illustrative purposes only and not all components are shown. Configurations, assemblies and components are subject to project-specific specifications.

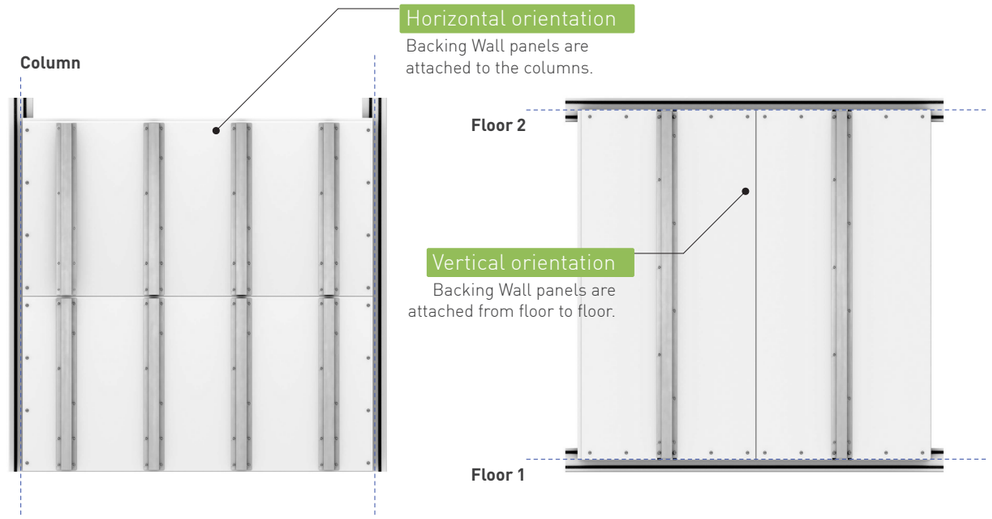
A system that adapts to your building

Trimo Backing Wall is designed to integrate with different building types and structural concepts.

For steel-framed buildings such as logistics centres, production facilities, warehouses and sports halls, Backing Wall panels can be installed directly onto the primary steel structure, creating a fast and efficient enclosure solution.

For multi-storey buildings such as offices, schools, residential developments and public buildings, panels can be installed from floor to floor, providing a continuous thermal, airtight and fire-safe building envelope.

The Trimo Backing Wall system adapts to the building structure, not the other way around.

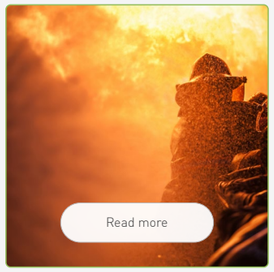


Benefits for every stakeholder

For architects	Freedom to choose virtually any façade finish.
For structural engineers	Reliable load transfer and predictable performance.
For contractors	Faster enclosure with fewer site interfaces.

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Product highlights



A

Fire protection built in.

More than non-combustible materials. Backing Wall provides a fire-resistant building envelope designed to help protect people, property and business continuity.

B

Reduced site labour.

Trimo Backing Wall reduces the number of installation steps, site interfaces and required trades. This enables faster enclosure, fast-track construction and more predictable project delivery.

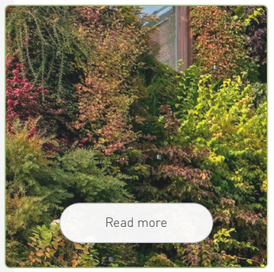




C

One wall. Multiple functions.

Thermal insulation, airtightness, weather protection and cladding support are integrated into a single solution.



D

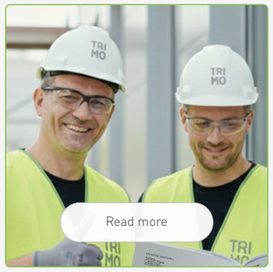
Future façade adaptability.

The external cladding can be modified, upgraded or replaced over the building's lifetime while retaining the insulated Backing Wall structure.

E

Design freedom.

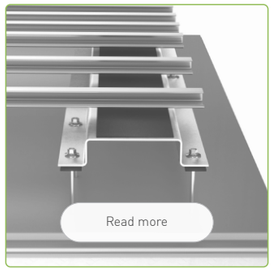
Create the desired architectural expression with metal, timber, ceramic, photovoltaic, green or composite façade systems.



F

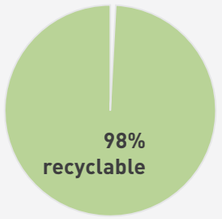
One system. One set of approvals.

With Trimo Backing Wall, certifications and system approvals are consolidated within one engineered solution, reducing coordination between multiple suppliers and simplifying the design process.



Supporting sustainable building design

Sustainability is no longer optional. It is a fundamental design requirement. Trimo Backing Wall contributes to sustainable building design through:



Backing Wall panel recycling efficiency.

Circular materials

Steel and mineral wool are highly recyclable materials that support circular-economy principles. Trimo products are manufactured using processes that minimise resource extraction. Component assemblies are designed for eventual deconstruction, rather than demolition.

Environmental product declarations

Environmental Product Declarations (EPDs) provide transparent, independently verified information on the environmental impact of the Trimo Backing Wall solution throughout its life cycle. They support informed material selection and help demonstrate the system's contribution to more sustainable building design.

Reduced carbon footprint

The Backing Wall system uses optimised, lightweight materials and can reduce embodied carbon, achieving up to 60% CO_2 savings for the customer compared to conventional cladding systems.

Green building certifications

The system can support project objectives under certification schemes such as LEED, BREEAM and DGNB through energy-efficient, responsible and resource-conscious building-envelope design.

Long service life

Durability and minimal maintenance reduce environmental impact throughout the building life cycle. The most sustainable building is one designed to perform efficiently for decades.

Building a sustainable future

Trimo sustainability, a holistic approach

The sustainability performance of Trimo was assessed by EcoVadis for the first time in 2021 and afterwards as well. A silver rating has been achieved and the score shows that Trimo was among the top 15% of all rated companies (already more than 130,000 globally at the time of the preparation of this document). The results also show that Trimo is better than the industry average in all rated categories (Environment, Labour & Human Rights, Ethics and Sustainable Procurement).

Trimo is committed to sustainability and has set ambitious greenhouse gas emissions reduction targets in alignment with the Science-Based Targets initiative (SBTi). By integrating the latest climate science into its sustainability strategy, Trimo aims to significantly lower its carbon footprint and contribute to global efforts to limit temperature rise to well below 2°C, with a vision of 1.5°C. Trimo's final goal is to have net-zero greenhouse gas emissions across the value chain by no later than 2050.

For more, read:

Trimo Support Guide for LEED® and BREEAM®

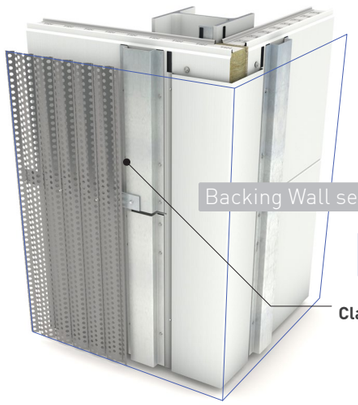


Les Lisses, Paris, RB-A, France

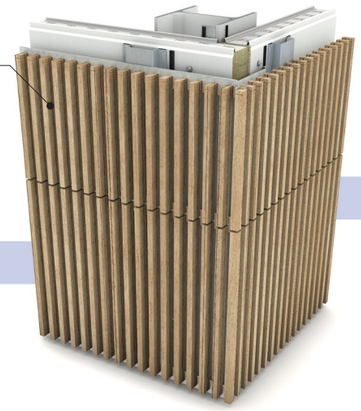
TRIMO INSULATED PANELS

Design without limitations

The Trimo Backing Wall System delivers thermal performance, structural reliability, and weather protection in one solution, supporting a wide variety of external façade finishes, including:



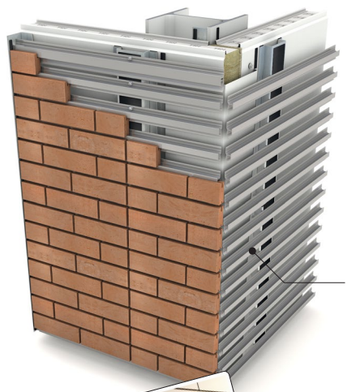
Trimoterm Backing Wall panel is adaptable to both horizontal and vertical panel layouts and the system supports a wide range of cladding options.



Timber planks
Warm, natural façade.



Metal cladding
Dynamic façades with transparency or depth.



Brick slips cladding
Traditional appearance with modern performance.



Green cassette wall
biodiversity of space and heat reduction.



PV modules
Building-integrated renewable energy systems.



Living wall module

For more, read:

“Trimo green and PV façades system guidelines”



Green façade integration

Green façades using prefabricated living wall systems are a simple and economical way to add vegetation to a building envelope and integrate greenery with insulated façade panels.

Explore other green façade options compatible with Trimo Backing Wall.

Contact me

Contact Trimo´s technical support to find out more about other cladding materials.

The combination abovåe is for illustrative purposes only and not all components are shown. Configurations, assemblies and components are subject to project-specific specifications.

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COMPONENTS | BACKING WALL

TRIMO INSULATED PANELS

BW Load path

[primary structure] ---► [BW panel] ---► [Omega rails] ---► [external cladding]

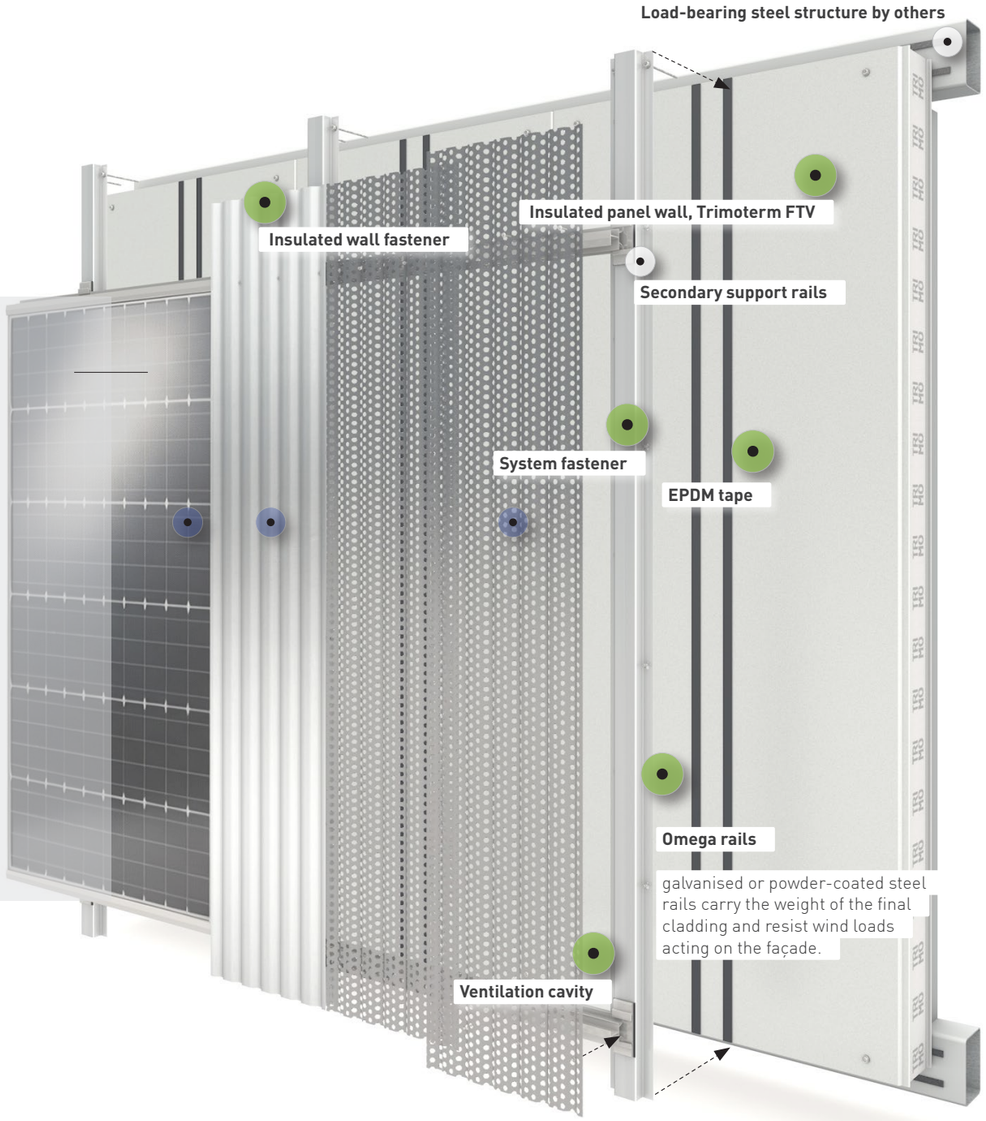
concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

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Backing Wall system components

Modern building design demands a separation of structural performance and visual identity.

The Backing Wall system combines an insulated panel as the primary thermal and weather-control layer with a secondary cladding that serves as the architectural finish, creating a rapidly installed solution with a replaceable external façade cladding.



The combination above is for illustrative purposes only and not all components are shown. Configurations, assemblies and components are subject to project-specific specifications.

1. Primary structure

The load-bearing structure of the building that supports the façade system and transfers loads to the foundation. It can be steel, concrete, timber or masonry.

2. Backing Wall panel

The core performance layer providing thermal insulation, airtightness, weather protection and fire resistance in a single component.

3. Omega rails

An adjustable support system that creates the ventilated layer and transfers cladding loads to the Backing Wall panel.

4. Cladding finish

The visible architectural layer that defines the appearance and character of the building, with virtually unlimited material and design options.

Components & cladding opt.

- Backing Wall panel



- A Brick slips



- B Timber planks



- C Trimo green wall



- D Profiled sheet



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[primary structure] ---► [BW panel] ---► [Omega rails] ---► [external cladding]

concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

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Why Trimo Backing Wall panels?



Trimo Backing Wall provides a high-performance, fire-safe and load-bearing foundation for modern façade solutions. Combining an insulated panel as the primary thermal and weather-control layer with a wide range of architectural cladding options, it enables rapid installation and exceptional design freedom. The system supports sustainable construction through durable, recyclable materials, while its replaceable external façade cladding ensures long-term adaptability.

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TRIMO INSULATED PANELS

1ST WITH AUTOMATED SANDWICH PANEL PRODUCTION

The power of Backing Wall panels

01 **Proven fire performance**

02 **Range of thicknesses**

03 **Scalability, modularity & quick installation**

04 **Sustainability & thermal performance**

05 **Safe integration of VE/MEP openings**

06 **Certified products**

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BW panel specifications

The Trimo Backing Wall panel is a mineral wool sandwich panel designed as the supporting element of the Backing Wall system. Its properties provide the basis for the structural, thermal and fire performance described below.

Ventilation layer dynamics

A continuous ventilation cavity of at least 30 mm must be maintained between the back of the exterior cladding and the outer face of the Backing Wall panel. This air layer allows convective drying to remove any moisture or condensation behind the rainscreen façade.

Fire requirements

Where fire resistance is required, the complete wall build-up must comply with applicable local fire regulations. Backing Wall panels have been fire tested with additional loads to simulate the weight of the external cladding, achieving fire resistance classifications up to EI 120.

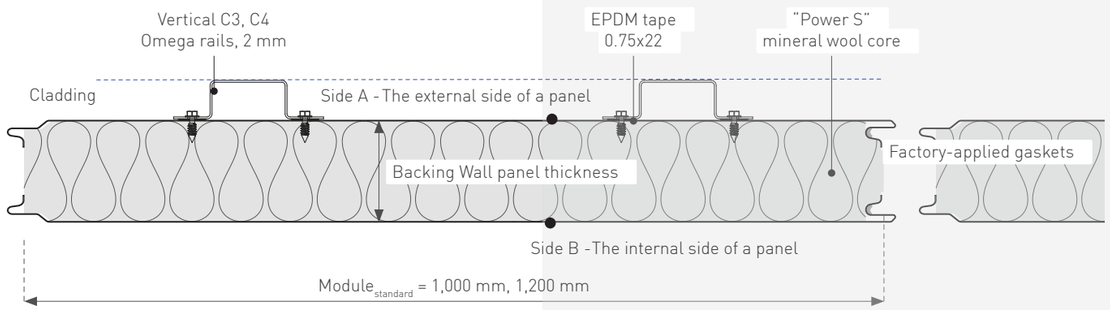
For detailed fire performance and tested configurations, refer to the Trimoterm Fire Guidelines or contact Trimo Technical Support.

Read more

Backing Wall panel property	Specifications / declared performance						
Core*	Power S type (non-combustible, high-density, vertically oriented mineral wool fibres)						
Steel sheets	Hot-dip galvanised steel, EN 10346						
Steel sheet thicknesses	External: 0.7 mm | Internal: 0.5-0.6 mm						
Profiles	External steel sheet: G (smooth) | Internal steel sheet: S, M2 or G						
Anti-corrosion protection / coatings	External: Polyester or polyurethane coatings (PUR65) | Internal: All coatings available						
Panel thickness	100 mm	120 mm	133 mm	150 mm	172 mm	200 mm	240 mm
Panel weight	21.8 kg/m²	24.2 kg/m²	25.8 kg/m²	27.8 kg/m²	30.5 kg/m²	33.8 kg/m²	38.6 kg/m²
U-value	0.41 W/m²K	0.34 W/m²K	0.31 W/m²K	0.28 W/m²K	0.24 W/m²K	0.21 W/m²K	0.16 W/m²K
Water and Air permeability	Class A (1,200 Pa) | C=0.00005 m3 (Pa s); n=1.5						
Ventilated cavity required	Minimum continuous cavity: 30 mm behind external cladding						



Technical overview of the Backing Wall panel build-up.
* Power S insulation core is the default configuration for the Trimoterm Backing Wall panel.



Backing Wall panel cross-section

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Performance built into the core

Stone wool is classified as Euroclass A1 and does not contribute to fire spread, supporting EI-rated separation where required. At the same time, it offers a practical balance of insulation and structural performance and recyclability for envelope design.

The POWER of mineral wool

Excellent fire resistance

Suitable for façade applications where strict fire safety regulations apply.

Excellent thermal insulation

The fibrous structure provides strong thermal performance, supporting lower heating/cooling demand and improved building energy efficiency.

Good acoustic insulation

Absorbs sound waves, reducing outdoor noise entering the building and limiting sound transmission between adjacent rooms or façade sections.

Dimensional stability

Does not shrink or degrade over time, helping maintain consistent insulation performance throughout the building's service life.

Sustainability

Can contain recycled content and deliver long-term energy savings, contributing to a lower building carbon footprint.

FACT

Long-term stability

Stone-wool insulation is dimensionally stable and does not exhibit ageing of thermal performance over the building's service life. Tests on insulation from buildings 20 to 55 years old showed that it retained its original thermal resistance.

"www.rockwool.com"

Mineral wool insulation core

- A1 fire classification,
- Thermal insulation,
- Acoustic performance,
- Dimensional stability,
- Recyclability



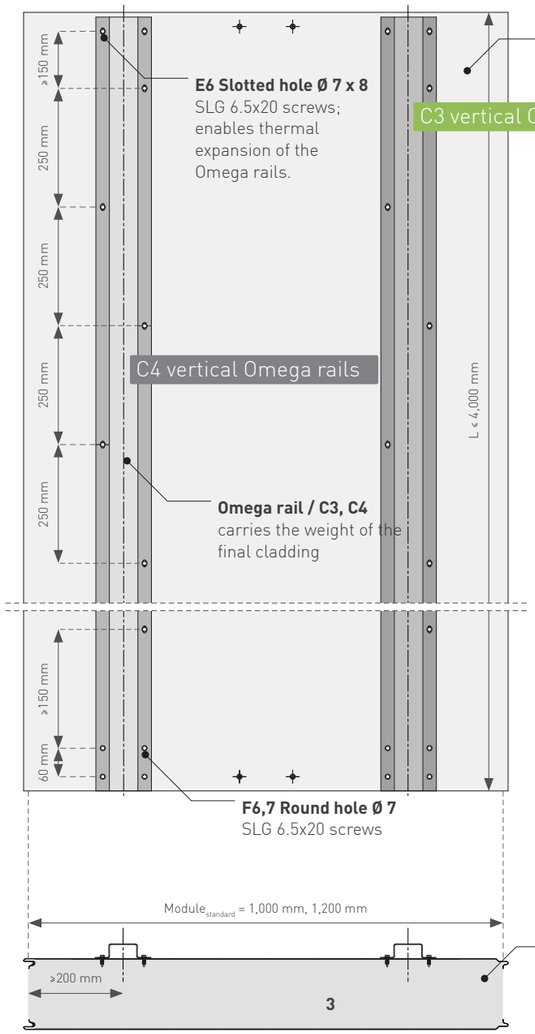
TRIMO INSULATED PANELS

[primary structure] ---► [BW panel] ---► [Omega rails] ---► [external cladding]

concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

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Backbone of the system
Omega rails



System cross-section

Why Omega rails?

The sub-framing system provides the structural connection between the external cladding and the Trimo Backing Wall panels, ensuring effective load transfer and distribution. Unified vertical Omega rails are designed for use with both horizontal and vertical Backing Wall panel orientations. Where fire performance is required, the complete wall build-up must comply with the applicable local fire regulations.

Dimensioning of Omega rails

Design calculations must account for the combined effects of multiple structural forces:

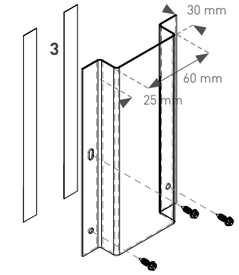
- Additional cladding weighing no more than **80 kg/m²** for vertical Backing Wall panel orientation.
- Additional cladding weighing no more than **65 kg/m²** for horizontal Backing Wall panel orientation.
- Wind loads up to a maximum project design load of 2.4 kN/m² at SLS and 3.6 kN/m² at ULS.

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Omega rail dimensions

Omega rail lengths are defined according to the Backing Wall panel module and panel orientation.

Backing Wall panel orientation	Panel module	Omega rail arrangement	Omega rail length
Horizontal	1,000 mm	Single-module span	980 mm
Horizontal	1,200 mm	Single-module span	1,180 mm
Horizontal	1,000 mm	Two-module span	1,980 mm
Horizontal	1,200 mm	Two-module span	2,380 mm
Vertical	Not module-dependent	Standard rail	4,000 mm



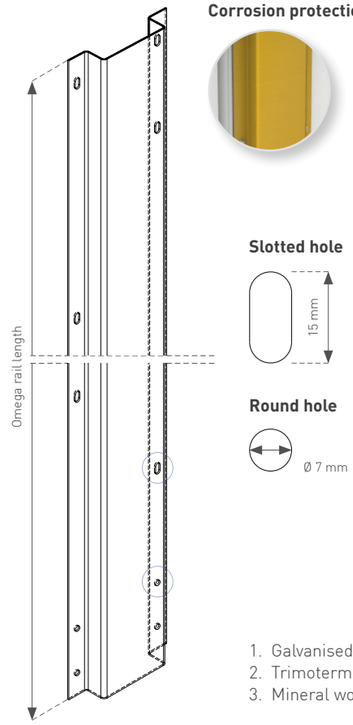
Galvanised / Powder coated Omega profile dimensions

Omega rail material and finish options

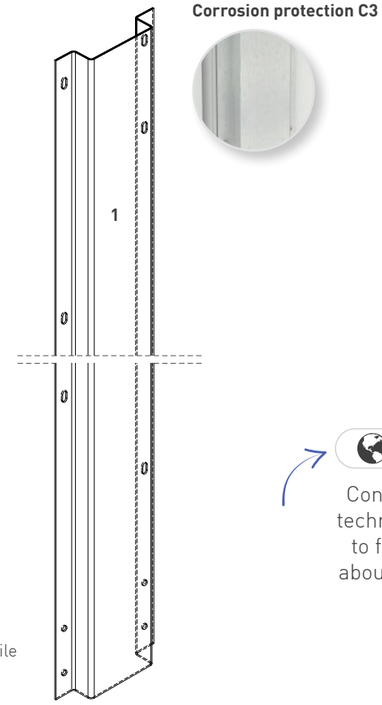
Structural profiles must be designed in accordance with the relevant Eurocodes (EN 1993 for steel).

Rail finishes available:

C4 Omega rails
galvanised & powder-coated s = 2mm



C3 Omega rails
galvanised s = 2mm



1. Galvanised / Powder coated Omega profile
2. Trimoterm FTV Backing Wall panel
3. Mineral wool insulation

Contact me

Contact Trimo´s technical support to find out more about Omega rail distribution.

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COMPONENTS | BACKING WALL

TRIMO INSULATED PANELS

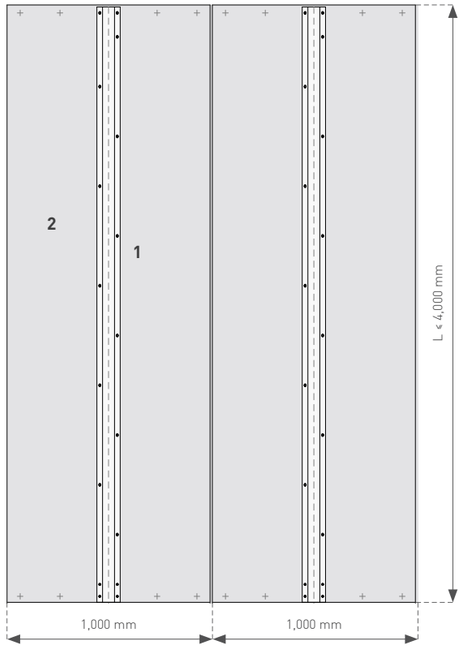
[primary structure] ---► [BW panel] ---► [Omega rails] ---► [external cladding]

concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

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Omega rails distribution

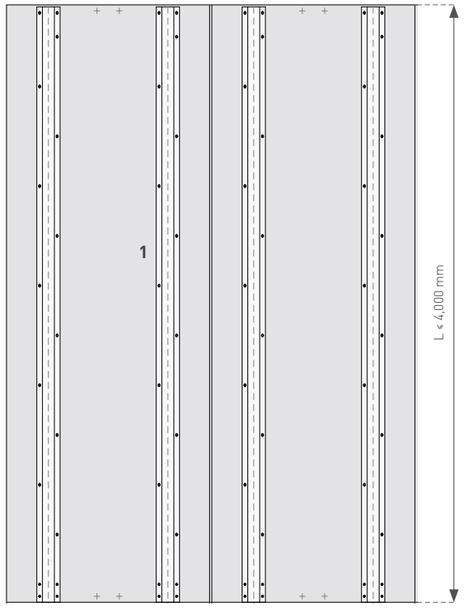
1 Single Omega rail vertical panel orientation



Optimised for lighter cladding

A single Omega rail per panel provides an efficient solution for lighter façade finishes while minimising material use.

2 Two Omega rails vertical panel orientation



Increased load-bearing capacity

Two Omega rails per panel increase the system's load-bearing capacity, supporting façade cladding of up to 80 kg/m².

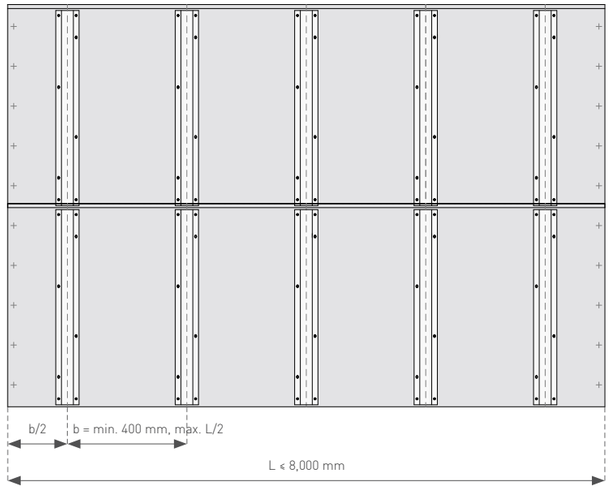
1. Galvanised / Powder coated Omega profile
2. Trimoterm FTV Backing Wall panel

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www.trimo-group.com

Omega rails distribution

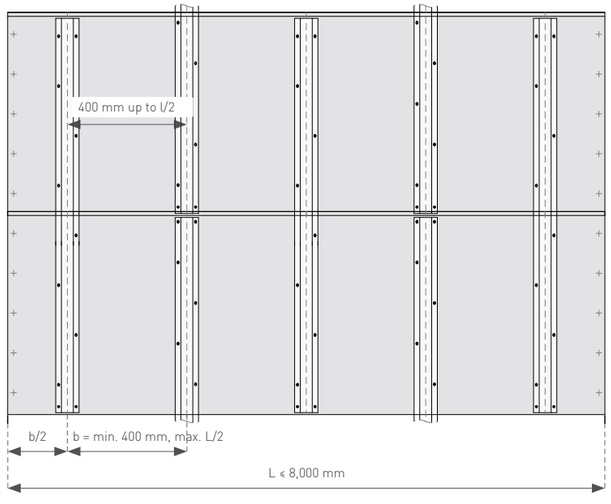
3 Short Omega rails horizontal panel orientation



Pre-installation before lifting

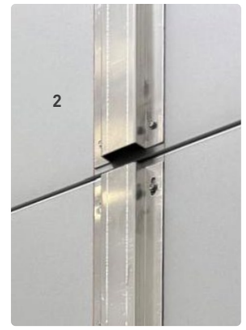
Short Omega rails fixed to a single panel can be installed before the panel is lifted into position, simplifying on-site assembly.

4 Extended Omega rails horizontal panel orientation



Fewer components

Omega rails extending across two panels reduce the number of individual rail sections and are installed after the Backing Wall panels are in position.



COMPONENTS | BACKING WALL

[primary structure] ---► [BW panel] ---► [Omega rails] ---► [external cladding]

concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

Backing Wall fasteners

Fastener selector matrix

The matrix lists compatible through-panel fasteners for Trimo Backing Wall panels, supported by Trimo testing, ETA, German approval, or verified supplier documentation.

Substructure thickness	2 mm < t < 5mm		4 mm < t < 12 mm	
Panel thickness	**ID**	**Name**	**ID**	**Name**
100 mm	30024462	EJOT JT3-D-6H-5,5/6,3x127 E19	30027301	EJOT JT3-D-12H-5,5/6,3x155 E19
	30032810	SFS SXC5-S19 6.3x140 (A2)	30036596	SFS SXC16-S19 5.8x150 (A2)
120 mm	30024990	EJOT JT3-D-6H-5,5/6,3x167 E19	30027306	EJOT JT3-D-12H-5,5/6,3x175 E19
	30032051	SFS SXC5-S19 6.3x160 (A2)	N/D	SFS SXC16-S19 5.8x170 (A2)
133 mm	30024990	EJOT JT3-D-6H-5,5/6,3x167 E19	30027306	EJOT JT3-D-12H-5,5/6,3x175 E19
	30032383	SFS SXC5-S19 6.3x190 (A2)	30036269	SFS SXC16-S19 5.8x200 (A2)
150 mm	30011562	EJOT JT3-D-6H-5,5/6,3x197 E19	30027305	EJOT JT3-D-12H-5,5/6,3x195 E19
	30032383	SFS SXC5-S19 6.3x190 (A2)	30036269	SFS SXC16-S19 5.8x200 (A2)
172 mm	30023821	EJOT JT3-D-6H-5,5/6,3x237 E19	30024060	EJOT JT3-D-12H-5,5/6,3x245 E19
	30031695	SFS SXC5-S19 6.3x220 (A2)	30032843	SFS SXC16-S19 5.8x230 (A2)
200 mm	30023821	EJOT JT3-D-6H-5,5/6,3x237 E19	30024060	EJOT JT3-D-12H-5,5/6,3x245 E19
	30032841	SFS SXC5-S19 6.3x250 (A2)	30032844	SFS SXC16-S19 5.8x260 (A2)
240 mm	30027310	EJOT JT3-D-6H-5,5/6,3x267 E19	30027304	EJOT JT3-D-12H-5,5/6,3x275 E19
	30032842	SFS SXC5-S19 6.3x290 (A2)	N/D	SFS SXC16-S19 5.8x300 (A2)

For more, read:

“Trimo accessories catalogue”



Fastening of Backing Wall panels

Backing Wall panels are fixed at both ends, like standard sandwich panels, to a pre-installed supporting structure, typically steel. Additional loads from the external cladding (dead load) and its substructure must be considered when determining the type, number and arrangement of fasteners.

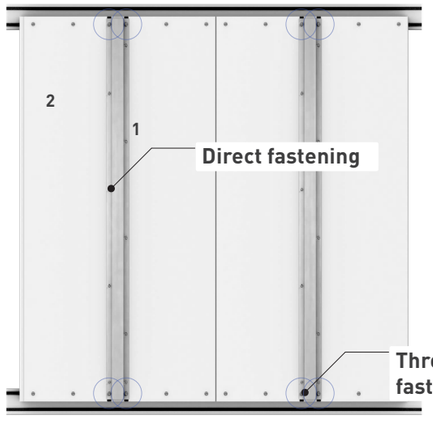
Fastening Omega profiles

Omega rails are fixed to the outer steel skin using SLG-S-6.5×20 short screws. For vertical panel orientation, through-panel fasteners are also used at defined locations to connect the Omega rails to the supporting structure. See the previous page for recommended through-panel fasteners.

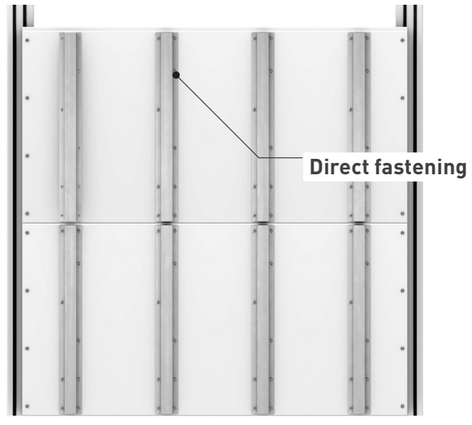
SLG-S-6.5×20 fixing to the outer steel skin.



Through-panel fixing to the supporting structure.



Vertical Backing Wall panel orientation



Horizontal Backing Wall panel orientation

Cladding fastening

Cladding materials are fastened according to the manufacturer’s instructions. Fixing points must be spaced closely enough to distribute the load evenly across the Omega rails and avoid concentrated loads. See Cladding load distribution on the following page for further guidance.

1. Galvanised / Powder coated Omega profile
2. Trimoterm FTV Backing Wall panel

Contact me

Contact Trimo´s technical support to find out more about Backing Wall fastening.

TRIMO INSULATED PANELS

[primary structure] ---► [BW panel] ---► [Omega rails] ---► [external cladding]

concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

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Backing Wall system design approach

Simple design process

Designing the Backing Wall system starts with a few key project inputs. Provide Trimo with the design loads, cladding characteristics and fixing requirements.

Based on this information, Trimo prepares the structural calculation and defines the optimal Omega rail arrangement for the project.

The resulting system configuration can then be incorporated into the façade design and used to prepare the project specifications and bill of materials.

Why is this important?

The Backing Wall system must be designed as a complete load-transfer path. Wind actions and cladding dead loads are transferred through the secondary supports and Omega rails to the Backing Wall panels and ultimately to the primary building structure. Correct selection and dimensioning of each component is therefore essential for a safe, reliable and trusted façade solution.

Engineering workflow

1 — project inputs

Loads & cladding data

- Wind loads
- Cladding weight
- Cladding coverage
- Fixing requirements

2 — Trimo support

Optimised system design

- Structural calculation
- Panel configuration
- Optimal Omega rail arrangement
- Fastening requirements

3 — project integrate

Ready for project design

Incorporate the solution into the façade design and prepare the project specifications and bill of materials.

4 — order material

Order according to the project specification

Panels · Omega rails · EPDM seals · Fasteners

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Cladding load distribution

The Backing Wall system is designed for cladding loads that are evenly distributed across the façade surface. To ensure an appropriate load distribution, the spacing between cladding fixing points must be limited to avoid excessive concentrated loads.

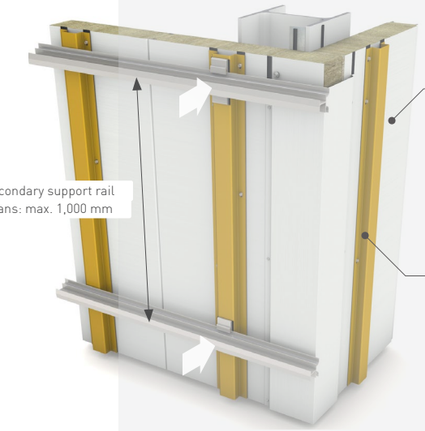
The diagrams below show the maximum permitted fixing-point spacing for horizontal and vertical Backing Wall panel orientation.

All cases outside the solutions described below shall be considered bespoke solutions and must be designed and engineered using appropriate engineering methods and the design inputs specified in this handbook.

V Method

For vertical Backing Wall panel orientation, the maximum permitted vertical spacing between cladding fixing points is 1,000 mm.

up to 80 kg/m²



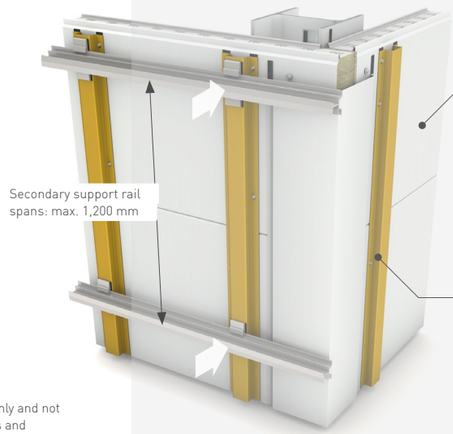
Insulated BW panel
Vertical orientation

Omega rails
Carries the weight of the final cladding

H Method

For horizontal Backing Wall panel orientation, the maximum permitted vertical spacing between cladding fixing points is 1,200 mm.

up to 65 kg/m²



Insulated BW panel
Horizontal orientation

Omega rails
Carries the weight of the final cladding

The combinations above are for illustrative purposes only and not all components are shown. Configurations, assemblies and components are subject to project-specific specifications.

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COMPONENTS | BACKING WALL

[primary structure] → [BW panel] → [Omega rails] → [external cladding]

concrete / steel frame | thermal / airtight barrier | adjustable rails, fasteners | different options

Engineered to be trusted

01 Project support

From the initial idea to the final implementation, Trimo's expert team supports you at every phase of your project, from planning and architectural design to construction and handover.

Trimo provides comprehensive project consulting, innovative design solutions, and technical excellence in the following areas:

- **Shop-drawing design,**
- **Structural calculations,**
- **Material selection and sampling,**
- **Tender and specification services,**
- **On-site installation training,**
- **Video, samples & mock-ups,**
- **Face-to-face meetings**

The benefits of technical excellence

Engineered to perform, Trimo Backing Wall turns building-envelope complexity into a simple, efficient solution. By combining thermal, structural and weather-protection functions within a prefabricated system, it reduces interfaces, simplifies installation and provides a reliable platform for diverse architectural finishes. The result is greater design flexibility, faster construction and dependable long-term performance.

For more, read:

"Trimoterm technical specifications"



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02 Fire safety

Fire safety is based on the controlled behaviour of materials and building elements in the event of fire.

The mineral wool core is classified as Euroclass A1 and is non-combustible, meaning that it does not contribute to fire spread. Trimo Backing Wall panels enable high fire resistance. In some designs, this can reach EI 180 minutes with slim profiles (due to the stable structure and non-combustible core).

Performance depends on the tested wall build-up and project configuration.

03 Airtightness and protection against moisture

An airtight envelope reduces uncontrolled airflow and enables the more efficient management of thermal regimes. Standard EN 12114 describes the methodology for measuring the airtightness of building components, which is critical for:

Control of airflow and temperature,
Prevention of condensation.

04 Thermal insulation and stability over time

A combination of high airtightness and effective thermal insulation ensures stable thermal performance throughout the building's service life. With U-values as low as 0.16 W/m²K, heat losses and gains are limited, reducing the energy demand for heating and cooling. Lower energy consumption during the use phase contributes to reduced carbon emissions.



05 Embodied carbon

The Backing Wall panel is a lightweight insulated façade system with high load-bearing capacity offering a sustainable alternative to concrete or brick build-up walls, reducing embodied carbon and achieving **up to 60% CO_2** savings for customers compared to conventional cladding systems.

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06

Climate targets and emissions reporting

Trimo is firmly committed to achieving net-zero greenhouse gas emissions by 2050. Emissions are measured in accordance with the GHG protocol, focusing on Scope 1 (direct emissions), Scope 2 (purchased electricity) and Scope 3 (supply chain and downstream activities).

07

Lifecycle assessment

The product lifecycle assessment (LCA) evaluates the environmental effects throughout the product's lifecycle, from raw material extraction to disposal. For the Trimoterm product line, LCAs have been prepared and third-party verified Environmental Product Declarations (EPDs) have been issued.

Information for designers:

- Insulated panels can be easily included in a building LCA model.
- Whole-life carbon assessment is increasingly required by regulations, certification schemes and project-specific sustainability targets.
- EPDs improve the building's sustainability rating according to, e.g. BREEAM, LEED or DGNB.

FACT

EPD credits

Because both steel and stone wool are highly recyclable materials, stone wool panels often have very favourable credits due to recycling, reducing the net carbon footprint of the building envelope.

08

Minimising thermal bridging

When conductive materials bypass insulation, they create pathways for heat transfer.

The continuous insulated Backing Wall reduces interruptions in the thermal envelope and limits thermal bridging. Careful detailing of connections further supports consistent thermal performance across the building envelope.



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How to read **EPD**

Environmental product declarations

An environmental product declaration, or EPD, is a document that transparently reports the environmental impact of a product or material, based on a product lifecycle assessment (LCA).

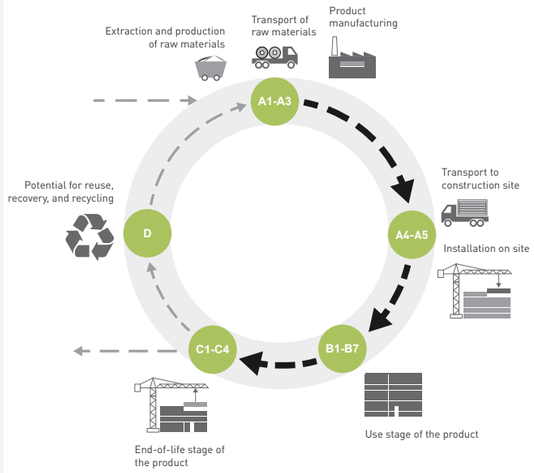
What does an EPD includes?

In accordance with EN 15804+A2, Trimo's EPDs cover:

- **A1-A3 Product stage**
  Raw material extraction and processing, transport to manufacturing, and manufacturing.
- **A4-A5 Construction process stage**
  Transport to the site and installation.
- **C1-C4 End-of-life stage**
  Deconstruction, transport, waste processing, and disposal.
- **D Benefits and loads beyond the system boundary**
  Potential benefits from reuse, recovery and recycling.

Because both steel and stone wool are highly recyclable materials, stone wool panels often have a very favourable D-factor, reducing the net carbon footprint of the building envelope.

link to EPD Hub library



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Confidence comes from testing.

Extensive testing is at the heart of the Trimo Backing Wall System. Structural, fire and weather performance, together with key system components and connections, have been tested and verified to provide a reliable, high-quality solution for demanding façade applications.

Engineered. Tested. Verified.

Structural

Single-panel test load
1.2 T

Load cycles
5,000

Contact me

Rail connection & panel testing

- Pull-out, shear, combined-load and cyclic testing of the Omega rail-to-panel connection.
- Single-panel testing reached a load of 1.2 tonnes.
- 5,000 load cycles performed to verify connection performance under repeated loading.
- Proven structural performance, backed by system testing.

Testing in Action





www.trimo-group.com

Engineered. Tested. Verified.

Fire

Fire resistance achieved
EI 120

Façade load during test
80 kg/m²

Contact me

Fire performance under façade load

- Full-scale fire testing performed with additional load to simulate the weight of the external façade.
- The tested Backing Wall configuration achieved fire resistance up to EI 120.
- Test load of 80 kg/m² applied to represent the secondary façade.

Testing in Action



Engineered. Tested. Verified.

Weather

Water permeability reached
1,200 Pa

Contact me

Rail-to-panel system testing

- Driving rain resistance tested under pulsating pressure up to 1,200 Pa.
- Complete system configuration tested, including panel, Omega rails and fasteners.
- Verified weather protection for demanding façade applications.

Testing in Action



Engineered. Tested. Verified.

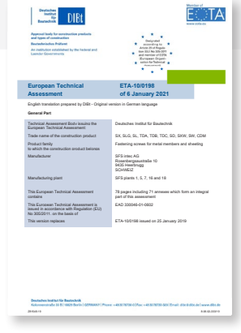
Fasteners

Short & through-panel fasteners
Verified

Contact me

Verified fastening solutions

- Only high-quality fasteners with documented and independently assessed performance are specified for the Backing Wall System.
- Both short fasteners for Omega rail connections and through-panel fasteners are selected according to their specific structural function.
- ETA or equivalent technical documentation provides verified performance data for reliable design and specification.



European Technical Assessment ETA-10/0198 of 6 January 2021

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the ETA: Deutsches Institut für Bautechnik

Trade name of the construction product: SX, SLG, SL, TDA, TDB, TDC, SD, SWH, SW, CDM

Product family to which the construction product belongs: Fastening screws for metal members and sheeting

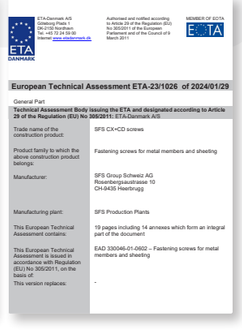
Manufacturer: SFS intec AG, Rosenbergsaustraße 10, 9435 Heerbrugg, SCHWEIZ

Manufacturing plant: SFS plants 1, 5, 7, 16 and 19

This European Technical Assessment contains: 78 pages including 71 annexes which form an integral part of the assessment

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of: EAD 330046-01-0602

This version replaces: ETA-10/0198 issued on 25 January 2019



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Authorised and notified according to Article 29 of the Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011

MEMBER OF EOTA

European Technical Assessment ETA-23/1026 of 2024/01/29

General Part

Technical Assessment Body issuing the ETA and designated according to Article 29 of the Regulation (EU) No 305/2011: ETA-Danmark A/S

Trade name of the construction product: SFS CX+CD screws

Product family to which the above construction product belongs: Fastening screws for metal members and sheeting

Manufacturer: SFS Group Schweiz AG, Rosenbergsaustrasse 10, CH-9435 Heerbrugg

Manufacturing plant: SFS Production Plants

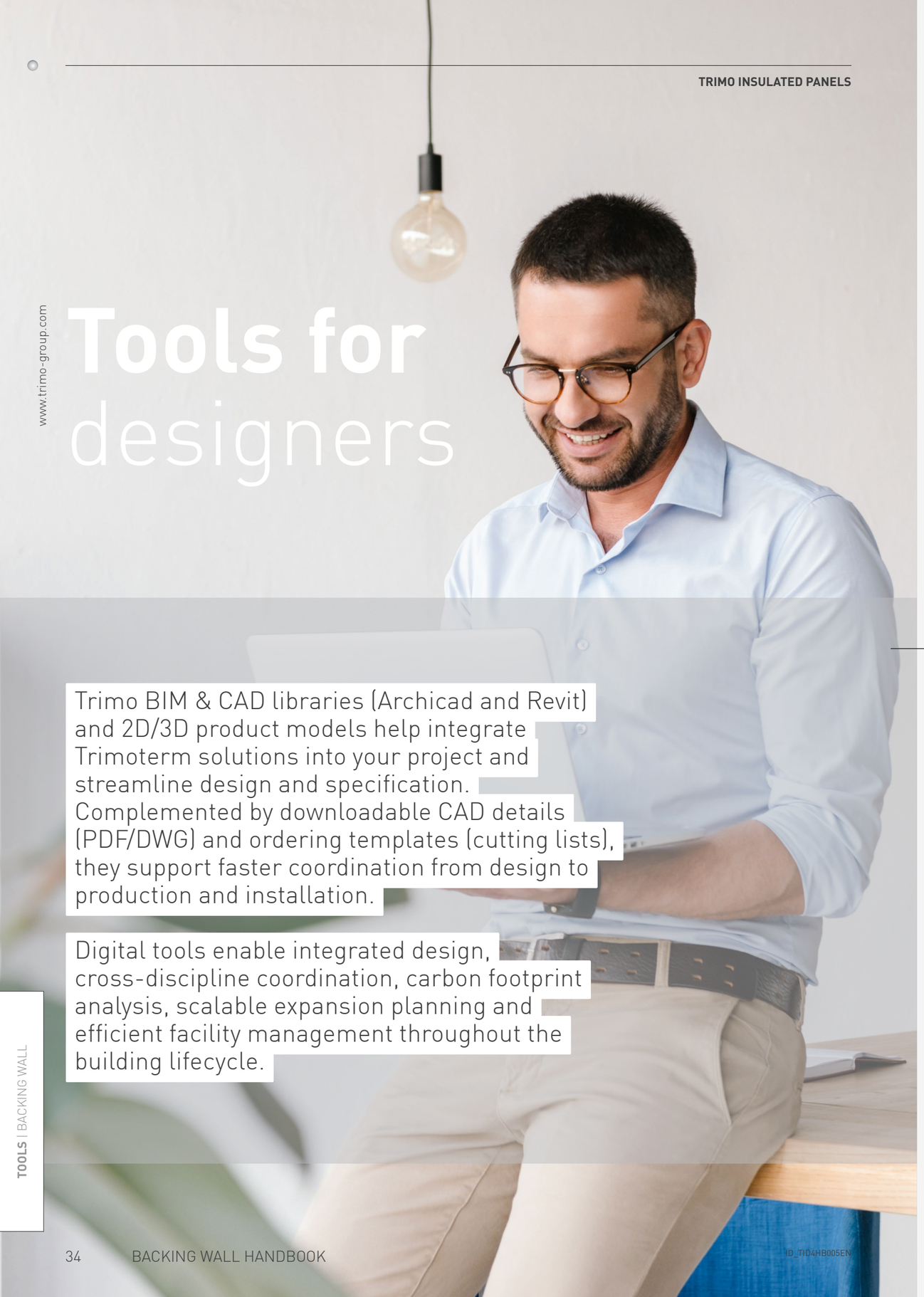
This European Technical Assessment contains: 19 pages including 14 annexes which form an integral part of the document

This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of: EAD 330046-01-0602 – Fastening screws for metal members and sheeting

This version replaces: -

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Tools for designers



Trimo BIM & CAD libraries (Archicad and Revit) and 2D/3D product models help integrate Trimoterm solutions into your project and streamline design and specification. Complemented by downloadable CAD details (PDF/DWG) and ordering templates (cutting lists), they support faster coordination from design to production and installation.

Digital tools enable integrated design, cross-discipline coordination, carbon footprint analysis, scalable expansion planning and efficient facility management throughout the building lifecycle.

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BIM

BIM (Building Information Modelling) supports the precise 3D design, coordination and analysis of building systems and components. Trimo provides BIM libraries and tools to support efficient information management and fast building envelope design in all project phases.

BIM libraries include:

- ARCHICAD library and Revit families,
- Models of façades, walls, roofs and curtain walls,
- Schedules and project data to export.

CAD details

Trimo's extensive library of CAD details helps resolve typical interfaces and system connections for façade, wall and roof applications. Each detail is available in both .PDF and .DWG formats and can be downloaded from Trimo's CAD tool download page.

Trimoterm FTV system design details

Information for designers:

- Early project engagement with Trimo's technical support is advisable.
- Explore Trimo's extensive documentation library and digital tools.
- Evaluate aesthetics and technical performance together with Trimo for optimal design outcomes.
- Use typical details on final cladding. Its designer's responsibility to combine systems in correct way.

Site installation

Site installation guidelines and construction details are available from Trimo's Technical documents download page.

Revit

GRAPHISOFT Archicad

AutoCAD



Courtesy of Trimo d.o.o.



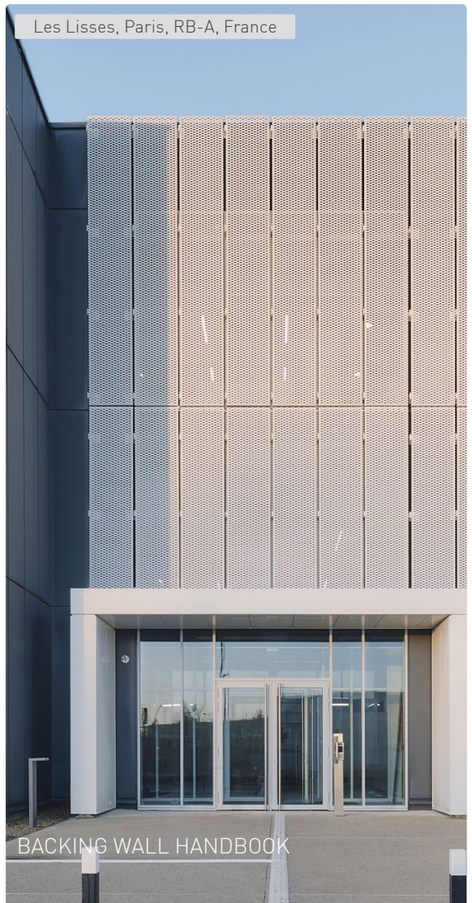
Courtesy of Trimo d.o.o.

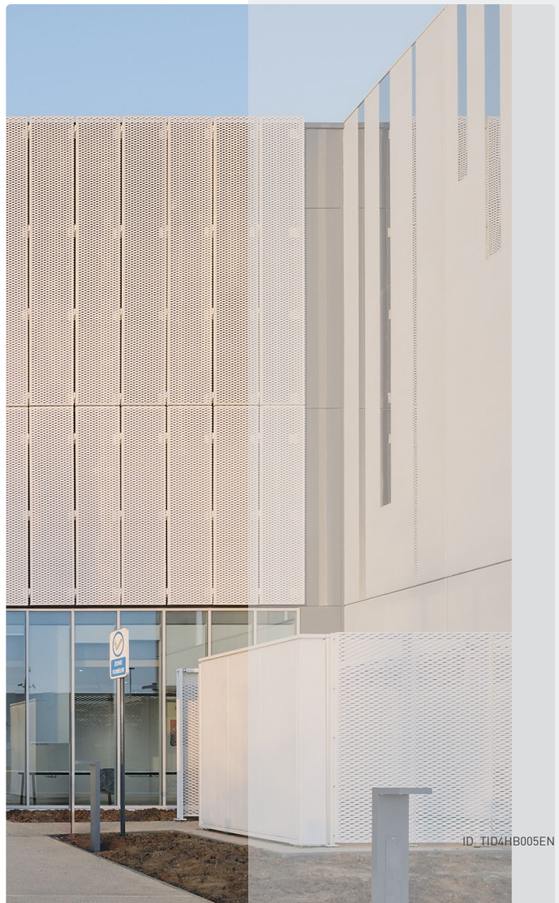


Project, City, Country



Les Lisses, Paris, RB-A, France





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Coolsingel / cladding: Petrarch plates, Rotterdam, NL





Did you know?

Since its establishment in 1961, Trimo has completed projects in more than 120 countries worldwide.

"www.trimo-group.com"

Bookshelf

This chapter contains all the relevant technical documents for additional information on Trimoterm panels. These documents include structural design data, technical specifications, guidelines and other resources that are essential for a comprehensive understanding of the subject. For further information about the panels, visit:

Read more

www.trimo-group.com/en/downloads/technical-documents



Insulated façade system - Trimoterm FTV



Insulated façade system - Trimoterm FTV HL



Backing Wall - insulated façade system - Trimoterm FTV



Trimoterm FTV book



Trimo green and PV façades system guidelines



Trimoterm technical specifications



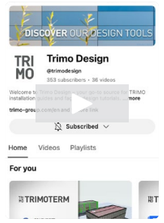
Trimoterm structural design data



Trimo accessories catalogue



Packaging, transport and storage for Trimo products



TrimoDesign YouTube channel

ID_TID4HB005EN

How can we help?

From concept to installation, Trimo provides the engineering support needed to turn your façade concept into a buildable solution.

Feasibility studies · BIM support · Structural calculations · Detail development · On-site installation training

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Technical support team leader

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Consultancy on BW panel application

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For information about the delivery of panels see Trimo's General conditions (https://trimo-group.com/en/trimo/general-conditions-of-sale).

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