TRIMO MARCHITECTURAL SOLUTIONS

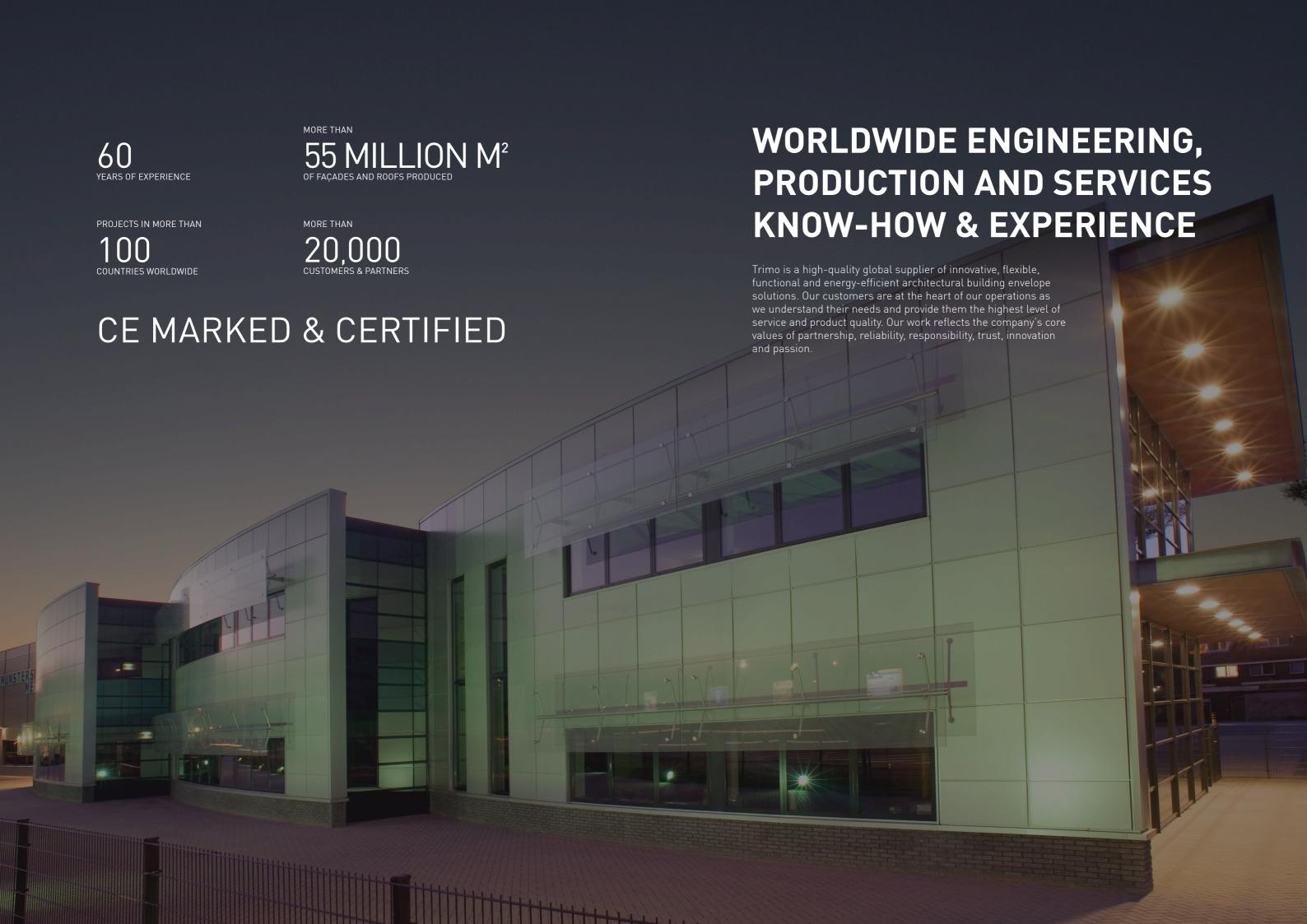
CONTENTS

| 01 | COMPANY PROFILE HISTORY | 01 05 |
|----|---|----------------------------|
| 02 | SERVICES TECHNICAL SUPPORT AND CONSULTING | 07 09 |
| 03 | FAÇADE SYSTEMS QBISS ONE QBISS SCREEN TRIMOTERM ARTME | 11 13 17 21 27 |
| 04 | ROOFS | 29 |
| 05 | MODULAR SPACE SOLUTIONS | 33 |
| 06 | FIXING AND DECORATIVE ELEMENTS | 37 |
| 07 | MATERIALS | 41 |
| 08 | PROJECTS IMPLEMENTED AROUND THE WORLD | 45 |



COMPANY PROFILE





HISTORY

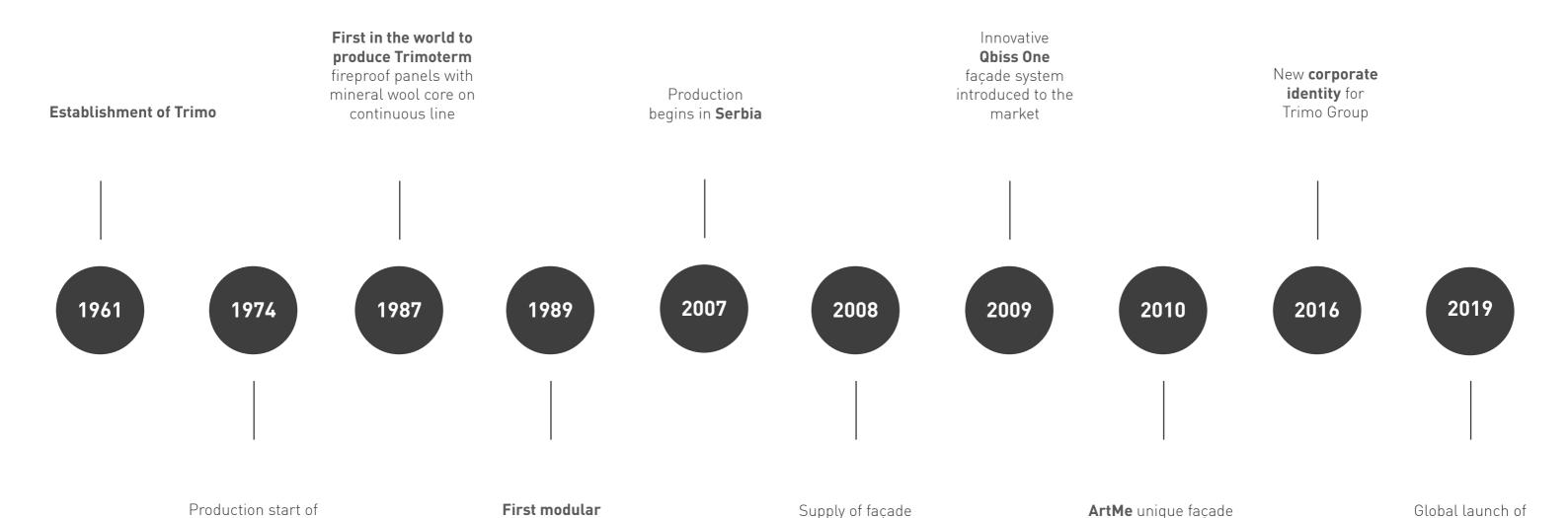
thermal-insulated

PU panels

DEFINING MOMENTS IN THE HISTORY OF THE TRIMO GROUP

space solution

produced





panels for con-

struction of the

first CO₂-neutral building in the

world

design receives

Red Dot Design

award

Qbiss Screen -

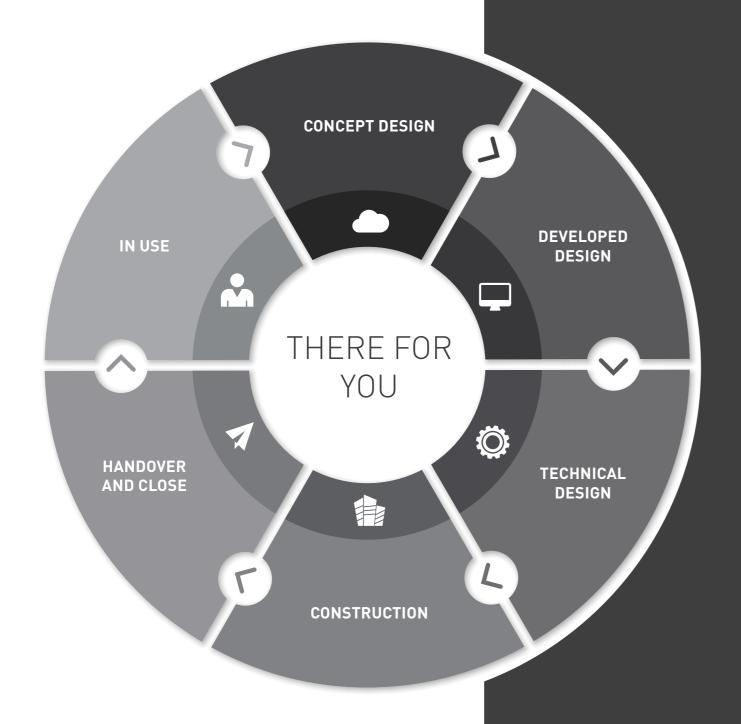
innovative metal

rainscreen



TECHNICAL SUPPORT AND CONSULTING

From an 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.

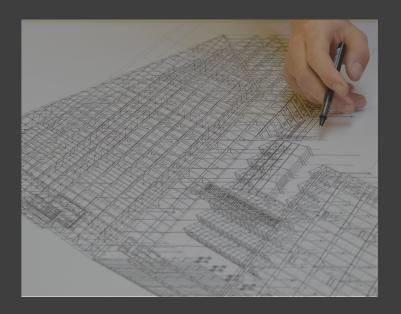


DESIGN

Trimo's design team is comprised of **architects**, **designers**, **structural engineers**, **and design and project managers** who together make design plans and drawings quickly, efficiently, professionally and with an understanding of the customers' needs and expectations.

Trimo's team of experts monitors the global market by recognising design requirements in accordance with the latest **standards** – European EN norms, German, Russian SNIP, American ASTM, and various others and designs projects according to the individual and regional requirements.

Trimo provides a large range of architectural and engineering principle details for sandwich panel façades, walls and roofs. Its team of dedicated technical support and product development specialists is known for giving professional advice on bespoke details and individual custom-made solutions.



BUILDING INFORMATION MODELLING - BIM

Trimo has developed BIM libraries of its products for the most sophisticated engineering BIM software Archicad and Revit in order to support and speed up the building design process.

Trimo BIM libraries are available at https://trimo-group.com/en/trimo/downloads/design-tools/bim/.



TECHNICAL SUPPORT

Trimo's technical consulting team is a partner you can count on to provide **comprehensive support** throughout the entire <u>duration of your project</u>.

Technical support includes visualisations, rendering, detailing, BIM engineering, virtual and augmented reality, structural calculations and management of changes, information and resources.

The technical consulting team also provides special product solutions designed to perfectly suit your project.



FAÇADE SYSTEMS



QBISS ONE

Qbiss One is a world-class engineered, prefabricated, A1 mineral wool-insulated, metal façade system that offers a through wall solution within a single piece of construction element. Façade elements with rounded corners, unmatchable flatness and advanced technical characteristics place Qbiss One among the best façade systems in the world.

TOTAL WALL SOLUTION

- Single component pre-engineered and pre-fabricated construction element
- Self-supporting column to column horizontal or floor to floor vertical installation

LIMITLESS DESIGN POSSIBILITIES

- Extensive range of interfaces and bespoke elements
- Integrated windows, doors and louvers systems
- Prefabricated corners and rounded corners without cuts,
- folds or welds
- 3D corner elements, curved elements, trapezoidal elements
- Extreme flatness
- Multiple joint possibilities

MAXIMUM SAFETY

- Class A1 non-combustible mineral wool insulation core
- High-level insulation values as low as 0.15 W/m²K
- Fire resistance: up to class El 120 minutes integrity and insulation
- Watertightness up to 1200 Pa
- Flexible coating guaranteed up to 30 years and lifetime expectancy up to 50 years*

*terms and conditions apply





Qbiss One is distinguished by the unique rounded corner of the element which results in superior aesthetics without any cuts, folds or welds.

JOINT OPTIONS

Qbiss One system allows various combinations of recessed and flush joints.

JOINT OPTIONS FOR HORIZONTAL INSTALLATION



JOINT OPTIONS FOR VERTICAL INSTALLATION



JOINTS

LONGITUDINAL JOINT F

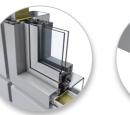


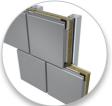




TYPICAL INSTALLATION DETAILS









ACCESSORIES / CORNER ELEMENTS

TRANSVERSAL CORNER ELEMENT



U-SHAPED CORNER ELEMENT



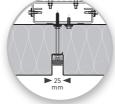
ELEMENT











LONGITUDINAL JOINT B



LONGITUDINAL JOINT

COLOUR RANGE

15

External steel skin is available for different corrosion environments of up to C5 (according to classification in EN12944) and is available in a variety of colours.

SOLID COLOURS













SPECIAL METALLIC





Modular façade elements Fixing and sealing material



The Qbiss One system consists of:

Adjustable sub-structure (optional) Windows (optional)

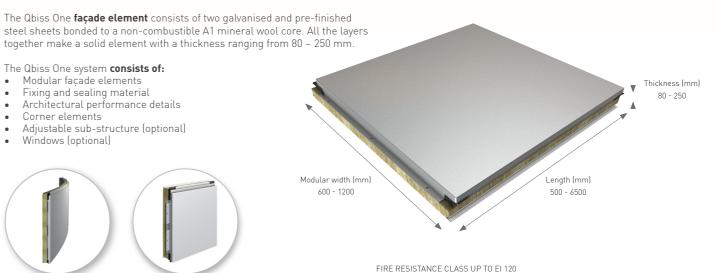


CURVED FAÇADE ELEMENT



FLAT FAÇADE ELEMENT

All Qbiss One DWG details and BIM libraries are available at: https://trimo-group.com/en/trimo/downloads/design-tools. With Qbiss One, the minimum length is set to 550 mm and maximum length to 6475 mm for the element types: 5, 6, 7, 8, 9, 10, 11, 12.



U VALUE AS LOW AS 0.15 W/m²K WATER PERMEABILITY UP TO 1200 Pa

STAINLESS STEEL**



ELEMENTS*





Seren Black Sirius Sparkle Orion Sparkle Zeus Sparkle Seren Anthracite







Quadro Lucido



5WL Lucido Pelle Lucido

Dots Lucido

*Colorcoat Prisma and Seren are trademarks of Tata Steel UK Limited
**Stainless steel is a bespoke solution and shall be discussed with the Trimo technical department on an individual project basis from an application and availability perspective.
Colours may deviate slightly due to different monitors and prints compared to original colours. Trimo can send you a metal swatch upon request. Colour range does not in any
case define delivery terms or any other terms of specific skin colour. Colour range presented shows only a fraction of most usable colours within the variety of colours available.

QBISS SCREEN

An innovative metal **rainscreen** designed for ventilated façade applications and for both **new-build** and **refurbishment use**. It is comprised of a mineral wool or of an aluminium honeycomb core, bonded between two metal skins, with a **rounded corner design**. It is equally applicable as an **exterior and interior wall** and **soffits** bringing a system approach to the building envelope. With an extremely flat design, Qbiss Screen is also engineered to meet the A2-s1, d0 fire classification and withstands high wind loads to larger spans than conventional rainscreen systems.

HIGH-QUALITY RAINSCREEN

- Fully prefabricated and self-supporting elementRounded corners without cuts, folds or welds
- Extreme element flatness

LIMITLESS DESIGN POSSIBILITIES

- Compatible with Qbiss One façade elements
- Various joint and installation options
- Wide range of colours and material finishes

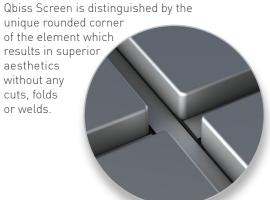
MAXIMUM SAFETY

- Class A2 limited combustibility classification
- Quick installation with reduced amount of bearing sub-frame system up to 60%
- Lightweight elements for simple on-site handling and installation

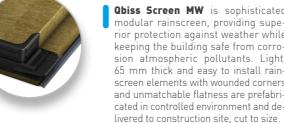


QBISS SCREEN DESIGN

unique rounded corner of the element which results in superior aesthetics without any cuts, folds or welds.









Qbiss Screen MW is sophisticated modular rainscreen, providing superior protection against weather while keeping the building safe from corrosion atmospheric pollutants. Light, 65 mm thick and easy to install rainscreen elements with wounded corners and unmatchable flatness are prefabricated in controlled environment and de-

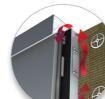
QBISS SCREEN TYPES

Qbiss Screen H, a 50 mm thick element is a composite made of two pre-painted galvanized steel sheets with joints and honeycomb core. The composition of materials gives elements visibly higher level of surface flatness, high load-bearing capacity, minimal thermal expansion, thermal deflection and resistance to humidity.

Qbiss Screen H+ comprises of an aluminium honeycomb core, inserted between two metal skins, with each element corner formed without cutting or folding. All joints are specially formed for fixing and sealing, with prefabricated lap joint on the side for self-weight fixing.

JOINTS

TRANSVERSAL JOINT





JOINT DETAIL





CORNER ELEMENT



ROUNDED CORNER FLASHING

ACCESSORIES / CORNER ELEMENTS



SHARP-EDGED CORNER FLASHING



INTERNAL HORIZONTAL CORNER

JOINT OPTIONS

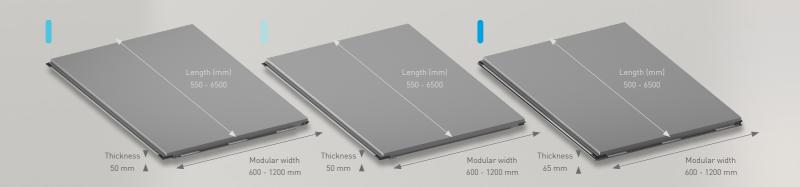
Qbiss Screen rainscreen allows various combinations of recessed and flush joints for horizontal and vertical installation.

JOINT OPTION FOR HORIZONTAL INSTALLATION



JOINT OPTION FOR VERTICAL INSTALLATION







TRIMOTERM

The Trimoterm fireproof façade system is a high-quality, versatile and environmentally friendly construction product for use where the highest demands of **fire resistance**, **thermal insulation**, **water and airtightness** are required. It offers the perfect combination of functionality and durability, whilst also delivering true architectural expression.

Available with a complete system of matching components and meeting local-specific requirements and regulations, Trimoterm is suitable for a wide range of insulated external façade, backing-wall for final cladding and roof cladding, internal walls, fire internal walls, food and hygiene walls and ceilings.

In addition to various industrial, logistic and renovation applications, Trimoterm panels can also be successfully utilized in the most demanding environments, such as food processing and pharmaceutical industry, power plants, oil and gas industry applications and many others.

TOTAL WALL AND ROOF SOLUTION

- Wide range of profile types and applications
- Range of ancillary interface items, bespoke solutions, pre-fabricated corners, aluminium extrusions and feature details
- Versatile stand-alone system or carrier structural wall for final cladding.

MAXIMUM SAFETY

- Class A1 non-combustible mineral wool insulation core
- Exceptional fire resistance up to class EI 240 minutes of integrity and insulation
- Advanced thermal and sound insulation and structural spanning performance
- Extremely high level of airtightness and watertightness



TRIMOTERM DESIGN

JOINT OPTIONS

TRIMOTERM FTV (STANDARD FIXING)

The standard fixing system Trimoterm FTV represents the visible fixing method of Trimoterm panels and is suitable for the horizontal, vertical and segmental curved installation of panels.



TRIMOTERM FTV JOINT (STANDARD FIXING)

TRIMOTERM FTV HL (HIDDEN FIXING)

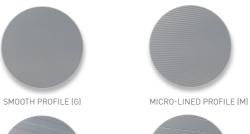
The hidden fixing system Trimoterm FTV HL offers a clean façade appearance with no visible fixings. Trimoterm panels with a hidden joint are mainly intended for vertical installation, but under certain conditions, can also be used for horizontal installations.



TRIMOTERM FTV HL JOINT (HIDDEN FIXING)

PROFILE TYPES

Trimoterm fireproof panels are distinguished by a wide range of profiles that enable the design of a large number of different solutions, tailored to individual buildings.





S - PROFILE (S)

V - PROFILE (V)

available at:

SYSTEM

Trimoterm offers a wide range of versatile accessories, including fasteners for fixing panels and flashings, sealants, aluminium extrusion elements and flashings.

Sharp-edged and **rounded pre-fabricated corners** from Trimo's portfolio of façade finishing elements, in a creative combination with façade panels, provide special aesthetic effects. They can be used on vertically installed façade panels, or with a combination of horizontally

installed façade panels and a vertically installed corner.





PRE-FORMED SHARP-EDGED CORNER

PRE-FORMED ROUNDED CORNER

COLOUR RANGE

Trimoterm steel sheet metal is hot galvanised in compliance with EN 10346, and additionally protected by an organic coating in accordance with the coil-coating process (EN 10169).

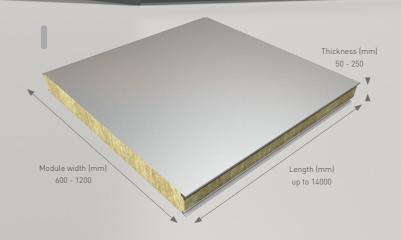
The following basic types of organic coatings are applied to steel sheet metal based on:

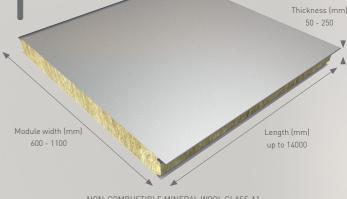
- SP polyester
- PVDF polyvinylidene fluoride
- PUR polyurethane
- PVC polyvinyl chloride, coating or film

A wide range of colour finishes is available for any building, which are engineered to capture the perfect appearance of the building design, both internally and externally.



Colours may deviate slightly due to different monitors and prints compared to original colours. Trimo can send you a metal swatch upon request. Colour range does not in any case define delivery terms or any other terms of specific skin colour. Colour range presented shows only a fraction of most usable colours within the variety of colours available.





NON-COMBUSTIBLE MINERAL WOOL CLASS A1 FIRE RESISTANCE CLASS UP TO EI 240

All Trimoterm DWG details and BIM libraries are available at: https://trimo-group.com/en/trimo/downloads/design-tools.

U VALUE AS LOW AS 0.15 W/m³K

ARTME

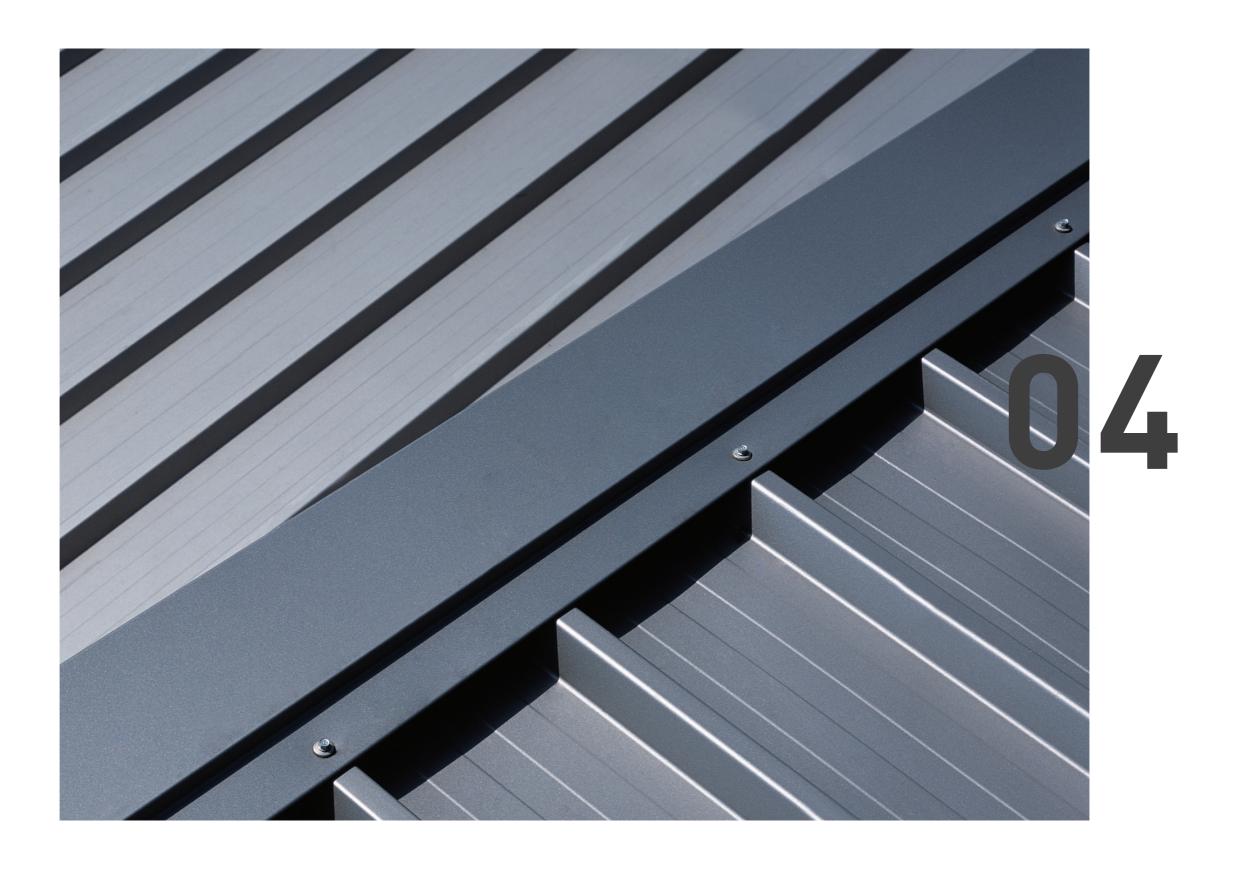
ArtMe surface treatment that allows unlimited shapes, patterns and visual effects to be expressed on the façade for dramatic, individual and creative results. From designs and pictures to inscriptions, logos, brands and bespoke creations.

ArtMe uses a highly controlled **3D-forming technology**, which is being used for the first time on complete façade elements with precoated steel-sheet surfaces. Recognising the importance of product performance, the original integrity and characteristics of the façade elements are preserved without compromise.





reddot design award



TRIMOTERM SNV (ROOF PANELS)

Trimoterm SNV fireproof panels are the perfect solution for pitched roofs. Thanks to the excellent technical characteristics and the complete range of technical solutions and elements, the Trimoterm roof system provides the perfect protection against harsh weather conditions. Trimoterm roofing systems are an excellent product to provide protection from weather and climate influences.

FIRE RESISTANCE

• Excellent fire resistance of up to 180 min

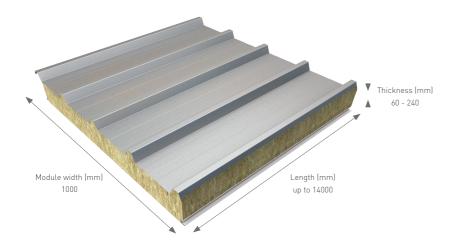
TOP STRUCTURAL PERFORMANCE

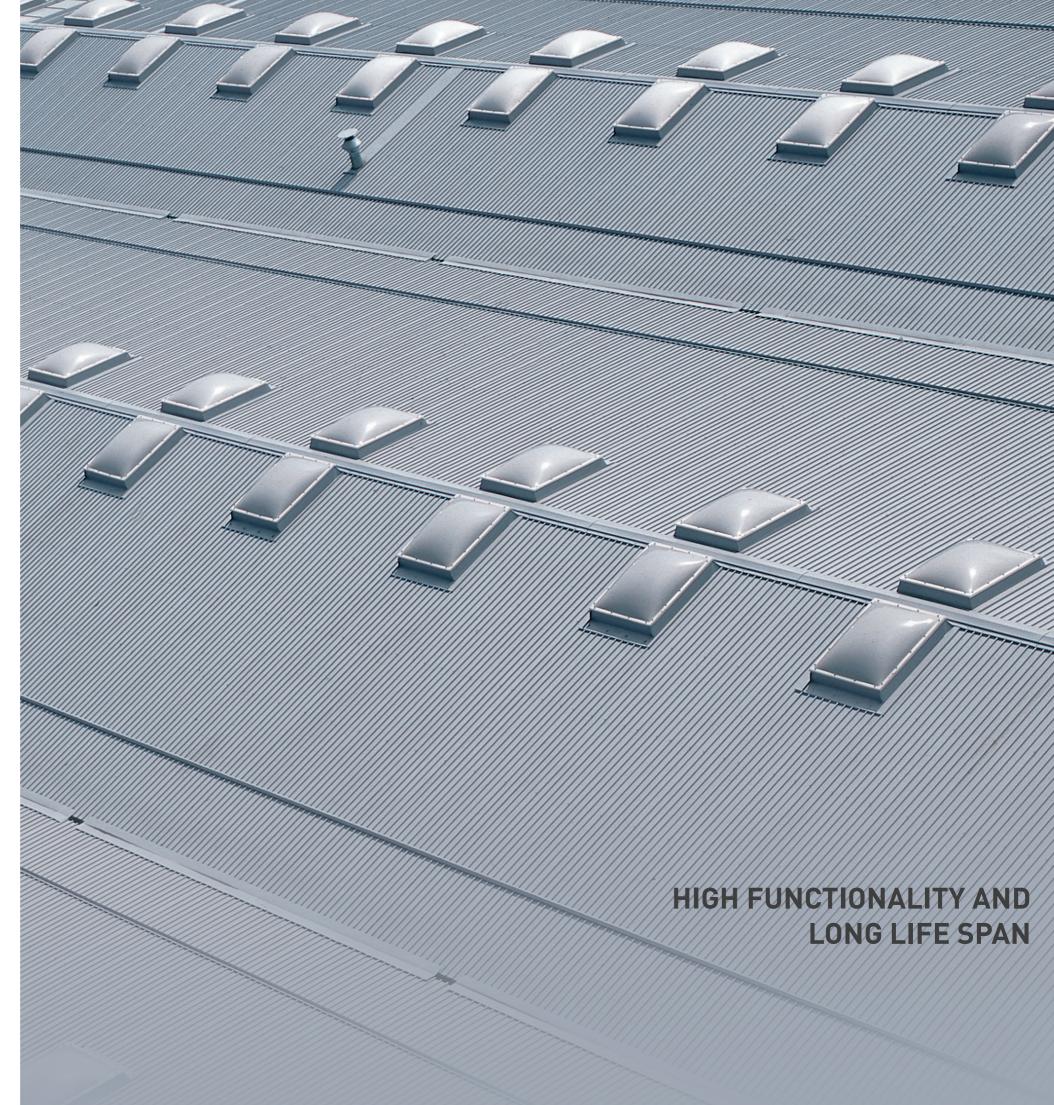
QUALITY

• Outstanding quality and functional solutions with a long life span

INSULATION

• Excellent thermal and sound insulation







MODULAR SPACE SOLUTIONS

Trimo is one of the leading providers of modular space solutions, with over 30 years of experience and more than 100,000 units manufactured and supplied worldwide to date.

Trimo modular space solutions are used extensively by private and public companies as **temporary or permanent**, **easy to set up and efficient** accommodation, offices, showrooms, hotels, schools and nurseries and infrastructure buildings, etc.

Trimo modular units are efficient, innovative and sustainable; made from natural materials and almost 99% recyclable. Modular units can be shipped assembled or, to keep transport costs to a minimum, supplied flat-packed for on-site installation with the minimum number of tools.

PROVEN QUALITY

• + 30 years of experience

FLEXIBLE DIMENSIONS

• Length up to 30 ft, width up to 10 ft, height up to 12 ft, non-standard modular unit sizes are available too

ENERGY-EFFICIENT

• Thermal conductivity values (U) for walls, floor and ceiling as low as 0.15 W/m²K

FIRE SAFETY

• Wall panels are EI fire resistance class certified (EI 30 – EI 240)

EASY TO TRANSPORT AND RELOCATE

• Flat-packed or fully factory assembled, completely interchangeable wall panels

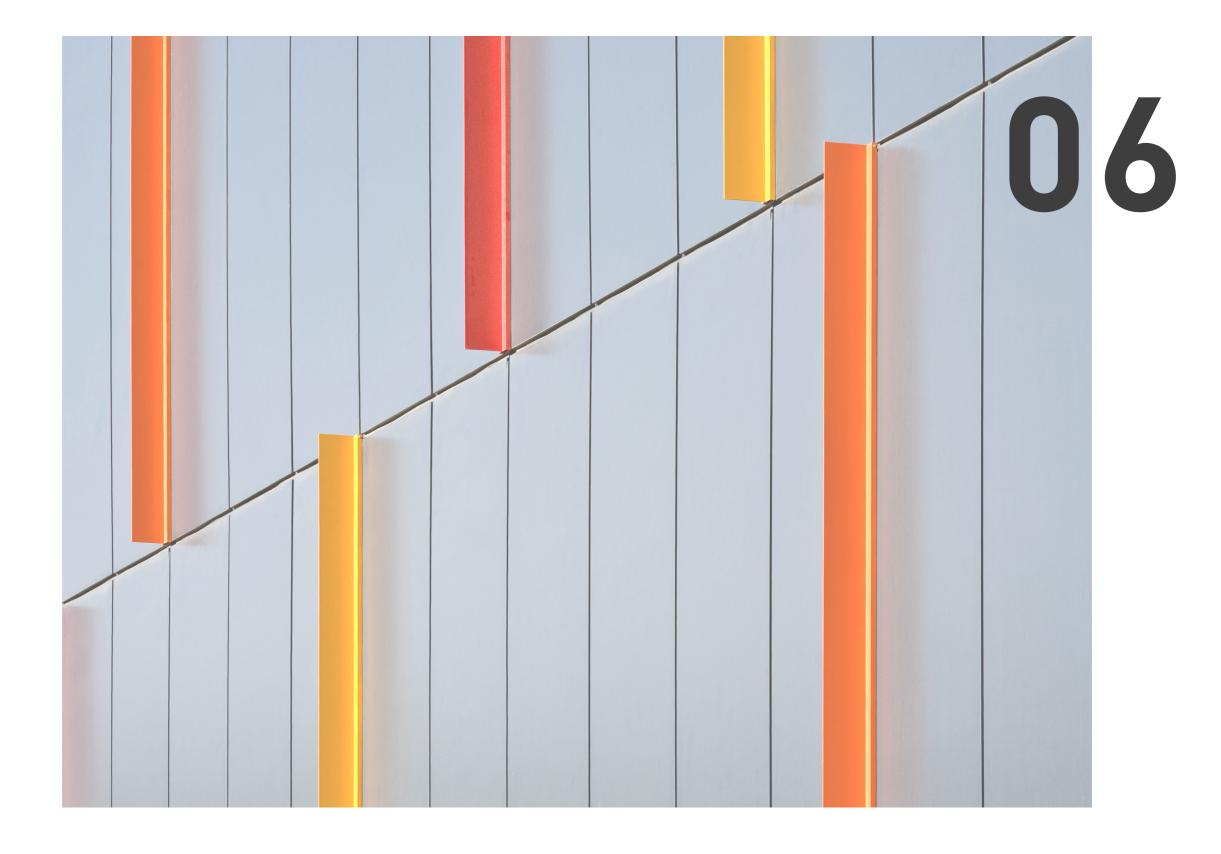
LONG-TERM ECONOMIC BENEFITS

• Easy to build and install for long-term use.

More information about Trimo modular space solutions at: www.trimo-mss.com



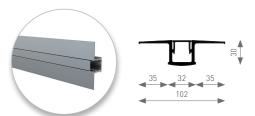
FIXING AND DECORATIVE ELEMENTS



STUNNING FINISHES

Trimo decorative elements emphasise the selected façade line, cover visible panel joints and give the building a touch of elegance. You can choose from various different options, manufactured from extruded and powder-coated aluminium.

FIXING PROFILES

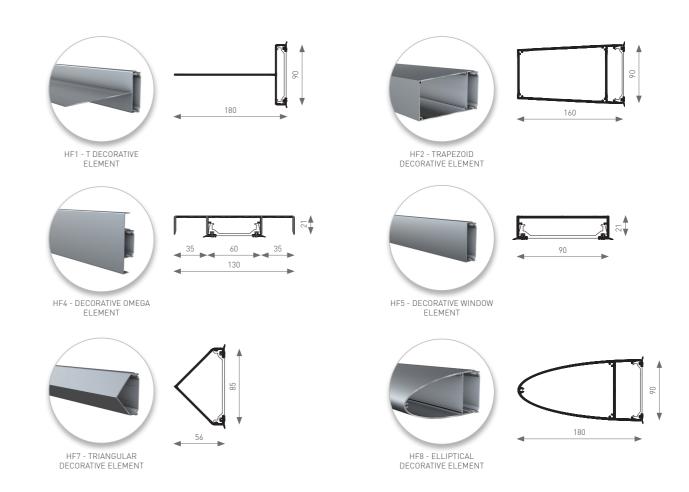


HF 102 - OMEGA PROFILE



HF140 - OMEGA PROFILE

DECORATIVE ELEMENTS









MINERAL WOOL

- Class A1 non-combustible reaction to fire classification
- High density 90-120 kg/m³ for superior structural strength
- Environmentally friendly, landfill disposal as non-hazardous waste
- Recycling costs up to 5 times less vs PIR/PUR insulation
- Does not absorb water
- Retains the thermal and structural performance throughout its lifetime
- Does not provide the environmental conditions for bacteria growth and rodent animals, thus is also suitable for construction in the food & pharmaceutical industries, clean rooms, etc.

STEEL AND COATING SELECTION

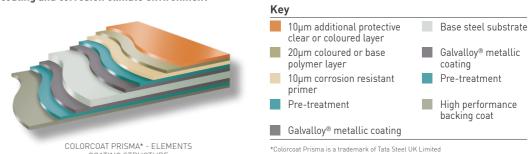
- External steel sheet thickness 0.50 to 0.70 mm
- Internal steel sheet thickness 0.50 to 0.60 mm
- Base substrate galvanised (Zn, ZnMg, ZnAl)

PAINT COATING TYPES

- Standard polyester coating SP 25 micron (suitable for C1-C3 corrosion climate environment)
- Polyvinylidene fluoride coating PVDF 25 to 57 micron (suitable for C1-C4 corrosion climate environment)
- Polyurethane coating PUR 50 to 65 micron (suitable for C1-C5 corrosion climate environment)
- Polyamide-modified polyurethane coating PUR-PA 50 to 65 micron (suitable for C1-C5 corrosion climate environment)
- Polyvinyl chloride laminated film PVC(F) 120 to 150 micron (suitable for C1-C4 corrosion INTERNAL climate environment)
- Polyethylene terephthalate laminated film PET(F) 50 micron (suitable for C1-C4 corrosion INTERNAL climate environment)
- Polyvinyl chloride plastisol coating PVC(P) 200 micron (suitable for C1-C5 corrosion climate environment)

Guarantee period is directly influenced by the selected paint coating and corrosion climate environment

COATING STRUCTURE



Risk of corrosion - Classification of ambient conditions according to EN ISO 12994-2

| | Examples of typical environments | | |
|-------------------------|---|---|--|
| Corrosion risk category | External | Internal | |
| C1 Very low | - | Isolated building. Relative humidity of air: less than 60% | |
| C 2 Low | Slightly polluted atmosphere, dry climate e.g. rural areas | Non-isolated building with temporary water condensation e.g. warehouses, sport halls | |
| C 3 Medium | Urban or industrial atmosphere with low level of CO ₂ pollution or coastal areas with low salinity | Premises characterised by high relative humidity of the air and impurities, e.g. breweries, laundries, diaries | |
| C 4 High | Industrial or coastal atmosphere with low salinity | Swimming pools, chemical factories | |
| C 5 Very High I | Industrial atmosphere with considerable humidity and aggressive atmospheres | Buildings or areas with almost continuous water condensation and | |
| C 5 Very High M | Coastal area with high salinity | high levels of pollution | |

PROJECTS IMPLEMENTED AROUND THE WORLD



PORSCHE CAR SHOWROOM



LOCATION SWITZERLAND

ARCHITECT

GOLDBECK RHOMBERG AG

PRODUCT

QBISS ONE





EQUINIX LD6 DATA CENTRE







LOCATION
UNITED KINGDOM

ARCHITECT
ARUP ASSOCIATES

PRODUCT
QBISS ONE

COMMERCIAL CENTRE MANGO







LOCATION SPAIN

ARCHITECTGCA ARQUITECTURA

PRODUCT QBISS ONE

BRUNNER INNOVATION FACTORY





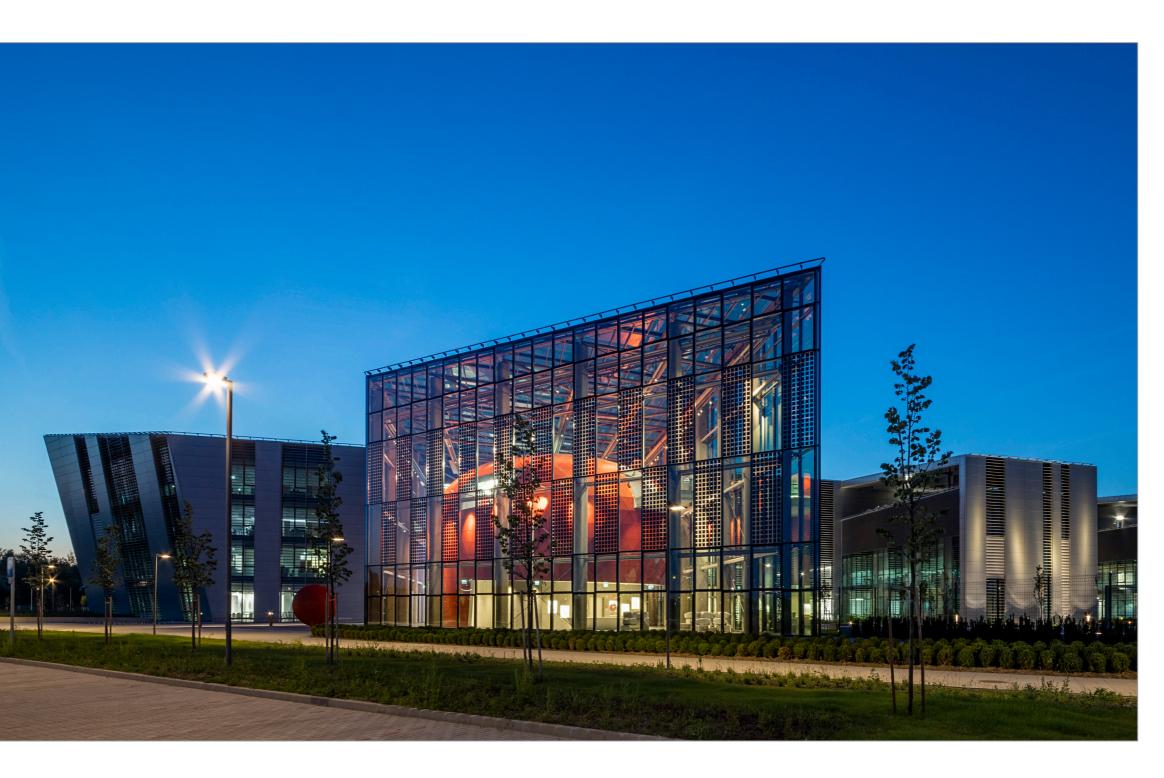


LOCATION GERMANY

ARCHITECTHENN, WOLFRAM SCHNEIDER

PRODUCT QBISS ONE

RESEARCH INSTITUTE ELI-ALPS



LOCATION HUNGARY

ARCHITECT

ARTONIC DESIGN ARCHITECTS

PRODUCT QBISS ONE



BRECON CLEANROOM SYSTEMS B.V.



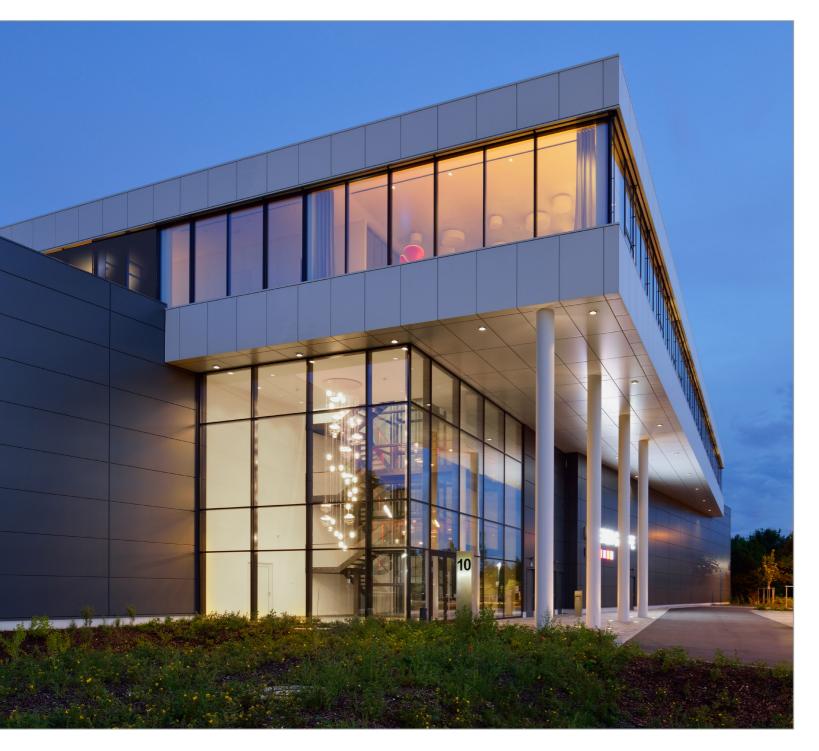








ORTERER GRUPPE LOGISTICS CENTRE





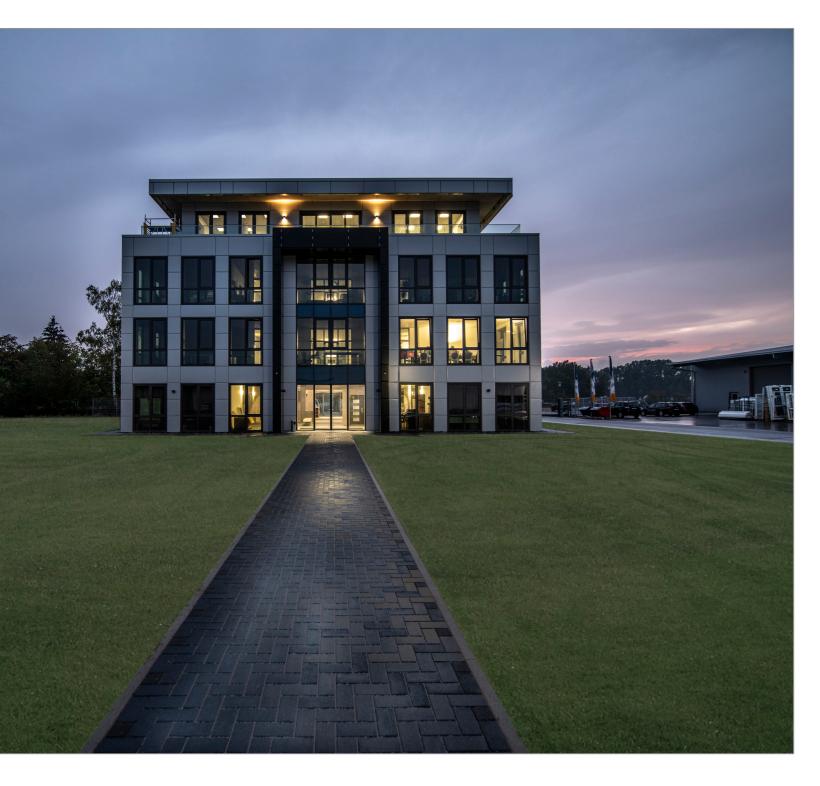
LOCATION GERMANY

ARCHITECT KEHRBACH PLANWERK

PRODUCT QBISS ONE



HEADQUARTERS HEKA HERZOG







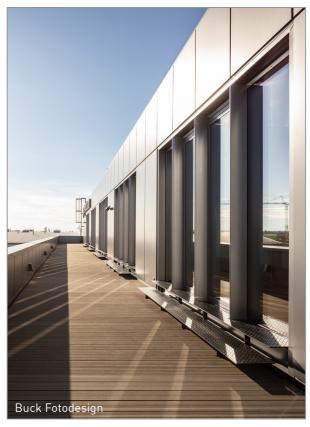
LOCATION GERMANY

ARCHITECT HEKA HERZOG

PRODUCT QBISS ONE

PARTYRENT LOGISTICS CENTRE MUNICH







LOCATION GERMANY

ARCHITECT

JAROSCH ARCHITEKTUR DARMSTADT

PRODUCT

QBISS ONE

CENTER OF WATER SPORTS ŽUSTERNA







LOCATION SLOVENIA

ARCHITECT ACMA D.O.O.

PRODUCT

MODULAR SPACE SOLUTIONS

CARGO-PARTNER D.O.O.







LOCATION

SLOVENIA

ARCHITECT

PROTIM, RŽIŠNIK-PERC

PRODUCT

QBISS ONE, TRIMOTERM FTV HL

MDM D.O.O.







LOCATION

SLOVENIA

ARCHITECTGENIUS LOCI D.O.O. LJUBLJANA

PRODUCTTRIMOTERM FTV HL

AIRBUS A380 LACKIERHALLE





LOCATION GERMANY

ARCHITECT HUHNHOLZ JÖRG; KRÄMER MICHAEL

PRODUCT
TRIMOTERM FTV



AIRCRAFT SPORT CENTER

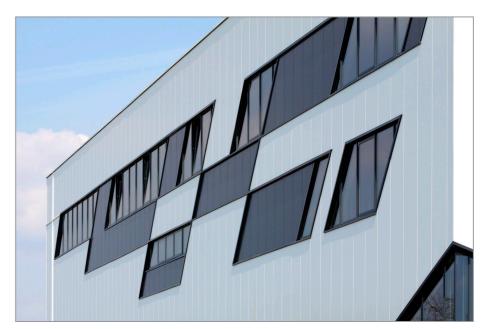




LOCATION SLOVAKIA

ARCHITECT GFI

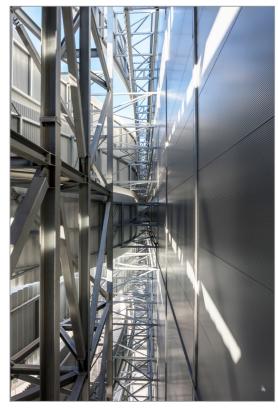
PRODUCTTRIMOTERM FTV HL



DUNA ARENA







LOCATION HUNGARY

ARCHITECTS

NAPUR ARCHITECT,
TECTON ARCHITECT

AND CONSULTING

PRODUCT
TRIMOTERM FTV

HEADQUARTERS

TRIMO D.O.O.

PRIJATELJEVA CESTA 12, 8210 TREBNJE, SLOVENIA T: +386 (0)7 34 60 200 F: +386 (0)7 34 60 127 TRIMO@TRIMO-GROUP.COM WWW.TRIMO-GROUP.COM

GLOBAL PRESENCE

Find your local contact



DOWNLOADS

BROCHURES

- Façade systems
- Roof systems
- General



TECHNICAL DOCUMENTS

- Façade systems
- Roof systems
- Structural performance



DESIGN TOOLS

- CAD details
- BIM product libraries



HANDBOOK Warehouse



HANDBOOK Data Centre



HANDBOOK Renovation



Trimo Group holds full copyrights on the information and details provided in this document, therefore any unauthorised reproduction and distribution is strictly prohibited. Professional Care has been taken to ensure that the information/details are accurate, correct, complete and not misleading. However, Trimo, including its subsidiaries, does not accept responsibility or liability for errors or information, which is found to be misleading. Information/details in this document are for general purposes only. It is the user's responsibility to check compliance with local laws. Any deviations in details and project solutions are the user's responsibility. Under no circumstances, will we be liable for any loss or damage including without limitation, indirect or consequential loss or damage, or any loss or damage whatsoever arising from lost profits as a result of or in connection with the use of this document. All information issued by Trimo Group is subject to continuous development and information/details ontained in this document were current on the date of issue. It is the user's responsibility to obtain the most up-to-date information from Trimo when information/details are used for a project.