COMPACFOAM

Klima Konform System as a climate friendly structural insulation.

Timber-free material with excellent insulating properties.

Simple to use, structural calculations and designs possible.

No waste - 100% material use, will withstand glass weights up to 1500kg.

Fire rating class B1, sound protection properties up to 64 db.

compacfoam.com

Klima Konform System.

With the COMPACFOAM Frame Support System, windows and doors can be installed in the external insulation layer and avoid thermal bridges. This means that the windows and doors are installed beyond the solid outer walls into the external wall thermal insulation. This method is known as pre-wall mounting.
Fixing windows and doors in the insulation layer has several advantages: the building is more aesthetically pleasing from outside and the position lets more light into the building. Deeper reveals inside allow more room for inward opening windows. More light means more solar energy and the solar heat gaining. The isothermal curves in the transition between the window and the wall system show how the cold temperatures are kept to the outside fabric of the building.

Simple to use.

Easy processing of the profiles

Few components

Lightweight materials, installation
by one person without special tools

All dimensions available

Quick window installation,
as no pre-drilling is required

Retroactive window replacement without plaster work
(blind frame installation)

Wide projections possible

Standard length 2250 mm

Will withstand glass weights up to 1500kg

Fire Rating class B1

No waste - 100% material use

IFT Rosenheim tested for security

RC2

Structural calculations and designs possible

Sound protection properties up to 64 db

Tested according to ETB

Timber-free material

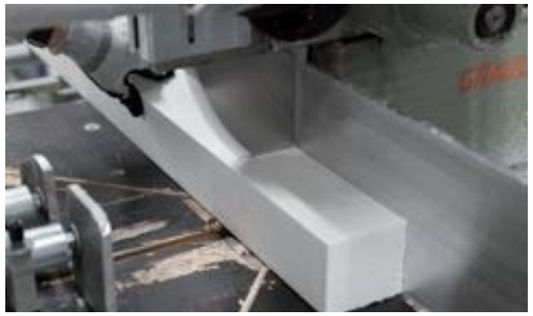
Rot proof

Resistant to moisture and freezing
excellent insulation properties

Mounting instruction.

Cutting the profiles.

Cut the profiles to size according to the measurements for all sides. Start with the bottom horizontal profiles.



Applying adhesive.

Apply two triangular beads of adhesive around the profiles, approximately 5 mm from the edge, along the length of the profiles. Press the profiles firmly against the wall. The adhesive thickness should be between 2 and a maximum of 5 mm after pressing.

Pre-drilling and screwing.

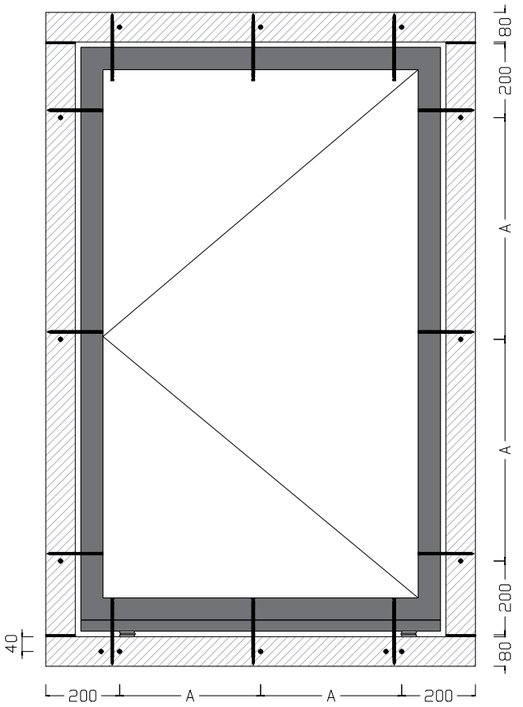
Drill the bottom rail 150 mm from the end of the rail, then continue drilling holes every 700 mm.
For corner and joint bonding, use MS polymer to create air- and driving rain-tight connections.

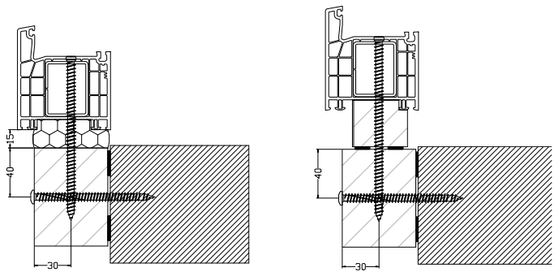
Positioning and alignment.

Align the position of the rails and drill through the rail into the wall. Choose the drill diameter and hole depth according to the wall material. Refer to the table for specifics.
Place the drill holes in the wall with a screw distance of 150 mm from the start of the rail, continuing every 700 mm. Secure the rails with suitable fastening materials to create a stable connection.

Processing Guidelines.

Fixing Details for climate friendly structural insulation system: projection up to 90mm





side connection

under connection

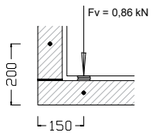
A....max. screw spacing <700mm
Window frame screw with cylindrical head
diameter 7.5mm, spacing and anchorage length in the substrate according to static requirements or RAL guidelines
No pre-drilling required in the substrate insulation profile!

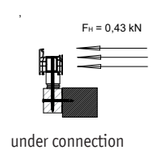
Derivation of Vertical Loads:
Each window construction is supported by point-bearing blocks in the frame. The entire dead load of the window is concentrated under these bearing points and must be safely transferred into the wall at these locations.

Derivation of Horizontal Loads:
Horizontal loads in window constructions arise from wind or impact on the glazing panes. These loads are then transferred into the frame structure. Through the lateral screw connection, this load is introduced pointwise into the mounting frame.

The following specifications depend on the element weight and the Klima Konform profile:

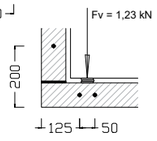
Execution ❶
Force per fastening point < 0.86 kN



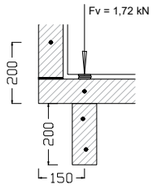


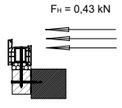
under connection

Execution ❷
1 additional fastening point
Force per fastening point < 1.23 kN

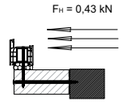


Execution ❸
2 additional fastening points
Force per fastening point < 1.72 kN





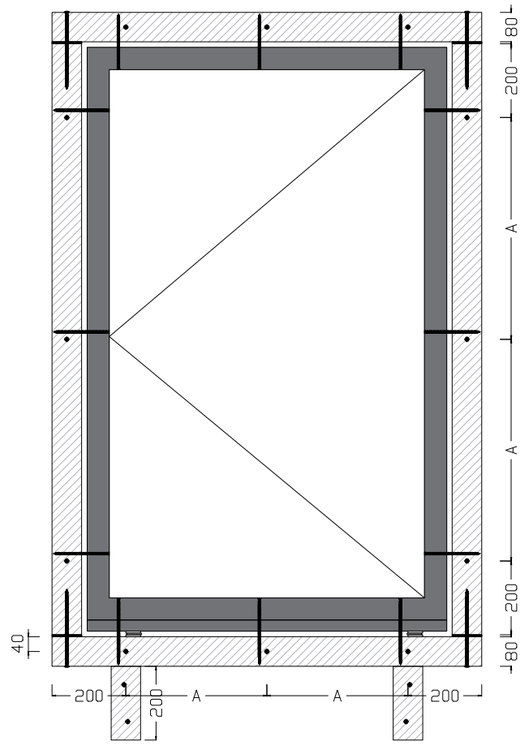
side connection

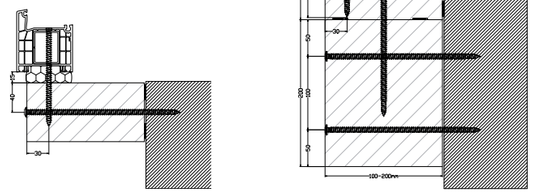


side connection, extended projection

The bracket must be set from an overhang of the climate friendly structural insulation profile > 100 mm .
The individual bearing loads at the fixing points can be calculated with the **COMPACFOAM** fixing calculator.

Fixing Details for climate friendly structural insulation system: projection up to 200mm

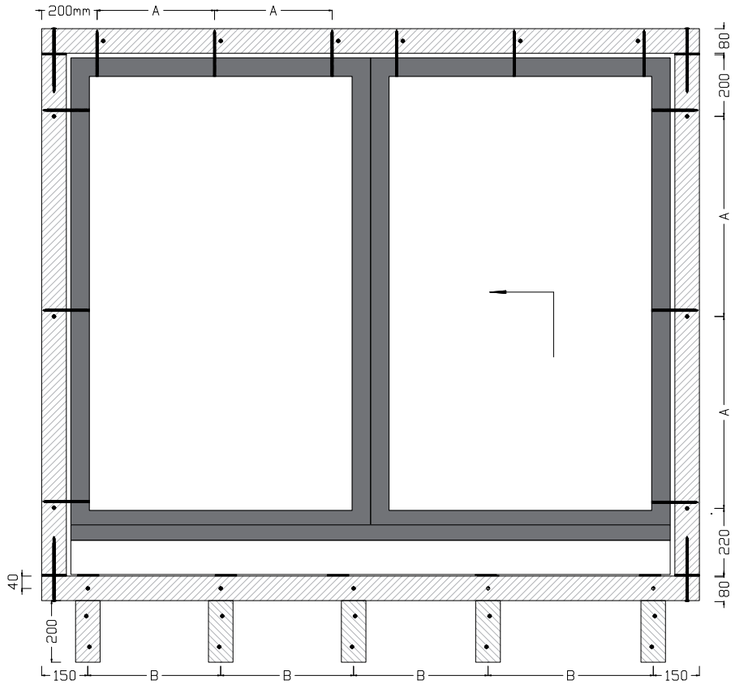




side connection

under connection

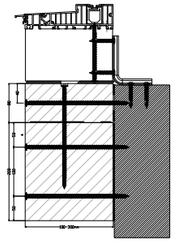
A....max. screw spacing <700mm
Window frame screw with cylindrical head
diameter 7.5mm, spacing and anchorage length in the substrate according to static requirements or RAL guidelines
No pre-drilling required in the substrate insulation profile!



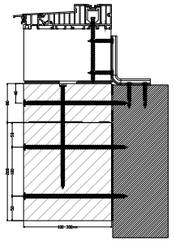
A....max. screw spacing at the top and side
<700mm or according to static requirements
B....max. distance between supports at the bottom
<500mm, arrangement below the corner points
of the fixed area

Window frame screw with cylindrical head, diameter 7.5mm, spacing and anchorage length in the substrate according to static requirements or RAL guidelines
No pre-drilling required in the substrate insulation profile!

under connection
screwing from below:



under connection
screwing from above:

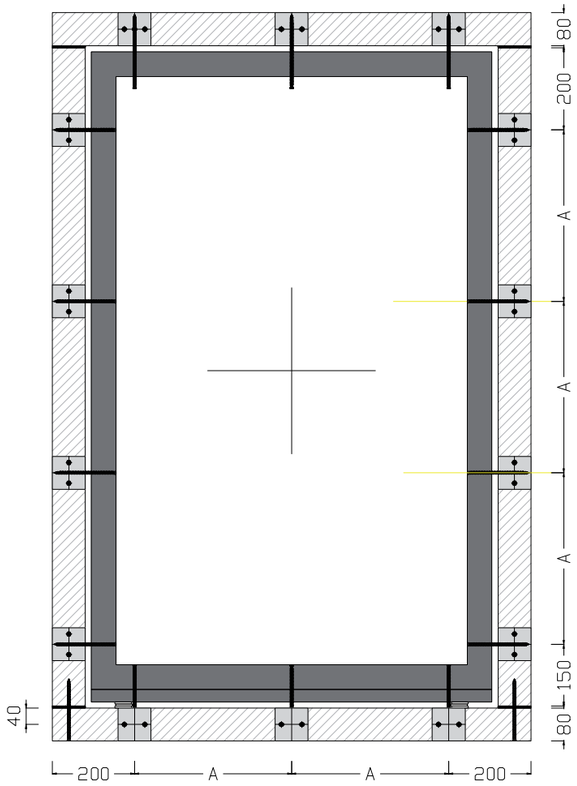


Fall Protection ETB.

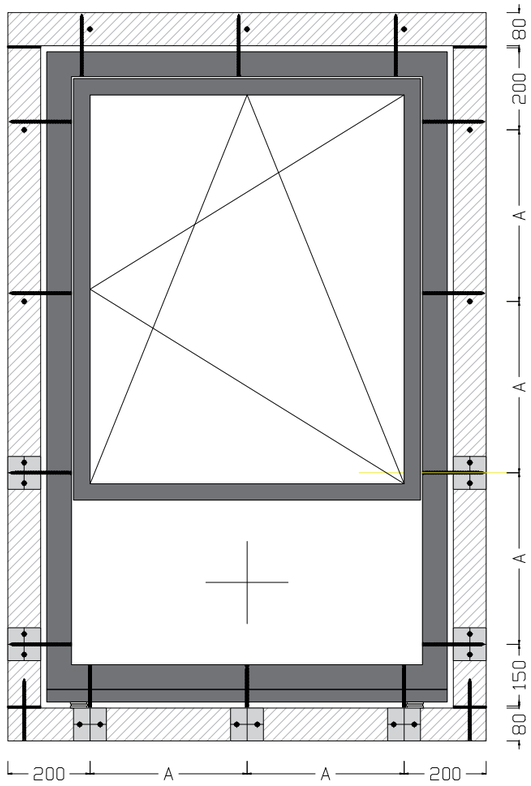
The ETB guideline for fall-protecting full-height components requires load-bearing capacity at the relevant fastening points of at least 2.8 kN. Fall-protecting glazing is designed to protect individuals from falling to a lower level. It should offer a low risk of injury upon impact and ensure that the traffic area below is not endangered by glass breakage. Examples of such glazing include parapets, glass stair railings, and full-height windows.

The **Klima Konform System** meets all of these requirements, providing the highest level of protection and safety for fall-protecting elements.

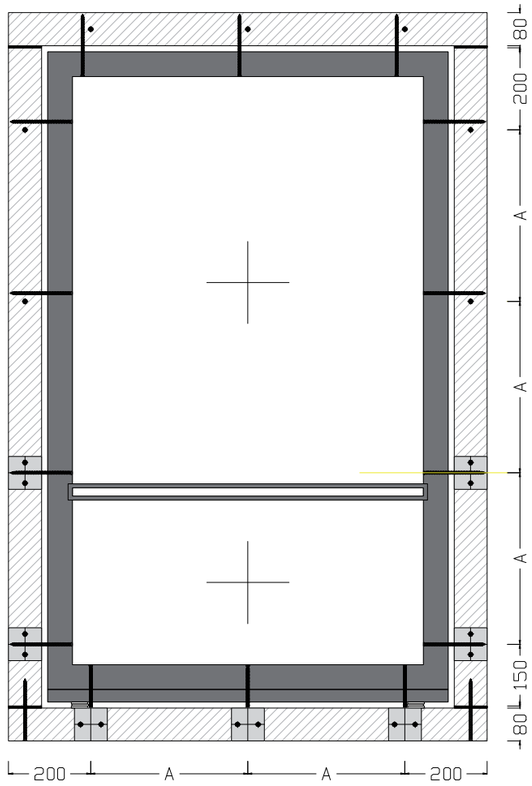
Category A, DIN 18008-4



Category C2, DIN 18008-4



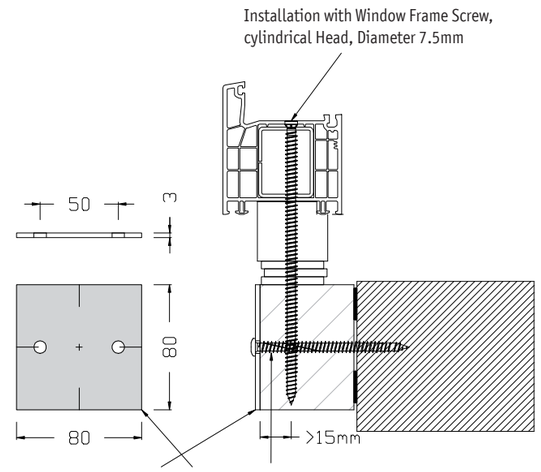
Fixing with Requirements According to the ETB Guideline



Fixing with Requirements According to the ETB Guideline

Fixing Without Requirements According to the ETB Guideline

Installation with Window Frame Screw, cylindrical Head, Diameter 7.5mm



ETB Plate 80x80x3mm

Window Frame Screw, Diameter 7.5mm, Flat Head
According to the dimensioning guidelines of the Klima Konform mounting system, the anchorage length in the substrate is specified according to the table.

Fixing of elements with antifall properties (ETB)
Depending on the category (A/C2/C3), a **Klima Konform System** ETB plate must also be fixed in the base surface (wall construction) with an additional screw of the **Klima Konform** profile for elements with anti-fall properties (ETB).
Fixing distance A: Plastic window, max. 700 mm, wooden, wood/aluminum and aluminium windows, max. 700 mm.

A....max. screw spacing <700mm

Window frame screw with cylindrical head, diameter 7.5mm,
spacing and anchorage length in the substrate according to static requirements or dimensioning software COMPACFOAM.

Burglary protection RC2.

The burglary protection is tested according to the standards DIN EN 1627-1630 and includes the following requirements:

The **Klima Konform System** meets all of these requirements, providing the highest level of protection and safety for every construction project.

Resistance.

Resistance to Static Load
The load-bearing capacity of the construction is tested by applying a pressure load of 3000 N to all critical points.

Resistance to Dynamic Load
A pendulum impact test with a 50 kg twin tire checks the stability of the system under dynamic forces at the relevant weak points.

Resistance to Manual Burglary Attempts
In a two-stage test, the critical areas are checked for security using standardized burglary tools. The first test is conducted between the window frame and the Klima Konform system. Additionally, an attack on the connection of the pre-wall mounting system to the wall structure is carried out.

Klassifizierungsbericht
einbruchhemmende Eigenschaften

Prüfbericht
Nr. 18-002431-PR01
(PB-A01-05-de-01)

ift ROSENHEIM

Auftraggeber	Compacfoam GmbH Resselstr. 7-11 2120 Wolkersdorf Österreich
Produkt	einbruchhemmendes einflügeliges Fenster in Vorwandmontage
Bezeichnung	greenteQ Klima Konform System
Außenmaß (B x H)	1300 mm x 1450 mm
(Rahmen) Material, System	PVC, Aluplast Ideal 8000
Angriffseite	Schließfläche nach EN 12519
Öffnungsart	einflügelig, Dreh/Drehkipp
Verglasung	Klasse P4A nach EN 356
Beschläge	Multi Matic / Mayer & Co Beschläge GmbH mit 10 einbruchhemmenden Verriegelungen und abschließbarem Fenstergriff Tresor Fenstergriff, Mayer & Co Beschläge GmbH
Montage	Gemäß der Montageanleitung des ursprünglichen Auftraggebers
Besonderheiten	-/-

Einbruchhemmung

RC 2 / RC 2 N

ift Rosenheim
03.08.2018

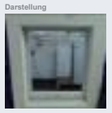
Konrad Querengässer, Dipl.-Ing. (FH)
Prüfstellenleiter
Sicherheitstechnik

Simon Stüer
Prüfingenieur
Sicherheitstechnik

Grundlagen
DIN EN 1627 : 2011
Türen, Fenster, Vorhangfassaden, Gitterelemente und Abschlüsse - Einbruchhemmung – Anforderungen und Klassifizierung
DIN EN 1628 : 2011
DIN EN 1629 : 2011
DIN EN 1630 : 2011

Prüfbericht Nr. 16-003714-PR03 (PB-A01-05-de-02) vom 4. Mai 2018

Darstellung



Verwendungshinweise
Dieser Prüfbericht dient zum Nachweis der einbruchhemmenden Eigenschaften.

Gültigkeit
Die genannten Daten und Ergebnisse beziehen sich ausschließlich auf den geprüften und beschriebenen Probekörper. Die Prüfung der Einbruchhemmung ermöglicht keine Aussage über weitere leistungs- und qualitätsbestimmende Eigenschaften der vorliegenden Konstruktion.

Das Deckblatt kann als Kurzfassung verwendet werden.

Abweichend von geprüften Ausführung sind folgende Größenänderungen zulässig:
Abstand A +5% und –20%
Abstand B +5% und –30%
Fläche ±25%

Inhalt
Der Nachweis umfasst insgesamt 30 Seiten

Sound protection.

In pre-wall installation, sound prodection plays a central role, particularly in areas such as window construction, facade construction, or metalwork. Through the targeted use of innovative materials and techniques, sound bridges can be minimized, ensuring optimal acoustic properties for the building.

Sound-absorbing materials.

High-density materials like COMPACFOAM offer excellent acoustic properties. The high rigidity effectively minimizes sound bridges and ensures sustainable sound insulation for the building.

Decoupling.

A mechanical decoupling of the construction from the wall reduces the transmission of structure-borne sound to a minimum and optimizes the building's acoustic performance.

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tgm
Technische Versuchsanstalt

festgelegt. Die Mittelwertbildung der Nachhallzeit erfolgte über 6 Abfälle je Position und an allen Drehgalgenpositionen. Alle Messungen erfolgten mit Terzfiltern.

Ergebnisse

Aus den durchgeführten Messreihen ergaben sich für die geprüften Fugenvarianten die entsprechenden Einzahlangaben des praktischen Fugenschalldämm-Maßes $R'_{w,p}$ sowie die Spektrum-Anpassungswerte C und C_{tr}, gemäß ÖNORM EN ISO 717-1. Die untersuchten Fugenvarianten sowie die Einzahlangaben sind in der nachfolgenden Tabelle 1 aufgelistet.

Tabelle 1: Praktisches Fugenschalldämm-Maß der geprüften Fugenausbildungen in Vorwandmontage

Fugenausbildung in einem 60 / 60 mm „greenteQ Klima Konform System-Profil"	bewertetes praktisches Fugenschalldämm-Maß $R'_{w,p}$ (C; C_{tr}) in dB
12 mm Fuge „Multifunktionsband greenteQ Vario S 64 / 10-20"	51 (-1; -3)
12 mm Fuge „Multifunktionsband greenteQ Vario S 64 / 10-20", Dichtband „Illbruck ME400 Fenster-Butylband" innen	64 (0; 0)
12 mm Fuge PU-Montageschaum „greenteQ 1K Winterpistolenschaum polar EXL B2", Fugendichtband „greenteQ Folie DUO plus EW" außen und innen	53 (0; 0)
12 mm Fuge PU-Montageschaum „greenteQ 1K Winterpistolenschaum polar EXL B2", Fugendichtband „greenteQ Folie DUO plus EW"außen, Dichtband „Illbruck ME400 Fenster-Butylband" innen	59 (0; 0)
12 mm Fuge „Fugendichtband greenteQ Vario SBA 40 / 7-15", Dichtstoff (rd. 5 mm) und PE-Rundschnur „greenteQ PE-Rundschnur" innen, Dichtstoff (rd. 5 mm) außen	44 (-1; -2)

Ing. Mag. rer. nat. Herbert Müllner
Leiter des Fachbereiches

Screwing Guidelines.

Screw-in depth.

The screw-in depth is primarily determined by the material of the building structure, as different materials have varying strengths and properties. Hard materials like steel or concrete require shorter screw-in depths, while softer materials such as aerated concrete or lightweight bricks require greater anchorage depths to ensure optimal stability. See table for details.

Depending on the material of the building

Steel	3 mm
Concrete	40 mm
Sand-lime brick	40 mm
Standard red brick	40 mm
Timber	50 mm
Aerated concrete block	90 mm
T10, T12, T14, T16 Poroton clay block	120 mm
T8, T8P, T10*, T12*, S11 Poroton clay block	235 mm

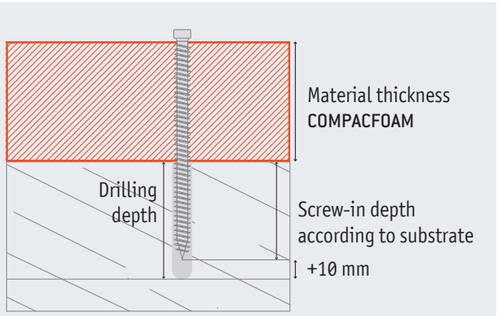
Pre-drilling.

The pre-drill diameter depends on the material of the building structure. Especially for lightweight structures, drilling with impact should be avoided to prevent material damage.
Please refer to the table for details.

	Pre-Drill-Ø	Rotary drilling	Impact drilling
Steel	6,0 mm		x
Concrete	6,0 mm		x
Sand-lime brick	6,0 mm		
Standard red brick	6,0 mm	x	
Timber	6,0 mm	x	
Aerated concrete	No Pre-Drilling		
Poroton clay	5,0 mm	x	

Screw length.

The screw length is determined by the projection of the pre-wall mounting system (depth) and the material composition of the building structure (required screw-in depth).
The drilling depth should be: screw-in depth + 10 mm.



Thermal Insulation: fRsi Value in Pre-Wall Installation.

Mold growth on surfaces often occurs due to too low temperatures on the inner reveal surface. To prevent this, it is crucial to keep this surface as warm as possible. DIN 4108-2 defines the temperature factor fRsi, which describes the relationship between the inner reveal surface temperature and the indoor and outdoor temperatures.

A minimum fRsi value of 0.7 or higher guarantees that the calculated inner reveal surface temperature is sufficiently high to avoid mold formation. In the standard climate (+20 °C indoor temperature, 50% relative humidity, -5 °C outdoor temperature), an inner reveal surface temperature of more than +12.6 °C is targeted. This corresponds to less than 80% relative humidity and thus lies outside the risk zone for mold growth.

Advantages of Installation

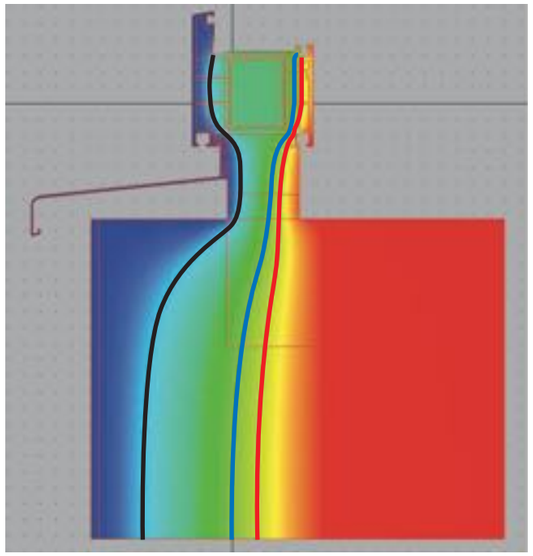
When the **Klima Konform** pre-wall mounting system is used, the temperature distribution in the transition area between the wall system and the window is significantly improved. The adjacent isothermic profiles clearly show the positive differences between conventional wall mounting and pre-wall installation.

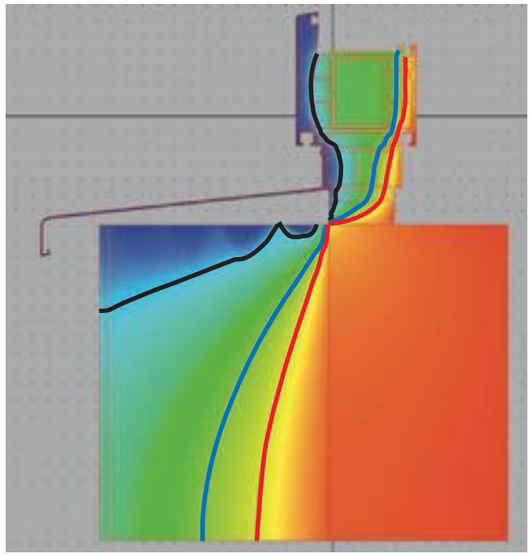
Positive Isothermic Profiles:
Temperature factor fRsi: ≥ 0,7
The minimum value of 0.7 must be maintained at the most critical point.

Conditions for Isothermic Calculation:
Outdoor temperature: -5 °C
Indoor temperature: +20 °C
Outdoor relative humidity: 80%
Indoor relative humidity: 50%

Color coding of isotherms:
Black: 0 °C / Blue: +9.3 °C / Red: +12.6 °C

With **Klima Konform**, optimal thermal insulation is ensured, meeting the fRsi value requirements and contributing to the prevention of mold formation.





Versatility.

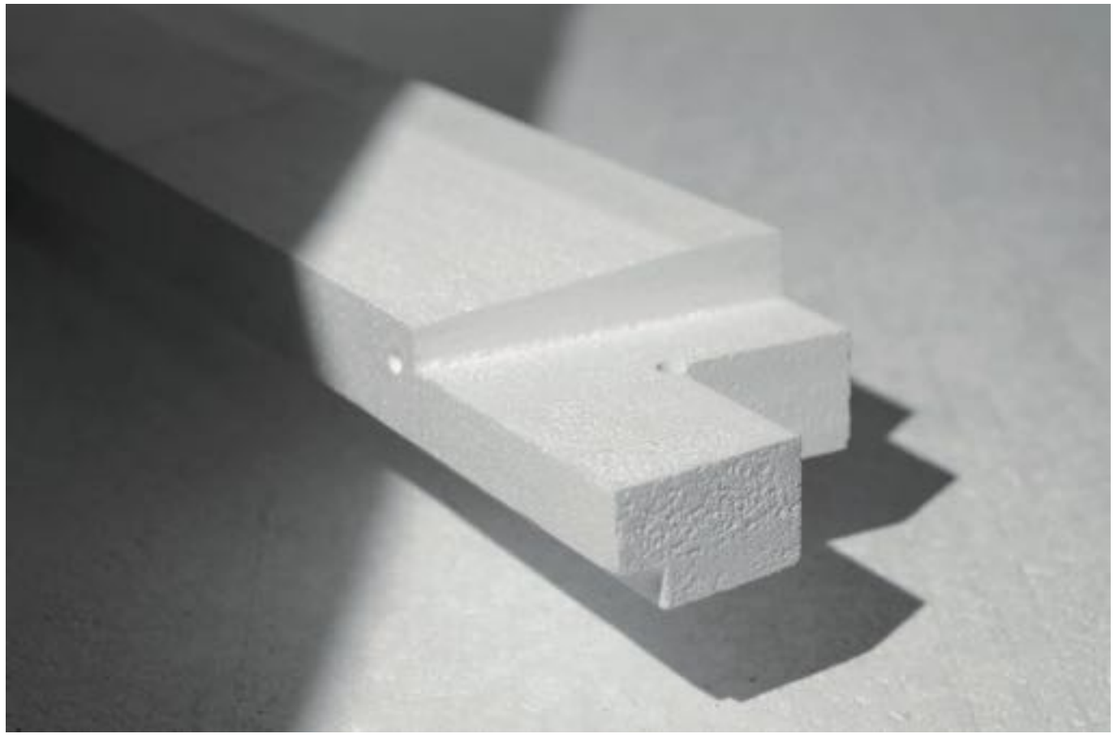
The **Klima Konform System** offers customized solutions for demanding construction projects. Whether flexible cross-sections, special shapes, integrated insulation wedges, or individual reveal solutions – nearly every requirement can be realized. Specially manufactured slanted profiles at the upper section also provide optimal protection against rainwater during the construction phase.

Precise manufacturing is ensured through state-of-the-art technologies:

5-axis CNC machining up to 4700 x 600 x 300 mm in one piece for highly complex and individual requirements.

2-axis wire cutting up to 2350 x 500 x 500 mm as a cost-effective alternative.

The products are distortion-free and bend-resistant, guaranteeing excellent stability. Thanks to their lightweight yet high-strength properties, they also allow for easy and quick installation.
This range of possibilities ensures a perfect fit for any project and sets new standards in functionality, efficiency, and quality.



References.

Standard profiles and accessories.

Standard Profile Palette Part Numbers (Length 2250mm)

	Palette	Artikelnummer
Klima Konform Bar 2250x60x80mm	230 range	1136
Klima Konform Bar 2250x90x80mm	150 range	1137
Klima Konform Bar 2250x80x80mm	180 range	3286
Klima Konform Bar 2250x120x80mm	102 range	1138
Klima Konform Bar 2250x120x80mm Blind Frame	102 range	1140
Klima Konform Bar 2250x160x80mm	85 range	1139
Klima Konform Bar 2250x180x80mm	72 range	2988
Klima Konform Bar 2250x200x80mm	72 range	2989

Screws

Window Frame Screw T30 7.5x42	100 Pack	1669
Window Frame Screws T30 7.5x62	100 Pack	1712
Window Frame Screws T30 7.5x72	100 Pack	1713
Window Frame Screws T30 7.5x82	100 Pack	1714
Window Frame Screws T30 7.5x92	100 Pack	1715
Window Frame Screws T30 7.5x102	100 Pack	1716
Window Frame Screws T30 7.5x112	100 Pack	1717
Window Frame Screws T30 7.5x122	100 Pack	1718
Window Frame Screws T30 7.5x132	100 Pack	1719
Window Frame Screws T30 7.5x152	100 Pack	1720
Window Frame Screws T30 7.5x182	100 Pack	1721
Window Frame Screws T30 7.5x212	100 Pack	1722
Window Frame Screws T30 7.5x252	50 Pack	1723
Window Frame Screws T30 7.5x300	50 Pack	1724

Adhesive

MS-Polymer Tube 600ml Mounting Adhesive	12 Pack	292
MS-Polymer Cartridge 290ml Mounting Adhesive	12 Pack	332

ETB Plate

Mounting Plate 60x45x3mm V-Fixx	1 per Piece	1660

Drills

SDS Plus Hammer Drill 4S Ø 6mm, Total Length 310mm,	1 per Piece	2000
SDS Plus Hammer Drill 4S Ø 6.5mm, Total Length 310mm,	1 per Piece	2001
SDS Plus Hammer Drill 4S Ø 6mm, Total Length 260mm,	1 per Piece	2002
SDS Plus Hammer Drill 4S Ø 6.5mm, Total Length 260mm,	1 per Piece	2003
MultiCon Multipurpose Drill, Ø 5mm, Total Length 400mm,	1 per Piece	2088
MultiCon Multipurpose Drill, Ø 6mm, Total Length 400mm,	1 per Piece	2816
MultiCon Multipurpose Drill, Ø 5mm, Total Length 250mm,	1 per Piece	2818
MultiCon Multipurpose Drill, Ø 5mm, Total Length 350mm,	1 per Piece	2819

Saw blades

Stehle ZFL Circular Saw Blade 250x3.2/2.2x30 Z=18	1 per Piece	1984
Stehle ZFL Circular Saw Blade 300x3.2/2.2x30 Z=14	1 per Piece	1462
Stehle ZFL Circular Saw Blade 350x3.5/2.5x30 Z=16	1 per Piece	2856
Stehle ZFL Circular Saw Blade 400x3.5/2.5x30 Z=18	1 per Piece	1456
Stehle ZFL Circular Saw Blade 450x3.8/2.8x30 Z=32	1 per Piece	2857
Bosch Speedline Wood Circular Saw Blade 160x20 2.2/1.6, Z=18	1 per Piece	1910
Bosch Speedline Wood Circular Saw Blade 165x20 1.7/1.2, Z=12	1 per Piece	1911

Mounting videos.

Klima Konform System
Pre-wall mounting, Standard

Klima Konform System
Pre-wall mounting
Special Case: Heavy Loads 1

Klima Konform System
Pre-wall mounting
Special Case: Heavy Loads 2

Klima Konform System
Pre-wall mounting, V-Fixx
(double-layered masonry)

Klima Konform System
Pre-wall mounting
Special Case: stell construction

Klima Konform System
Pre-wall mounting
Sawing of COMPACFOAM

COMPACFOAM

Our doors are open to you for questions and further information.

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MPA Dresden

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