

TRI MO QBISS ONE

DTC

DATA CENTRE HANDBOOK

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TRIMO DRESS CODE IS UNIQUE ARCHITECTURE



TRIMO APPROACH

In life, change is the only constant. Everything is in motion but our goal remains the same – to develop the world’s most trusted and highest performing Trimo products and to be our customers’ first choice. As you design unique architecture, we create the highest performing products to our customized formula whilst tailoring details specifically to your needs.

With over 50 years of experience and as the first producer in the world since 1987 of panels with incombustible mineral wool core, Trimo provides smart, innovative solutions that benefit people, organizations, and the environment.

Our ambition is to grand our customers with quality metal wall system for data centres and to offer roof, internal walls and ceilings from a single-source package. Special attention is given to simple and rapid installation solutions made with high recyclable products.

Trimo architectural solutions for the complete envelope of data centres, use tested and accredited Qbiss One metal wall system that seamlessly integrate with the modular grid construction typical for data centre. Comprehensive technical support delivers valuable design solutions, that will keep the equipment from data centres safe from humidity since no sweating or condensation within the rooms will occur. Products can also meet the food safe requirements.

We are aware of customers’ needs related to data centres:

- **EXCELLENT MECHANICAL ENGINEERING INFRASTRUCTURE**
Heating, ventilation and air condition (HVAC)
- **HIGH AVAILABILITY (HA) DATA CENTRES**
Tier 1, Tier 2, Tier 3 and Tier 4
- **FLEXIBILITY AND MODULARITY**
Possibility to extend or renovate the existing data centre.
- **PASSIVE AND ACTIVE FIRE PROTECTION**
- **GREEN DATA CENTRE**
Make as small environmental impact as possible
- **RAISED FLOOR**
Helps cooling the building by extending air circulation.
- **HUMIDITY PREVENTION**
Equipment in data centres are humidity sensitive

Hint!

Click here for Trimo renovation handbook and discover a unique architectural solution tailored to you. 

01

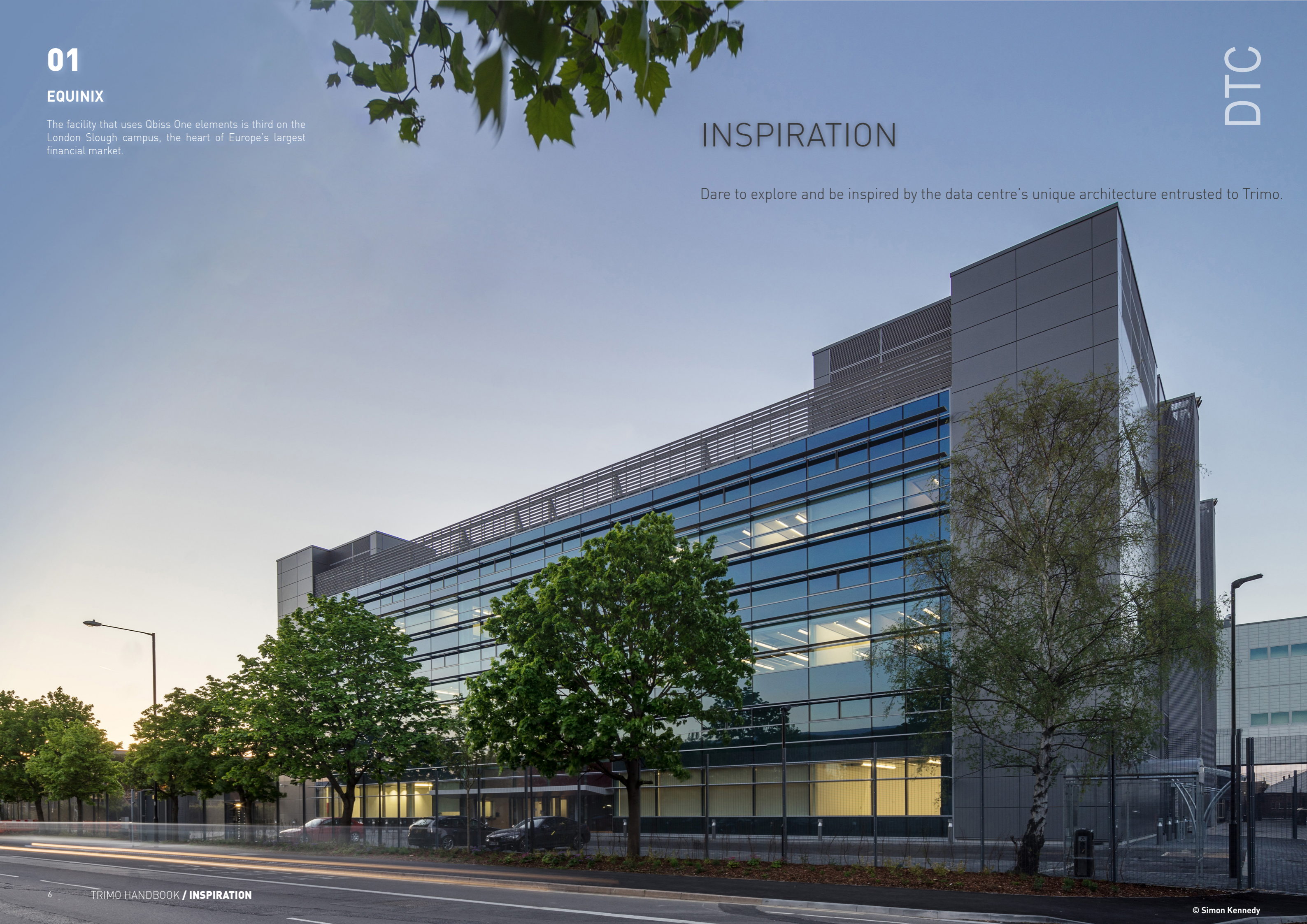
EQUINIX

The facility that uses Qbiss One elements is third on the London Slough campus, the heart of Europe's largest financial market.

DTC

INSPIRATION

Dare to explore and be inspired by the data centre's unique architecture entrusted to Trimo.



INSPIRATION

BUILDING SEGMENT: DATA CENTRE
INVESTOR: EQUINIX
LOCATION: UK, LONDON
PRODUCT: QBISS ONE

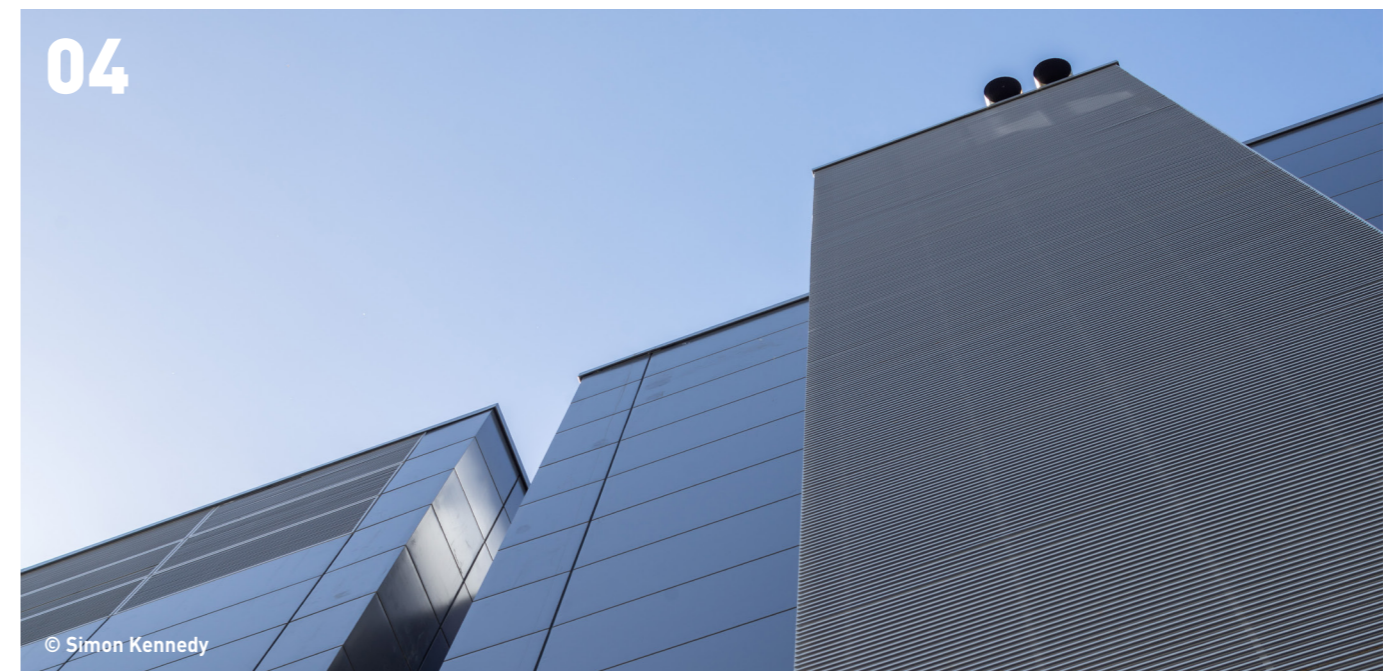
Equinix is an American multinational company that specializes in internet connection and data centres. The LD6 Equinix International Business Exchange™ (IBX) is a flagship facility built to meet escalating demand for services in the region. The facility that uses Qbiss One elements is third on the London Slough campus, the heart of Europe's largest financial market. LD6 has direct connectivity to the London Internet Exchange (LINX), one of the world's largest Internet Exchanges.

The building uses 10.703 m², 120 mm thick Qbiss One elements of which 295 pcs. of prefabricated Qbiss One corner elements were installed.



Flawless integration of air vents mesh and Qbiss One system.

Equinix LD6 building received LEED Gold accreditation.



05

QBISS ONE FACADE SYSTEM EXAMPLE

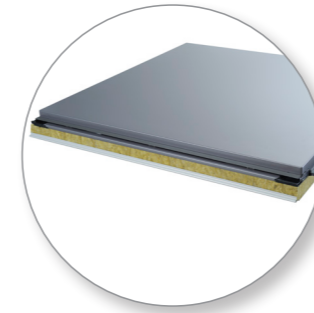
To ensure permanent quality, Qbiss One elements are prefabricated and cut to size in controlled environment.

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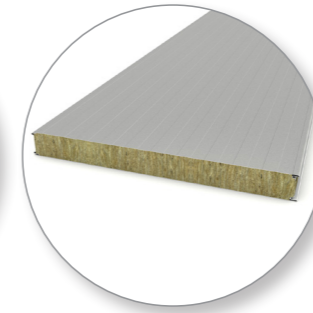
DATA CENTRE PRODUCT PORTFOLIO

Over the years, our product portfolio grew and developed in tune with market requirements. Trimo is known as a market leader in its sector and a trendsetter company as proven by numerous international awards for innovation and cooperation on projects which have received the most respected prestigious architectural awards: **RED DOT AWARD, GOLDEN KIWI AWARD, BIO 20, MIPIM, EFQM.**

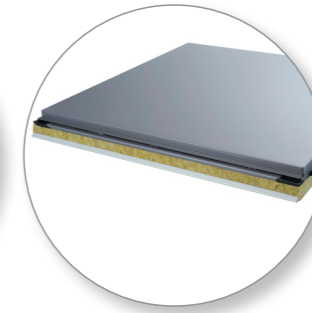
Data centre product solution



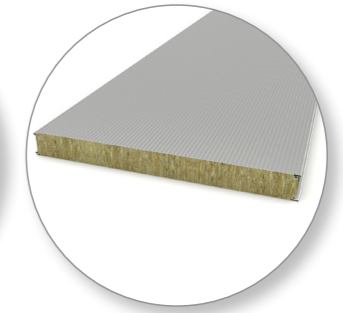
Horizontal facade
Qbiss One



Internal wall
Trimoterm FTV



Flat ceiling
Qbiss One

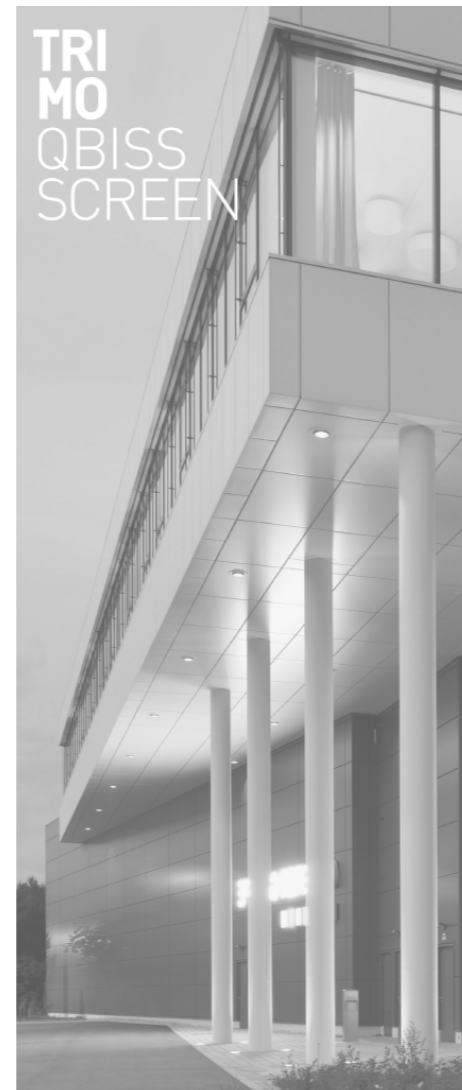


Flat roof
Trimoterm FTV

QBISS



QBISS SCREEN



TRIMOTERM



MODULAR UNITS



DATA CENTRE QBISS ONE BENEFITS

The added value of the product is reflected in the benefits for the user. The stars of architecture such as **Fosters and Partners**, recipient of the **Trimo Architectural Award**, trust the superior quality of Trimo products and the flexibility of Trimo service.



	FEATURES	ADVANTAGES	BENEFITS
	TOTAL WALL SOLUTION	Tailor made elements, corner elements, curved elements, trapezoidal elements	Save time & money by choosing only one supplier
	SELF SUPPORTING	Elements up to 6,5 m long	Reduced amount of substructure
	PREFABRICATED	Regular quality control, ready to install, produced in controlled environment, permanent quality	Reduced costs, reduced construction time, reduced quality risk
	MINERAL WOOL INSULATION	High level of fire resistance, non-combustibility	Ultimate fire safety, reduced insurance premiums, product for higher buildings (A2)
	EMBOSSSED CORNERS	No cuts, no welded edges, no leakage and corrosion	Ultimate aesthetics and long-run performance
	WATER & AIR TIGHTNESS	Low air change rates, safe equipment	Superb workplace climate
	TAILORED PROJECT SOLUTIONS	Design experts, technical support, in-house knowledge, 50+ years of experiences	Optimal cost solution, passion, creativity
	BIM LIBRARIES	Free ARCHICAD and Revit BIM libraries	Smooth collaboration, reduced errors and conflicts, better cost control and predictability, project visualisations
	BURGLARY RESISTANCE	Class RC3 of Burglary resistance	Safety of personnel and equipment in the building
	FLEXIBLE WARRANTIES	Robust, durable and high quality coatings	Easy & low-cost maintenance, 10-30 years warranty against corrosion
	98% RECYCLABLE	Environmentally friendly material	High sustainability and eco-friendliness
	EXTREME THERMAL VALUES	High energy efficiency	Reduced HVAC costs
	MOISTURE RESISTANT	No moisture on the surface of internal walls	No damage to expensive machinery

DATA CENTRE PRODUCT SOLUTION

We take into account the specifics of data centres and constantly improve and invent products that fulfill all demands. **Data centre installation** and **data centre product formula** steps explain pragmatically how to define and develop optimal products for complete envelope system.

DATA CENTRE INSTALLATION GUIDE GIVES RECOMMENDATIONS AND SOLUTIONS



SPANS

Qbiss One elements are installed as a single span system, fixed on each side of the element. When installation is complete, fixing screws are not visible.



INSTALLATION DIRECTIONS

The installation direction defines the direction of the transversal and the longitudinal joint of the element.

DATA CENTRE QBISS ONE PRODUCT FORMULA



FACADE SYSTEM

Facade system protects the building from fire, noise, weather and heat.



INTERNAL WALL SYSTEM

Internal wall system separates rooms within the building.



CEILINGS

Ceiling elements prevent seeing a mechanical installation and enable light integration within the element.



ROOF SYSTEM

The roof system defines the upper covering of a building in a flat or pitched installation.



DATA CENTRE PRODUCT SOLUTION

01. STEP

DATA CENTRE INSTALLATION

FACADE SYSTEM

Qbiss One elements are installed as a single span system, directly to main steel structure. Comprehensive Trimo's technical support instruct the optimal length of the elements and provide structural calculation with predefined fixing elements. Design department prepares design shop drawings and use optimal product dimensions to fulfill the building's technical specifications. Installation of entirely defined and designed Qbiss One is seamless and fast.

RECOMMENDATION

Main steel structure with about 4 m span between columns

SOLUTION

Horizontal, 4 m long prefabricated fire resistant elements (EI120) and accessories

FLAT ROOF SYSTEM

The system enables the application of a green roof layer on top of the elements.

RECOMMENDATION

Steel structure with 3 m spacing between the load bearing elements

SOLUTION

Flat roof with 12 m multi span

INTERNAL WALL SYSTEM

Internal walls in data centres divide rooms with expensive machinery. Keeping the equipment safe from fire is a necessity.

RECOMMENDATION

Main steel structure

SOLUTION

Horizontal/vertical installation of fire resistant Trimoterm mineral wool sandwich panel (up to EI240)

[Request service >](#)

CEILING SYSTEM

Harmonious integration of lights into a Qbiss One ceiling completes the whole envelope of the building with no possibility of sweating or condensation within the rooms.

RECOMMENDATION

Steel structure

SOLUTION

Qbiss Screen / Qbiss One ceiling

[Request service >](#)

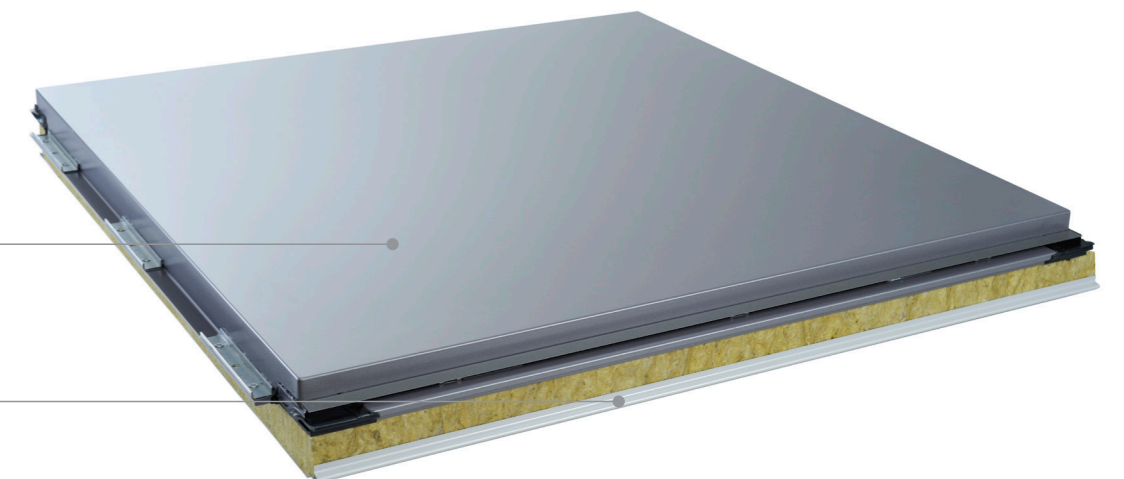
02. STEP

DATA CENTRE PRODUCT FORMULA

Rational planning and the right choice of products tailored to data centres will drastically reduce the cost of investment. Qbiss One products specially developed for the specifics of data centres offer excellent solution for complete data center envelope system.

Rich selection of Qbiss One color options will seamlessly integrate data centre into urban structures. To prolong a lifetime of the building, only the best (PVDF 35 or PUR/PA) anticorrosion protection is being used on the atmospherically most exposed areas of the facade which results into a longer anti corrosion warranty period.

- On stock colours
- Anticorrosion protection: PVDF, PUR/PA



EXTERNAL COATING

PVDF, PUR/PA, Stainless steel

INTERNAL COATING

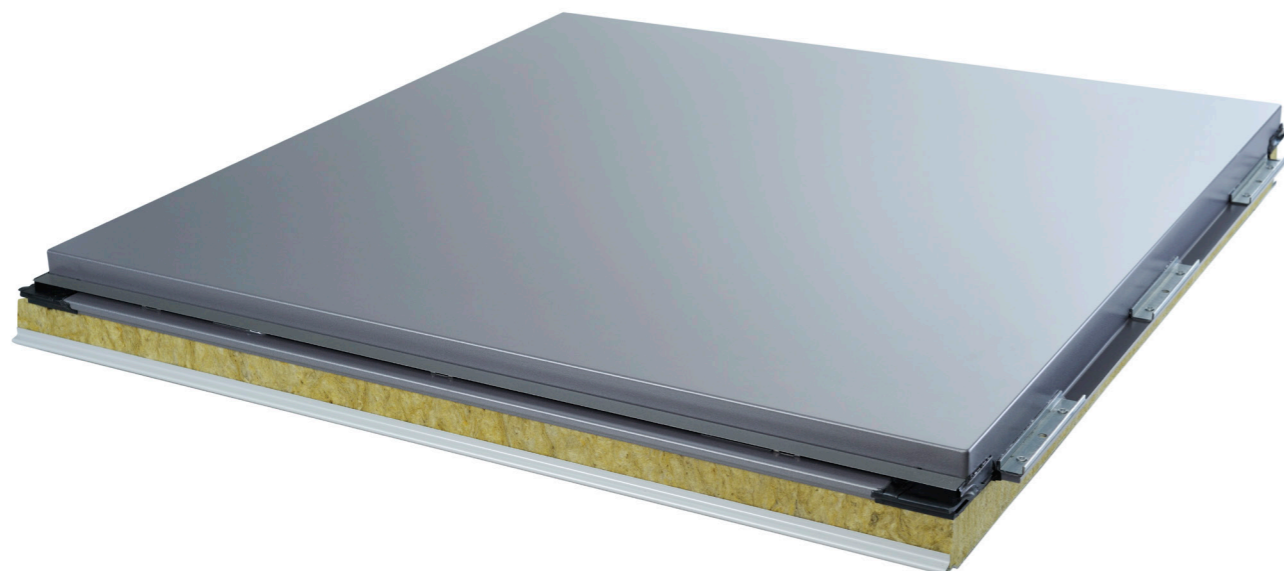
SP, HDP, PUR, PUR/PA, PVDF, PVC(P), PVC(F), PET(F)

DATA CENTRE PRODUCT SOLUTION

I. FORMULA

HORIZONTAL FACADE SYSTEM, **QBISS ONE** PRODUCT


Qbiss One is a world-class engineered, prefabricated, A1 mineral wool-insulated, metal façade system that offers a thorough wall solution within a single piece of construction element. Façade elements with rounded corners, unmatched flatness and advanced technical characteristics place Qbiss One among the best façade systems in the world. The system is RC3 burglary resistant, certified as class A for water permeability, class A2 fire resistant and reaches 30 dB of sound insulation.



Product	QBISS ONE	
Colour range	Bright, medium, dark	
Unit dimension	T (mm)	150
	M (mm)	1000
	R (mm)	4000
External steel sheet	Thickness t (mm)	0.7
	Profile	Gladio (G)
Internal steel sheet	Thickness t (mm)	0.6
	Profile	Gladio (G)
Features	Mineral Wool core (EN 14509)	Power T
	Weight (kg/m ²)	24.7
	Reaction to fire	A2-s1, d0
	Fire resistance (i→o)	EI120
	Thermal transmittance U (W/m ² K)	0.25
	Airborne sound insulation R _w (C:C _v) (dB)	30 (-1;-3)
	Water permeability (EN 14509)	class A (1200Pa)
	Air permeability (EN 14509)	n=0.97: C=0.0046
	Burglary resistance class (EN 1627)	RC3
	Certificates	CE, LPCB, FM

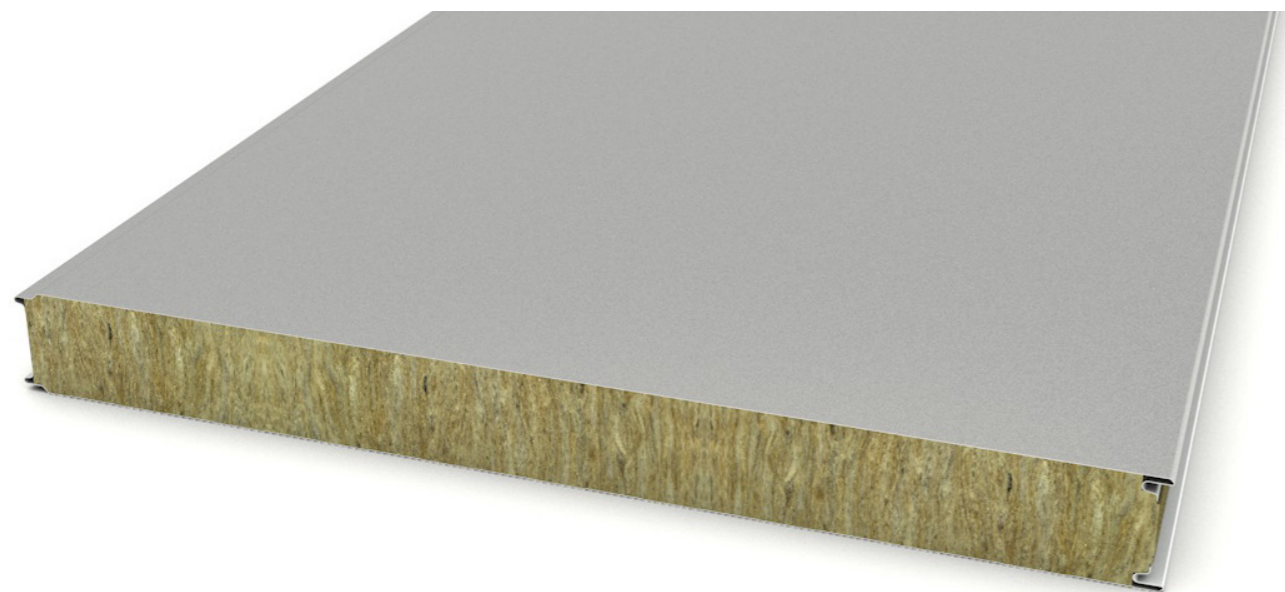
Hint!

We know how to develop and optimize product formula for your unique architecture at your location. Contact us by e-mail or phone:

✉ sales@trimo-group.com
📞 +386 (0)7 34 60 200 

II. FORMULA

VERTICAL SINGLE SPAN
INTERNAL WALL
SYSTEM,
TRIMOTERM FTV
PRODUCT

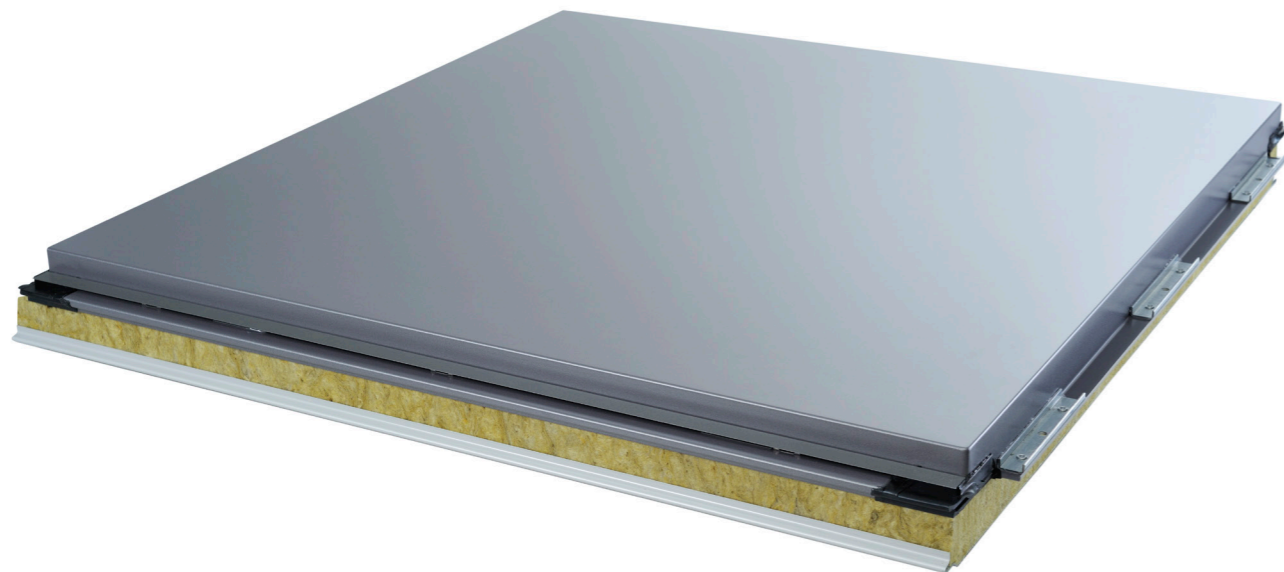


Product	TRIMOTERM FTV	
Colour range	Bright, medium, dark	
Unit dimension	T (mm)	120
	M (mm)	1200
	R (mm)	8800
External steel sheet	Thickness t (mm)	0.6
	Profile	Gladio (G)
Internal steel sheet	Thickness t (mm)	0.6
	Profile	Gladio (G)
Features	Mineral Wool core (EN 14509)	Power T
	Weight (kg/m ²)	19.8
	Fire resistance (o→i, i→o)	EI60
	Reaction to fire	A2-s1, d0
	Thermal transmittance U (W/m ² K)	0.31
	Airborne sound insulation R _w (C:C _{tr}) (dB)	30 [-1;-3]
	Water permeability (EN 14509)	class A (1200Pa)
	Air permeability (EN 14509)	n=1.5; C=0.00005
	Burglary resistance class	RC3
	Certificates	CE, LPCB, FM

III. FORMULA

FLAT SINGLE SPAN CEILING SYSTEM, **QBISS ONE** PRODUCT

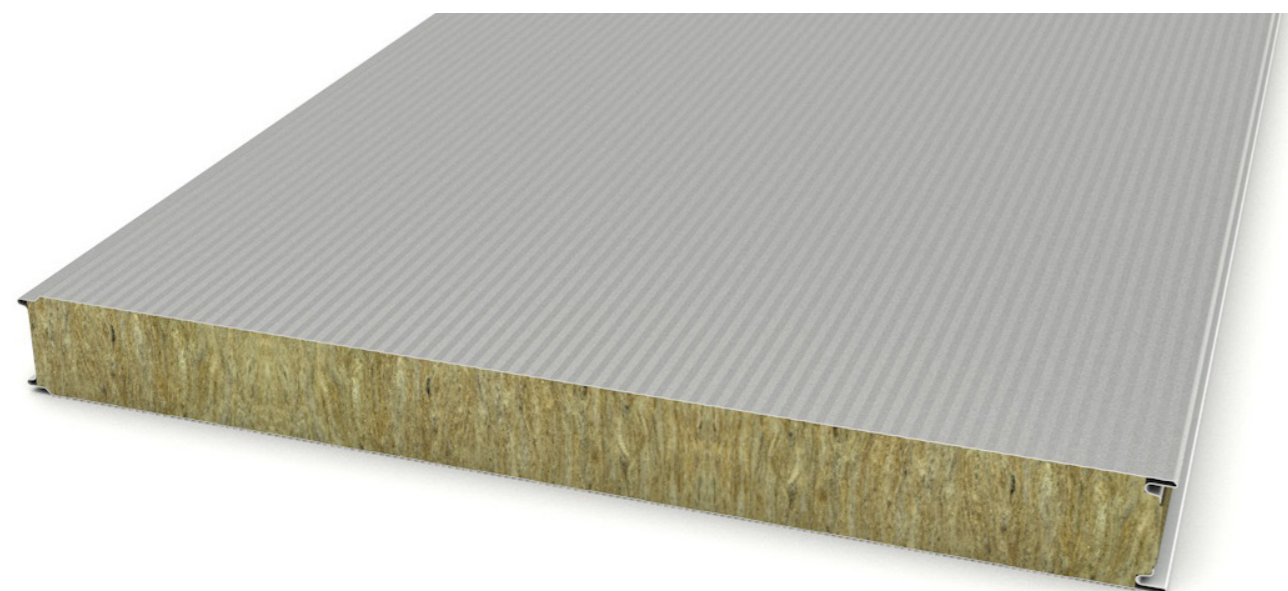
Qbiss One ceiling elements enable easy cut-out for recessed light installation. Because of its light weight, the installation is easy, fast and requires only 2 persons.



Product	QBISS ONE	
Colour range	Bright, medium, dark	
Unit dimension	T (mm)	120
	M (mm)	1000
	R (mm)	4000
External steel sheet	Thickness t (mm)	0.7
	Profile	Gladio (G)
Internal steel sheet	Thickness t (mm)	0.6
	Profile	Standard (S)
Features	Mineral Wool core (EN 14509)	Power T
	Weight (kg/m ²)	22.0
	Reaction to fire	A2-s1, d0
	Fire resistance	/
	Thermal transmittance U (W/m ² K)	0.31
	Airborne sound insulation R _w (C:C _{tr}) (dB)	30 [-1;-3]
	Air permeability (EN 14509)	n=1.5: C=0.00005
	Certificates	CE, FM

IV. FORMULA

FLAT MULTI SPAN ROOF SYSTEM, **TRIMOTERM FTV** PRODUCT



Product	TRIMOTERM FTV		
Colour range	Bright, medium, dark		
Unit dimension	T (mm)	200	
	M (mm)	1200	
	R (mm)	12000	
External steel sheet	Thickness t (mm)	0.7	
	Profile	Microline (M)	
Internal steel sheet	Thickness t (mm)	0.6	
	Profile	Microline (M2)	
Features	Mineral Wool core (EN 14509)	Power S	
	Weight (kg/m ²)	34.2	
	Reaction to fire	A2-s1, d0	
	External fire performance (EN 13501-5)	Broof (t1, t2, t3)	
	Thermal transmittance U (W/m ² K)	0.21	
	Airborne sound insulation R _w (C:C _v) (dB)	32 [-1;-2]	
	Water permeability (EN 14509)	class A (1200Pa)	
	Air permeability (EN 14509)	n=1.5: C=0.00005	
	Burglary resistance class	RC3	
	Certificates	CE	

DATA CENTRE DETAIL SOLUTION

I. FORMULA

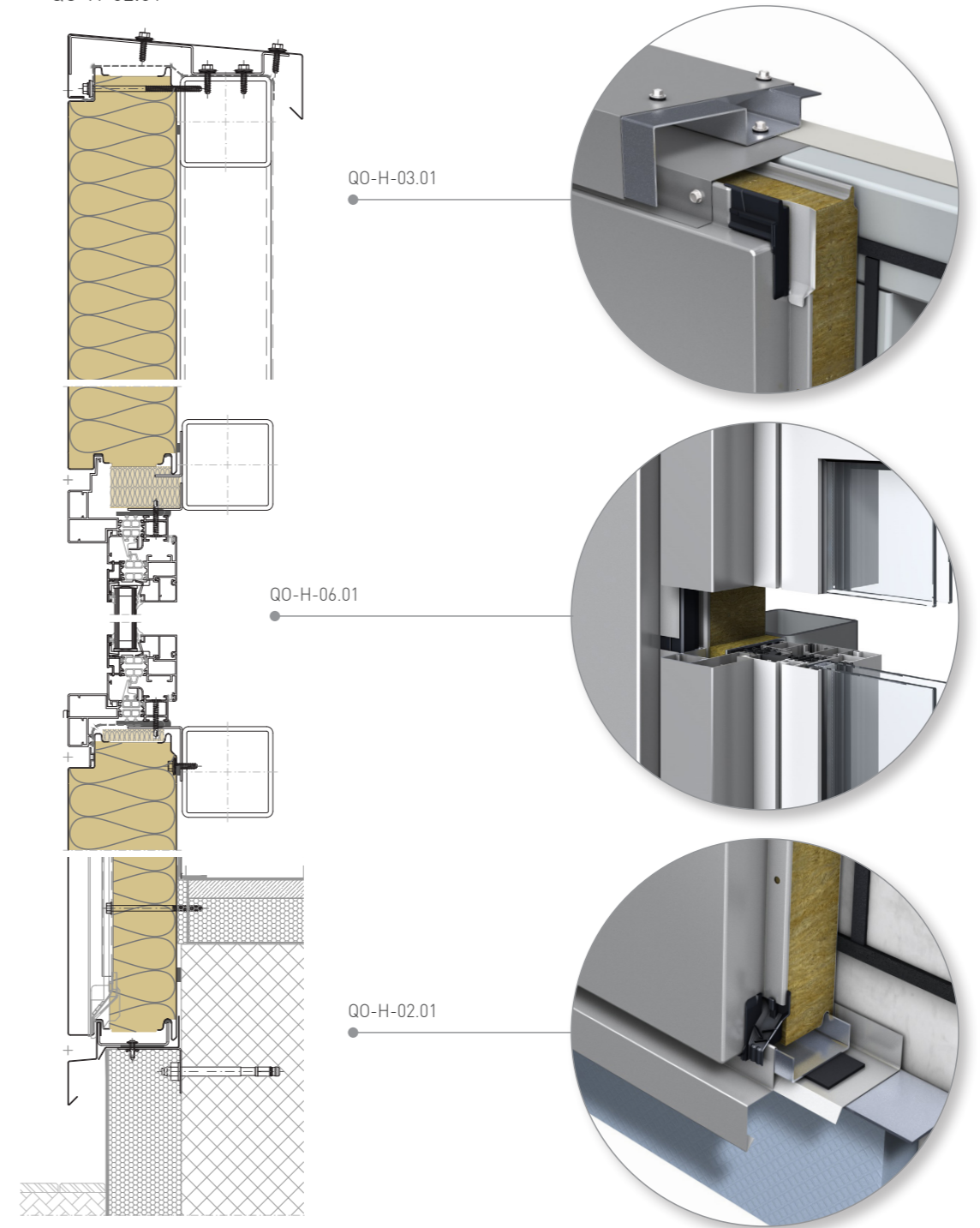
HORIZONTAL
FACADE SYSTEM,
QBISS ONE
PRODUCT

LONGITUDINAL JOINT



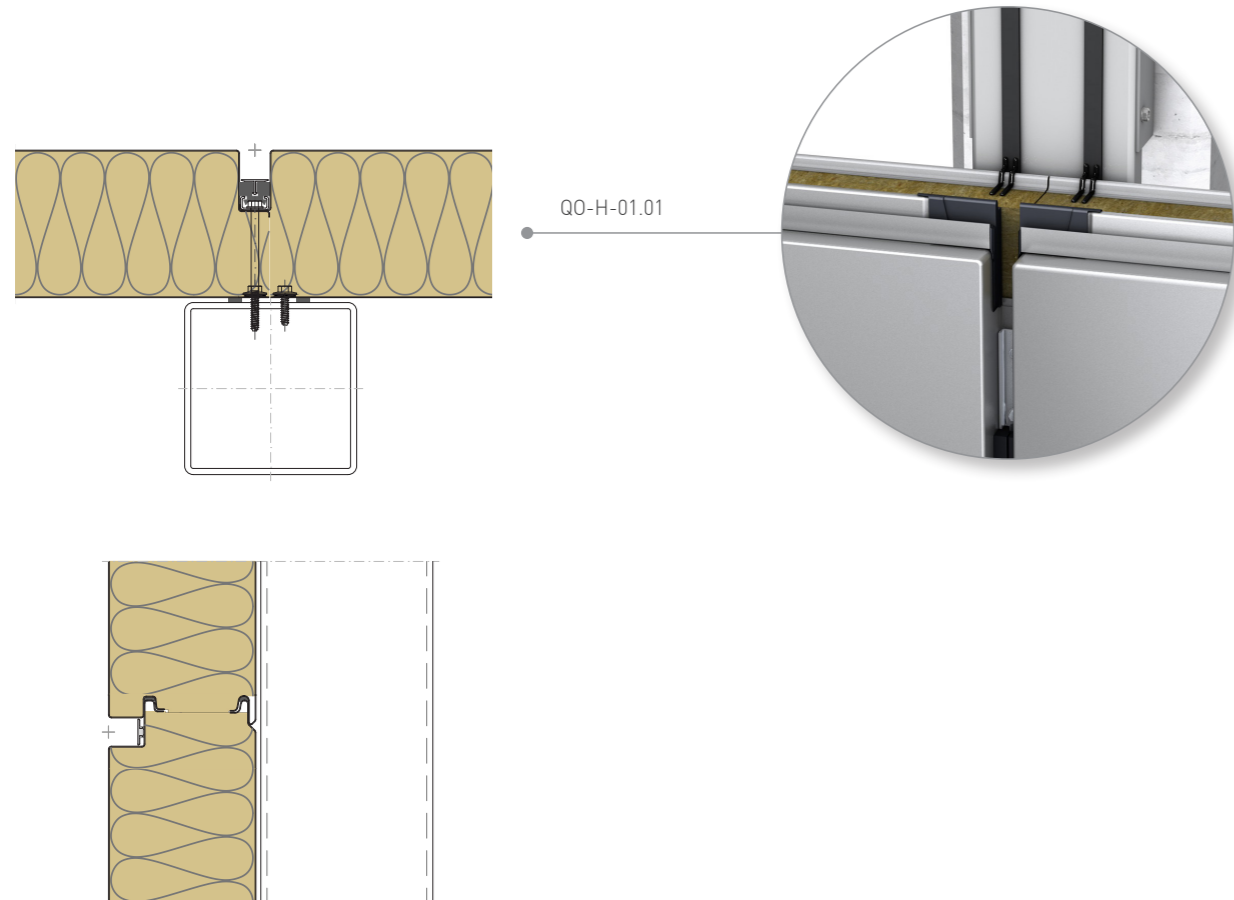
FIRE RESISTANT FACADE OPTION VERTICAL CUT

PARAPET	QO-H-03.01
WINDOW	QO-H-06.01
BASE	QO-H-02.01



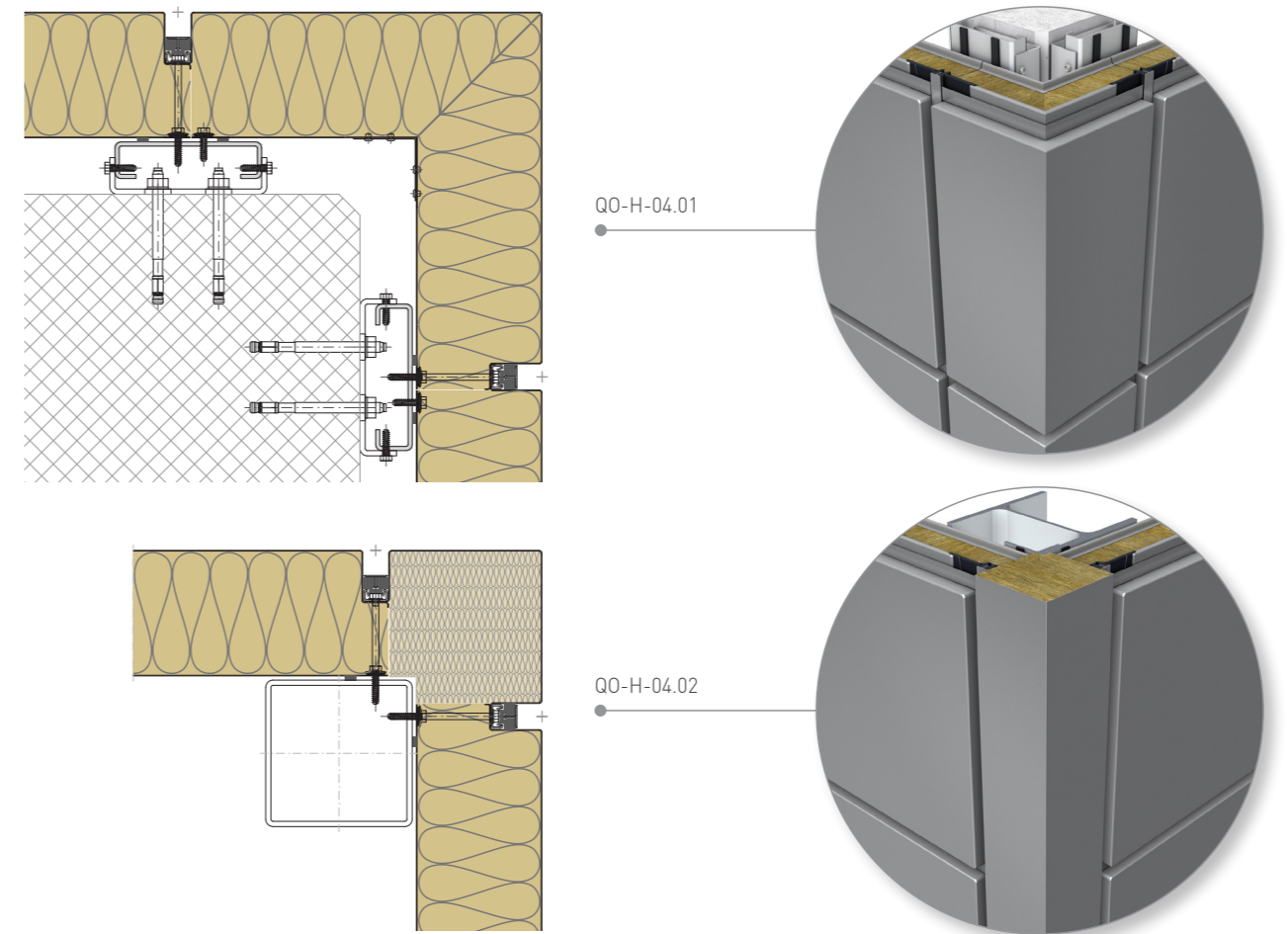
FIRE RESISTANT JOINT OPTION:
HORIZONTAL AND VERTICAL CUT

JOINT QO-H-01.01



FIRE RESISTANT CORNER OPTION:
HORIZONTAL CUT

EXTERNAL CORNER QO-H-04.01
EXTERNAL CORNER QO-H-04.02



Hint!

We accept challenges and develop tailor-made details for your unique architecture at your location. Contact us by e-mail or phone:

✉ technical@trimo-group.com
☎ +386 (0)7 34 60 200

II. FORMULA

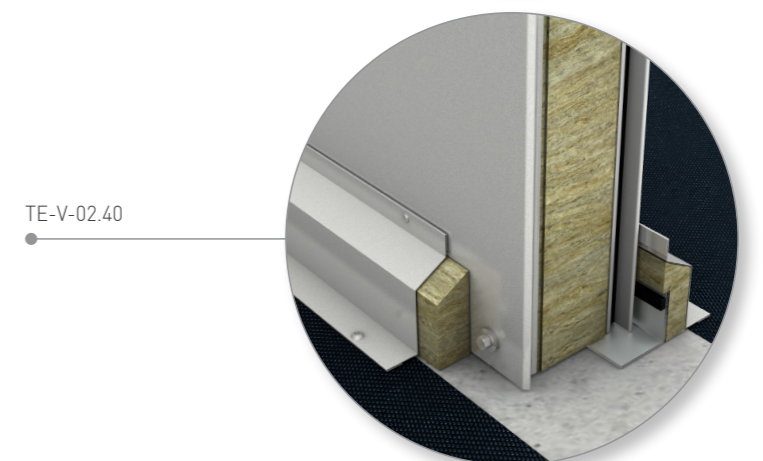
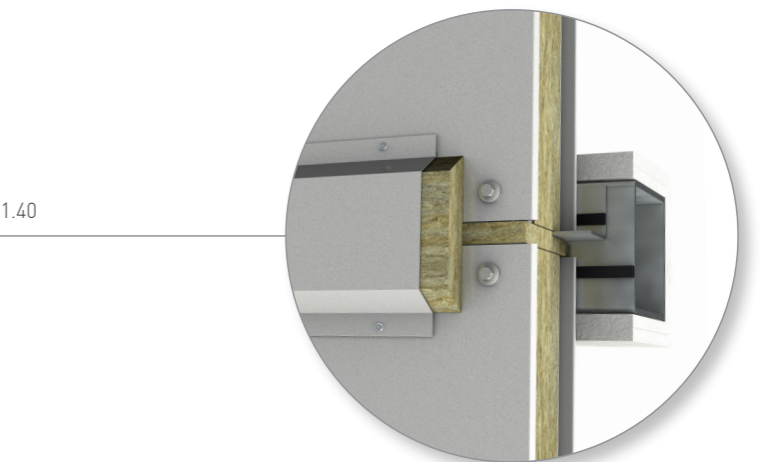
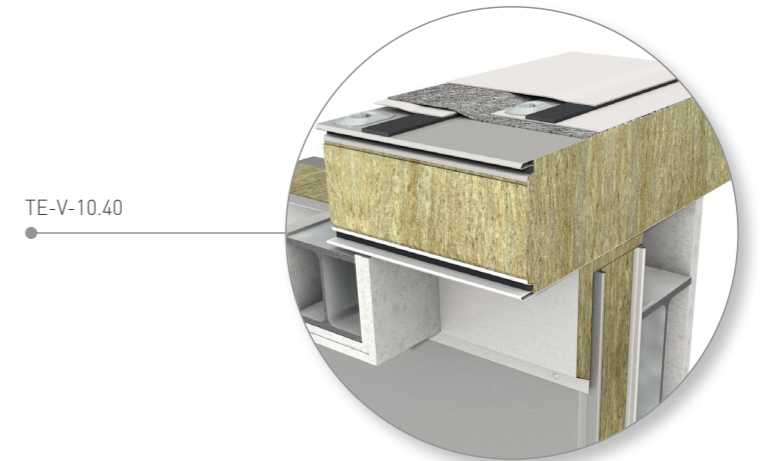
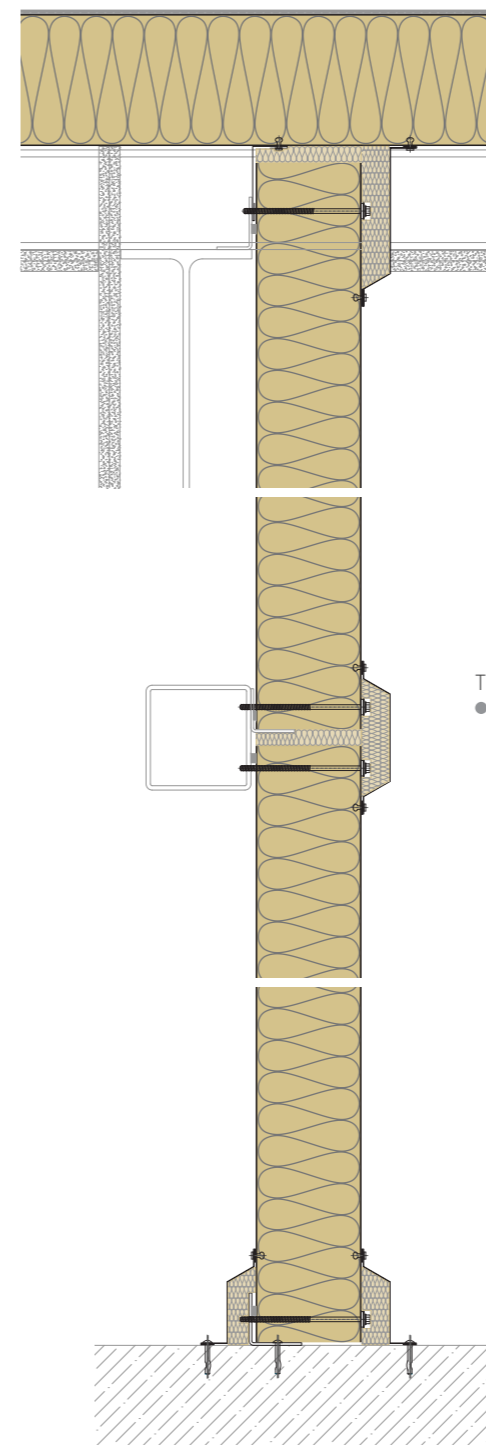
VERTICAL SINGLE SPAN
INTERNAL WALL
SYSTEM,
TRIMOTERM FTV
PRODUCT

LONGITUDINAL JOINT



FIRE RESISTANT, INTERNAL WALL OPTION VERTICAL CUT

TRIMO SYSTEM CONNECTION	TE-V-10.40
JOINT	TE-V-01.40
BASE	TE-V-02.40



III. FORMULA

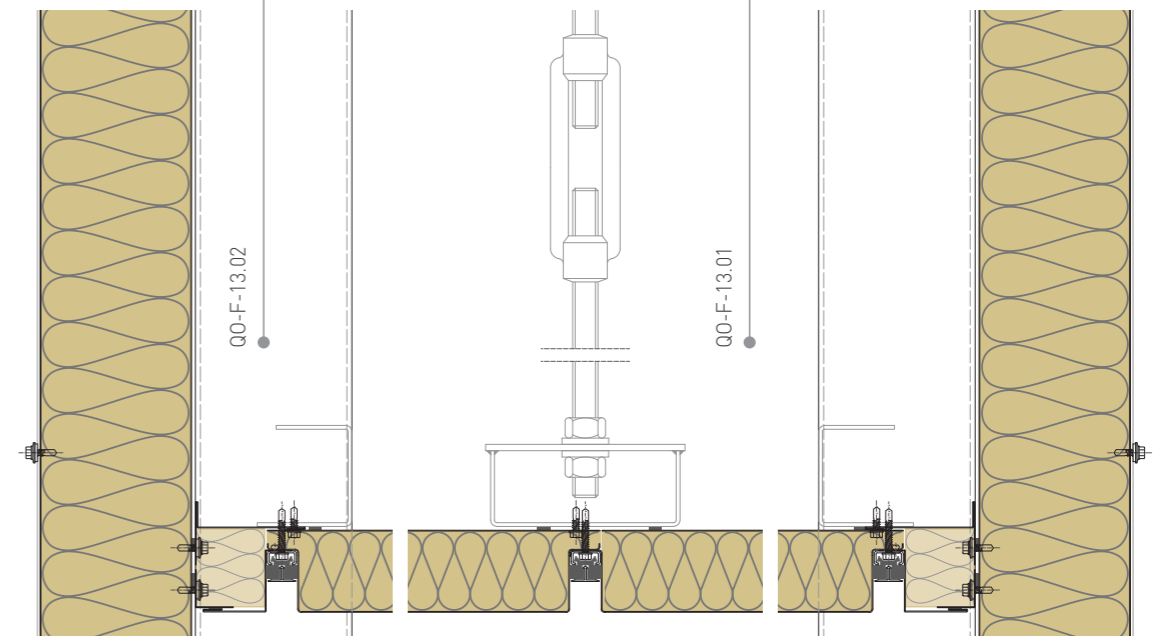
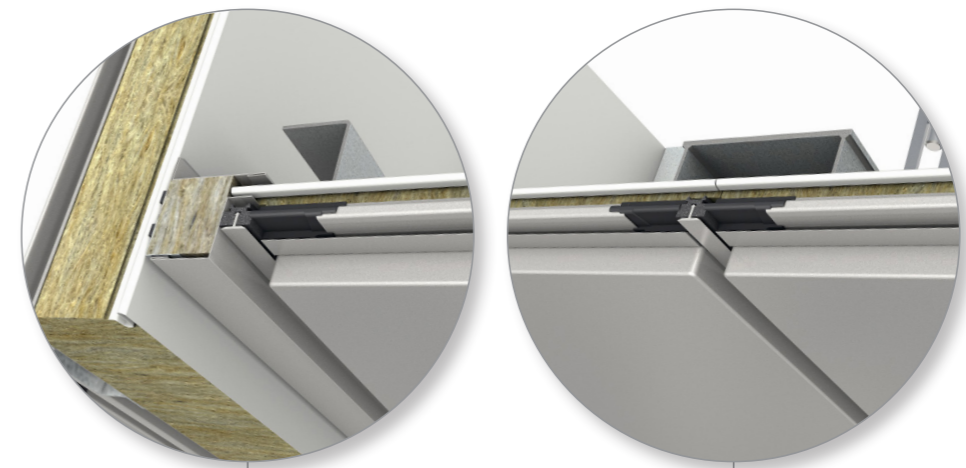
FLAT SINGLE SPAN
CEILING SYSTEM,
QBISS ONE
PRODUCT

LONGITUDINAL JOINT



FLAT CEILING OPTION
VERTICAL CUT

CEILING QO-F-13.01
CEILING QO-F-13.02

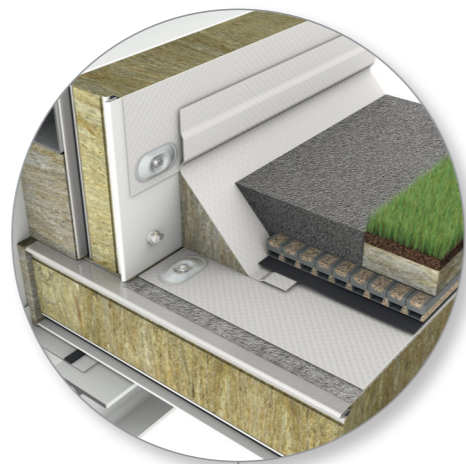


IV. FORMULA

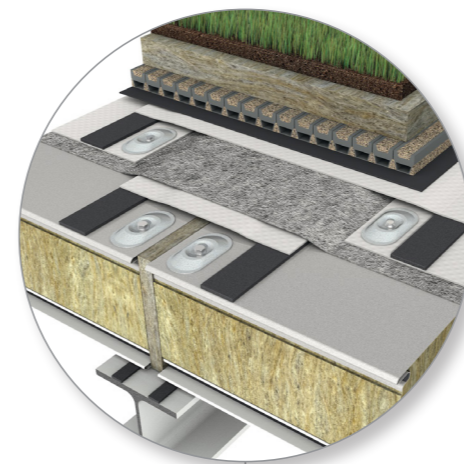
FLAT MULTI SPAN GREEN ROOF SYSTEM, **TRIMOTERM FTV** PRODUCT

FLAT ROOF OPTION VERTICAL CUT

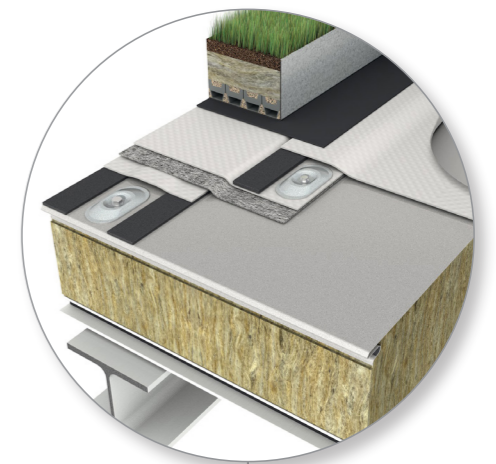
VALLEY	TE-F-06.20
JOINT	TE-F-01.20
PARAPET	TE-F-03.20



TE-F-03.20

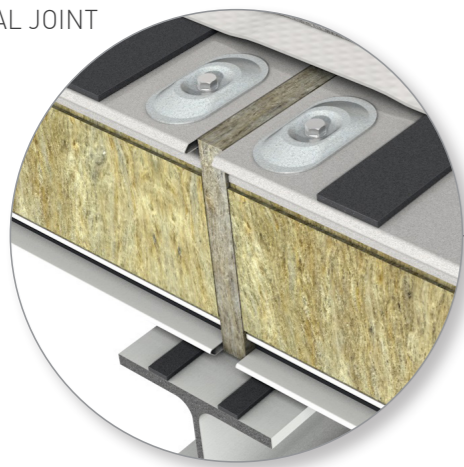


TE-F-01.20

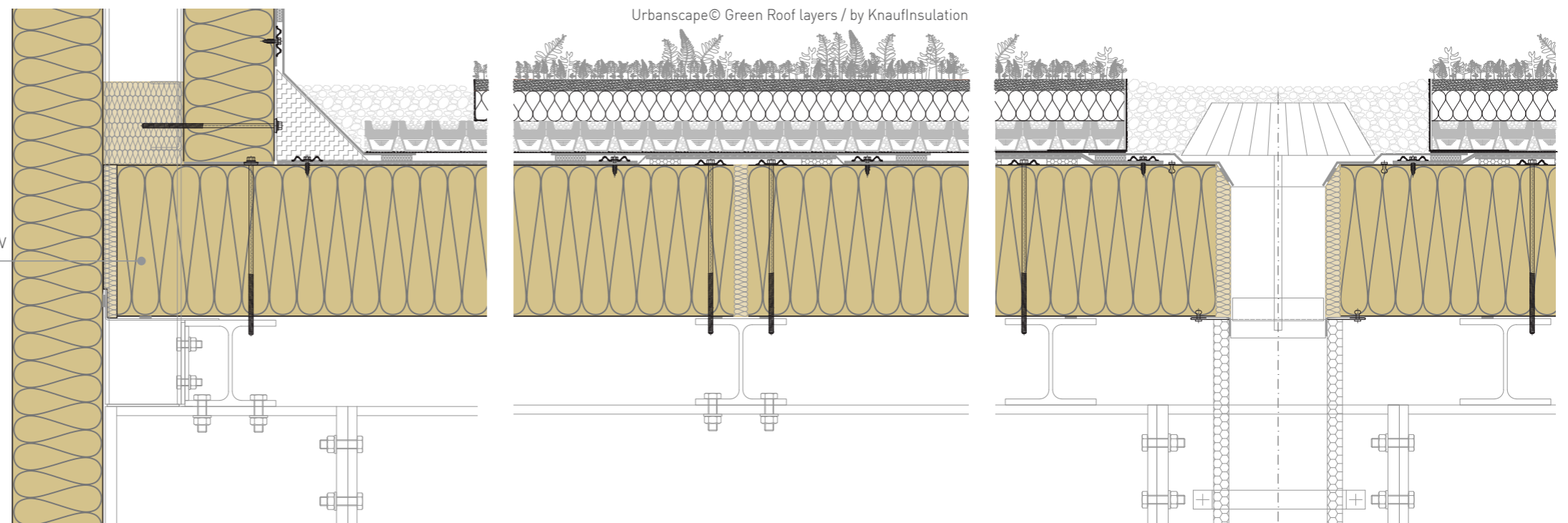


TE-F-06.20

TRANSVERSAL JOINT



TRIMOTERM FTV



FINAL FINISH

URBANSCAPE© GREEN ROOF LAYER BY KNAUF INSULATION

URBANSCAPE© SEDUM-MIX BLANKET

URBANSCAPE© GREEN ROLL 4 cm

URBANSCAPE© DRAINAGE LAYER

URBANSCAPE© ROOT MEMBRANE

WATERPROOFING MEMBRANE

TRIMOTERM FTV BASE

Hint!

For more detailed green roof layer structure explanation, check the Urbanscape System© KnaufInsulation technical documentation.



DATA CENTRE TOOLS

The tool is made to serve people during project realization. As pioneers in our industry, we have developed a user-friendly BIM tool for planning building envelopes that enables faster project planning by up to 20% compared to classic CAD design.

BIM

The dedicated Trimo BIM libraries include the developed Trimoterm products in line with data centre product formula and associated details. BIM libraries for Trimo data centre envelope systems are available and for GRAPHISOFT ARCHICAD and Autodesk Revit software.

Trimo BIM software tool ensures insight of product features data. Designing in a 3D environment reduces collisions, raises productivity and enables cost control with a list of quantities, which is a base for a quotation.

GREEN CITY

The green city is represented by architectures built with Trimo products that are up to 99% recyclable. In the animation, you notice architectures that are already built according to the product formula.

Discover your future data centre building in a vision of urban design, where we have placed our case study buildings made only with Trimo products.



DOWNLOADS

We constantly strive to keep up with the times and make sure you have the latest information and tools.

BROCHURES

- Facade systems
- Roof systems
- General



TECHNICAL DOCUMENTS

- Facade systems
- Roof systems
- Structural performance



RENOVATION

- Renovation handbook



DESIGN TOOLS

- CAD details
- BIM product libraries



DATA CENTRE

- Green city animation



Hint!

In case of renovation scan QR code and check out Trimo Renovation handbook.

DATA CENTRE HELP SERVICE

When you want to bring your project to the reality you can count on us. We provide comprehensive support throughout the entire duration of your project - from planning and purchasing to project management and creation, as well as flawless implementation.

OPTIMAL SOLUTION

With long term experience and knowledge, we are especially focused to optimize solutions for data centres with high demands for prefabricated, recyclable, fire safe non-condensational elements that can be easily installed.

We believe in smart, innovative, cost-effective, sustainable solutions therefore we can provide/develop a **product formula** with a complete envelope system solution for your data centre at your location.

DATA CENTRE PRODUCT FORMULA



DATA CENTRE DETAIL SOLUTIONS



SERVICE

- Visualizations, animations, VR
- Technical management
- Structural calculations
- BIM product libraries and engineering
- CAD design and shop-drawings

FIND YOUR LOCAL CONTACT

www.trimo-group.com/en/company/about-trimo/global-presence



THE VALUE PROPOSITION

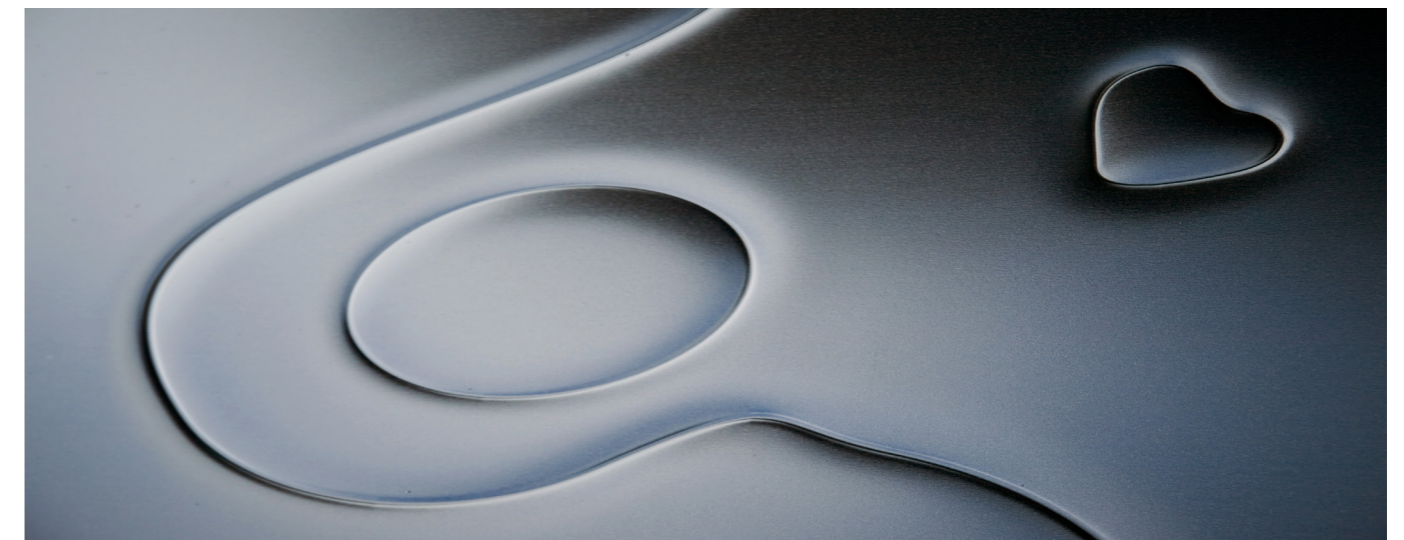
As you design unique architecture, we create the highest performing products to our customized formula whilst tailoring details specifically to your needs.

TRIMO DRESS CODE IS UNIQUE ARCHITECTURE



reddot design award
winner 2010

Artme, a unique product for unique personalities



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