

Sustainable Systems for Thermal Separation, Construction, Insulation and Sealing



Product Overview

COMPANY

Pflüger TOB GmbH was founded in 2014 as a subsidiary of Pflüger GmbH Holz- und Kunststofftechnik (Pflüger Wood and Plastics Technology). We develop and produce sustainable systems for thermal separation, construction, sealing, and insulation.

With a young team of experts in every facet of construction, we take on the challenges of energy consumption and develop solutions for worldwide energy conservation. Consequently, we are the right partner for timely and future-oriented planning, development, and implementation of solutions in the area of construction element integration and connection in residential and commercial building projects.

Our modern systems allow you to install your construction elements in and to all types of buildings. Whether new construction or restoration, the components of our module or customized products derived therefrom help you in expertly solving your installation problems.

MATERIAL

The materials we use meet high technical and ecological standards. They provide excellent insulation and compressive strength and are waterproof. The raw material consists of production waste from rigid polyurethane foam manufacturing or PET bottles. Once our products have completed their useful life, they can be recycled again. Numerous tests have confirmed that the materials are free of emissions during installation and later use. Our products can be installed in DGNB (German Sustainable Building Council) and LEED certified building projects.



100% water resistant



High compressive strength



Biologically and ecologically safe



Optimal insulation

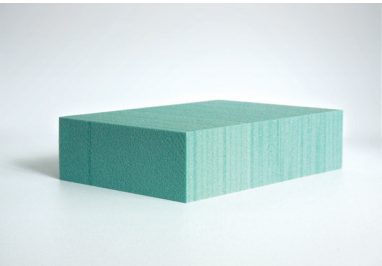


Permeable to water vapor diffusion



Low thermal conduction

KERDYN™ GREEN FR / Products starting on page 3



As a PET recyclate, Kerdyn™ Green FR is the new alternative to PUR construction materials. It provides lighter, more compact, and more efficient thermal separation and sealing. Due to its lower thermal conductivity, more efficient designs can be implemented with the same thermal bridge coefficient.

Higher transverse tensile strength enables better bonding and sealing results than alternative materials. Breaks and dents in the material are avoided. Specialized material features provide increased compressive strength as well as water tightness. Extensive testing by ift Rosenheim shows the suitability of the material for the window and facade sector.

- > Good mechanical properties (compression and shear characteristics)
- > Broad processing compatibility due to high temperature and chemical resistance
- > Optimal insulation characteristics
- > Minimal water absorption
- > Recyclable polymer



25 1.5 L PET bottles produce 4.5 x 35 x 35 cm Kerdyn™ Green FR 115 raw board.

	Kerdyn™ Green FR 115	Kerdyn™ Green FR 180	
Bulk density (kg/m³)	115	180	
Compressive strength (N/mm²)	1.5	3.2	
Thermal conductivity (W/mK)	0.036	0.043	
Panel thickness	from 30 mm	from 4 mm	
	up to 120 mm each		
Panel format	1005 x 2440 mm		
Building material class	B2 (DIN 4102), E (EN13501)		
Raw material	PET recyclate		

PHONOTHERM® 200 / Products starting on page 11



Phonotherm® 200, a board-shaped polyurethane-based construction material that is convincing in its extraordinary properties and enables innovative and customized building projects.

Phonotherm® 200 is particularly applicable for heavy elements or for load transfer across small surfaces. ift-tested statics parameters enable precise verification of window installation. We will be happy to provide you support in this process.

- > Non-sensitive to moisture (no swelling, no rotting)
- > Long lasting, since it is rot and chemical resistant
- > Easy coating of boards and preforms e.g. with aluminum, HPL, CPL, plastics, and films. Liquid coatings are also available.

	RG 500	RG 700	
Bulk density (kg/m³)	550	700	
Compressive strength (N/mm²)	5	18	
Thermal conductivity (W/mK)	0.076	0.10	
Panel thickness (mm)	15-60	10-50	
Panel format	1350 or 1500 x 2400 mm		
Building material class	1350 or 1500 x 3600 mm		
Raw material	B2 (DIN 4102)		
	PUR foam recyclate		

KERDYN™ GREEN FR

Profile overview

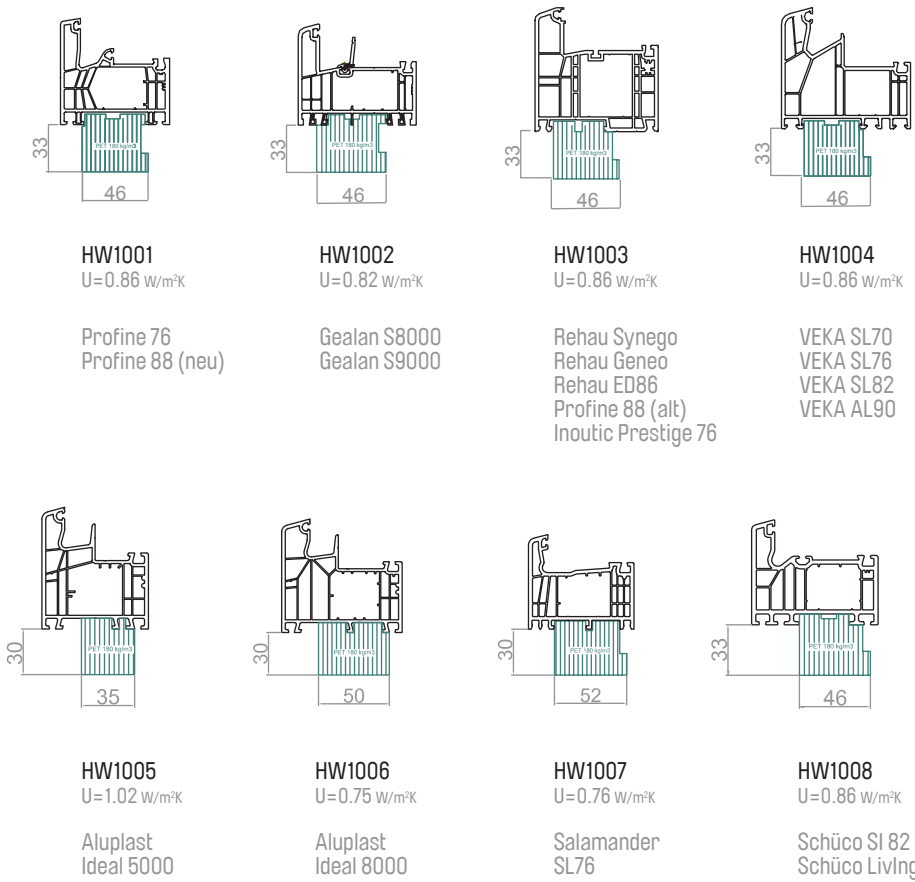
basistherm / Window base junction profile

The **basistherm** window base junction profiles are the basis of our module. They replace customary window base junction profiles and achieve lower thermal transmittance coefficients (U values) through optimized insulation.

Due to lower thermal conduction values, you can avoid thermal bridges also in more compact designs. Condensation and mold development in the area of the window base junction are now a thing of the past.

Heavier elements can be moved on internal transportation systems or on site without damage. Window base junction profiles **basistherm** made of Kerdyn™ Green FR come standard with a supporting surface for smooth positioning of an inner windowsill.

Standard delivery length: 2400 mm
Customized designs can be easily implemented upon request.



UDPtherm / Substructure insulating profile

The **UDPtherm** waterproof substructure insulating profiles provide optimal thermal, static, and sealing support to door thresholds and floor-level elements.

We offer matching adapter designs for many common profile and threshold systems as standard. Fixation via screws or adhesion is feasible at every level.

Multiple sealing systems have been successfully tested with our substructure insulating profiles – regardless of whether these are attached to raw Kerdyn™ Green FR or a PVC coating.

Mounting of support brackets in accordance with RAL installation guidelines is possible.

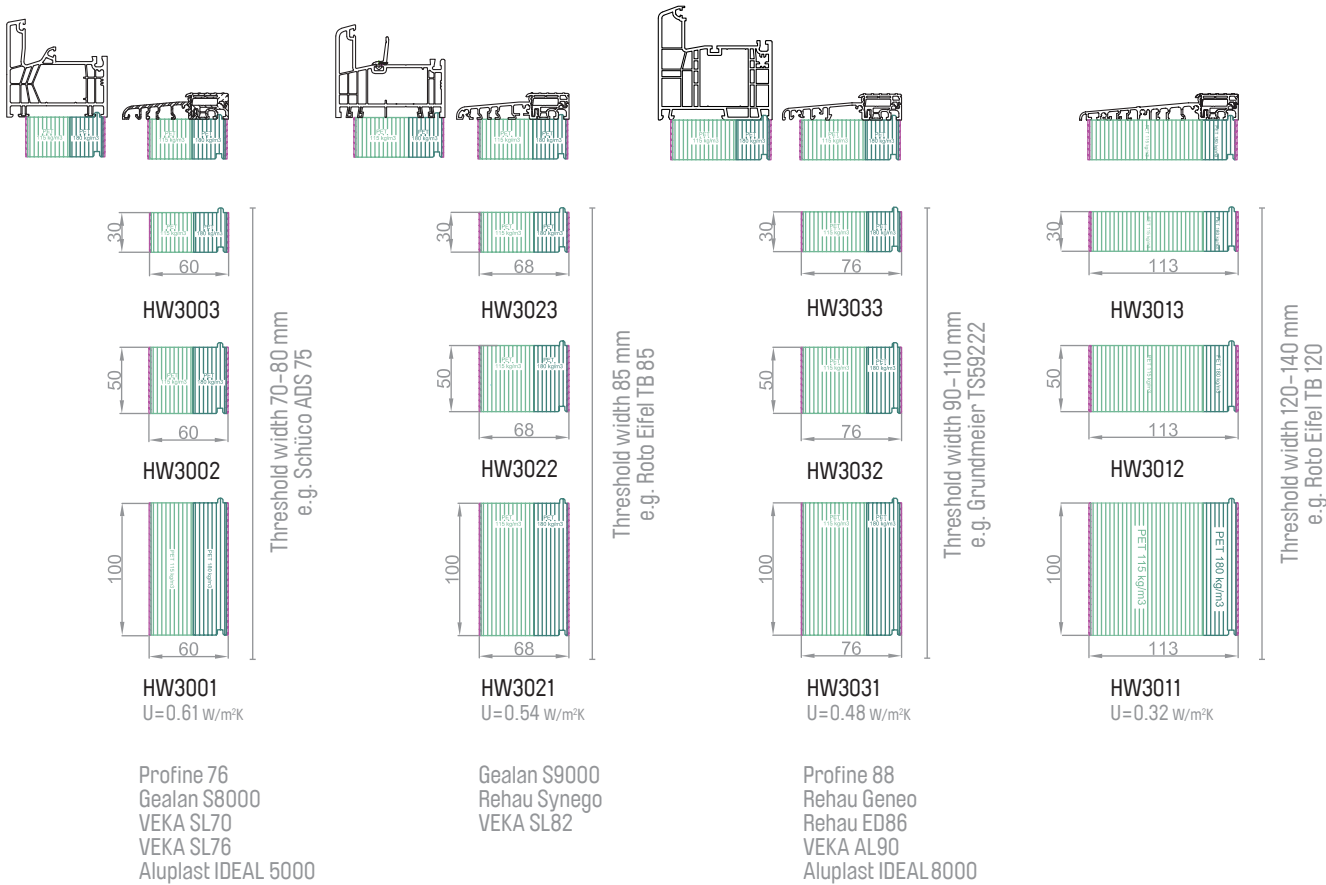
To minimize losing length of the parts, **UDPtherm** is frontally equipped with milling for insertion of a “Hoffmann dovetail”. By gluing the tail ends and inserting the included dovetail, an endless cord is created that can be trimmed anywhere as desired. Modifications can be made with common woodworking equipment and tools in the factory or at the construction site without sacrificing load bearing capacity or screw withdrawal strength.

UDPtherm provides multifaceted application possibilities both as a modular system or customized parts for fixed installation heights.

Standard delivery length: 2400 mm
Customized designs can be easily implemented upon request.



> Testing of long-term compressive strength in accordance with ift internal processes



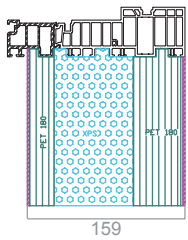
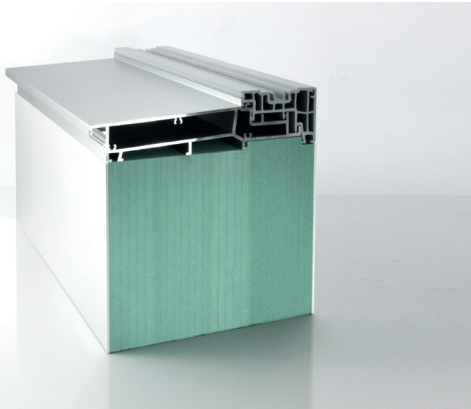
HSTtherm / Junction profile for lift/sliding doors

Lift or sliding door systems require a stable, insulated, and waterproof threshold substructure to function properly long term.

Additionally, such a substructure should also be lightweight to facilitate easy installation of the complete system. Depending on requirements with regard to load transfer, we manufacture our HSTtherm systems from a combination of various thicknesses of Kerdyn™ Green FR or Kerdyn™ Green FR, and XPS.

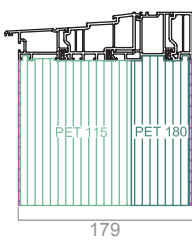
Upon request, the elements can also be PVC coated and assembled to project specifications.

Standard delivery length: 3050 mm
Longer elements have multiple parts with couplings.



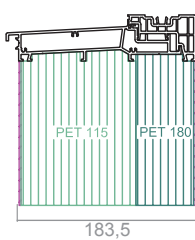
HW7159
U=0.20 W/m²K

Profine
PremiDoor 76



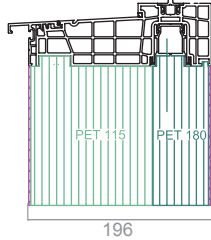
HW7179
U=0.21 W/m²K

VEKA Slide 82



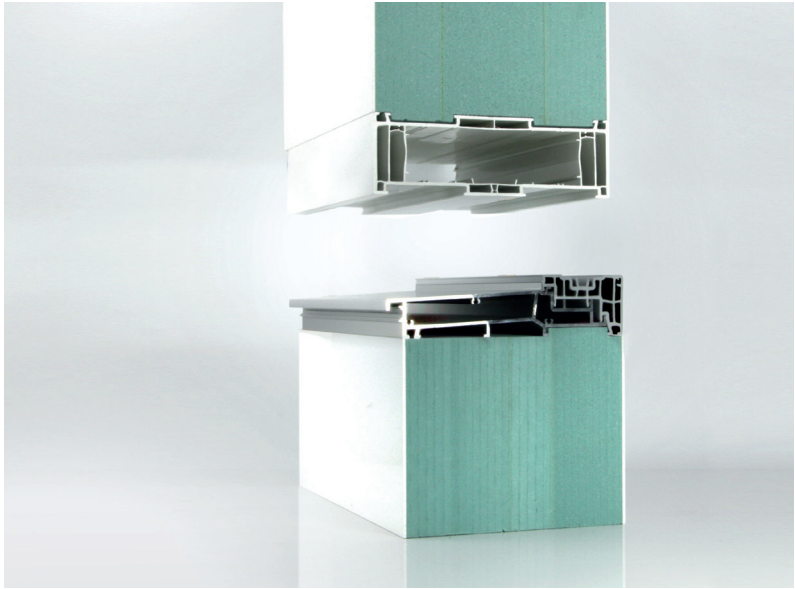
HW7184
U=0.20 W/m²K

Aluplast
lift/sliding door
85 mm bottom



HW7197
U=0.19 W/m²K

Gretsch-Unitas
thermostep 204



Substructure insulating profile
and frame extension for
Aluplast lift/sliding door

RVBtherm / Frame extension

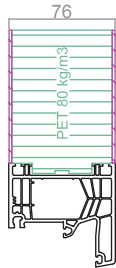
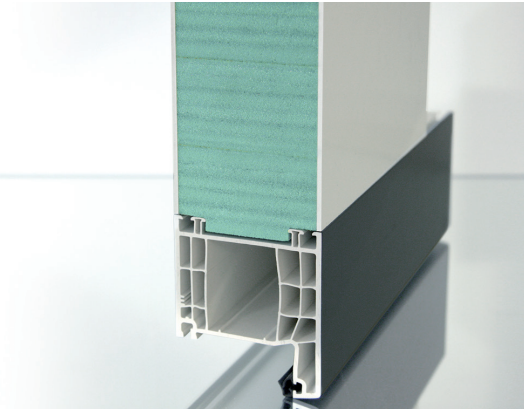
The frame extensions for PVC windows with a core made of Kerdyn™ Green FR combine good insulation with excellent airtightness and ease in installation.

Through the use of RVBtherm frame extensions with massive counter profiles, airtightness and impermeability to driving rain at critical junctures are significantly improved. In the area of the “interface gap” as well as possible corner joints of frame extensions, additional milling and bonding result in outstanding sealing values.

If you have specific STC requirements, additional material layers can be applied to attain the highest STC rating. The color scheme of the standard white surfaces, matching the profile systems, can be supplemented through lamination with the customary decorative window films.

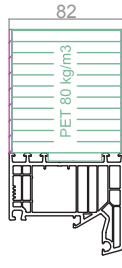
Frame extensions can be delivered as rods or ready-assembled.

Standard delivery length: 2400 / 3050 mm (window)
3050 / 4000 mm (lift/sliding door)
Longer elements have multiple parts with couplings.



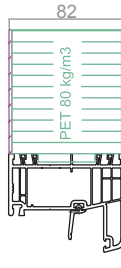
HW6076_654
U=0.44 W/m²K

Profine 76



HW6082_631
U=0.41 W/m²K

VEKA 82



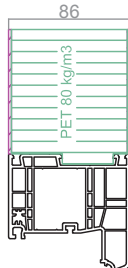
HW6082_654
U=0.41 W/m²K

Gealan 9000



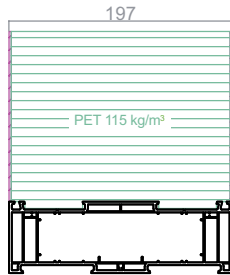
HW6085_631
U=0.40 W/m²K

Aluplast Ideal 8000



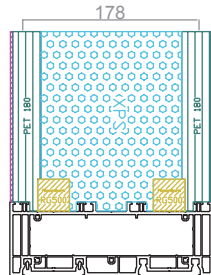
HW6086
U=0.39 W/m²K

Rehau Geneo



HW6197_631
U=0.18 W/m²K

Aluplast lift/sliding door
85 mm top



HW6178_654
U=0.18 W/m²K

Profine
PremiDoor 76

FDKtherm / Windowsill insulating and sealing wedge

The new window installation solution: thermal bridge-optimized, tested, applicable across all industries, and sustainable.

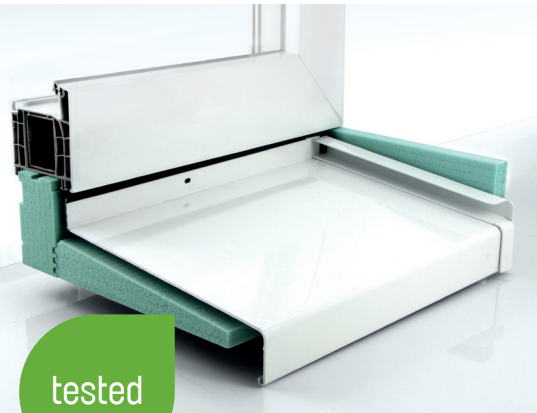
With the FDKtherm insulating and sealing wedge, you get a second water-bearing layer that prevents water from seeping into the wall construction. Regardless of whether your wall is of masonry, cement, or timber frame construction.

With various lateral end caps and profile-specific window base junction profiles, the insulating wedges can be customized to fit your specific building project. These elements are glued to one another with our hybrid adhesive **vowafix one**.

The insulating and sealing wedge is particularly applicable for windowsills that do not have edging rated for driving rain or windowsills made of stone.

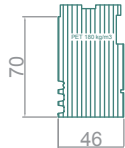
As modular system

- > In stock for all common window types
- > Can be modified with regular woodworking equipment
- > Available in small quantities
- > Standard delivery length: 2400 mm

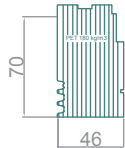


tested

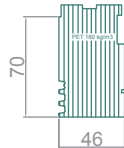
- > Impermeability to driving rain in accordance with ift guideline MO-01/1
- > Climate cycles in accordance with EOTA-ETAG 004



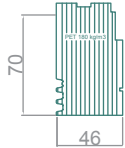
HW1031
U=0.84 W/m²K
Profine 76
Profine 88 (neu)



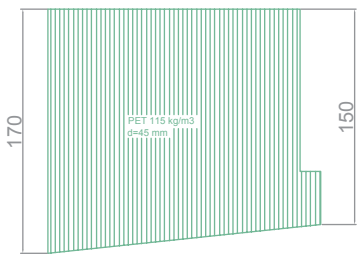
HW1032
U=0.87 W/m²K
Gealan S8000
Gealan S9000



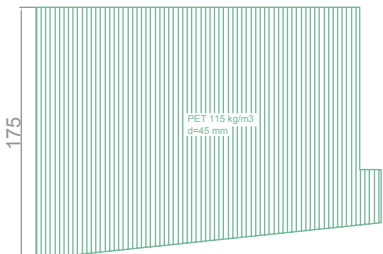
HW1033
U=0.84 W/m²K
Rehau Synego
Rehau Geneo
Rehau ED86
Profine 88 (alt)
Inoutic Prestige 76



HW1034
U=0.84 W/m²K
VEKA SL70
VEKA SL76
VEKA SL82
VEKA AL90



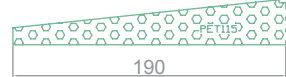
HW5191_XXX Notching specific to window profile!



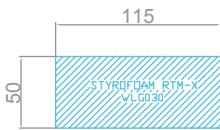
HW5241_XXX Notching specific to window profile!



HW5190



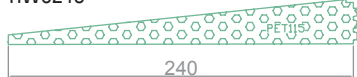
HW2190
U=0.26 W/m²K



HW4115
U=0.25 W/m²K

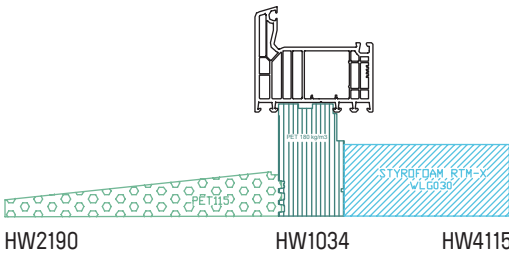
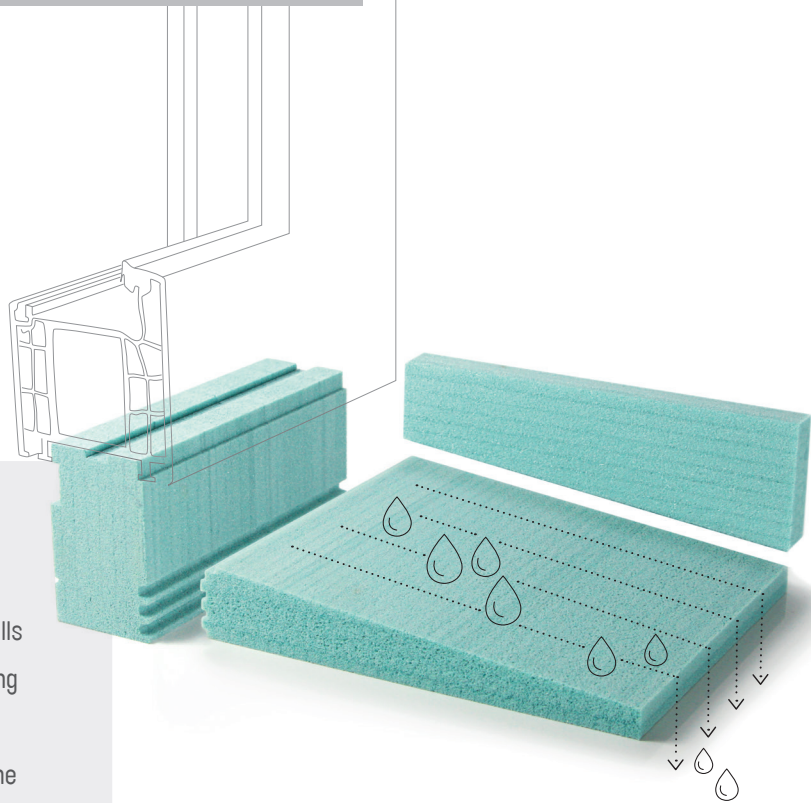


HW5240

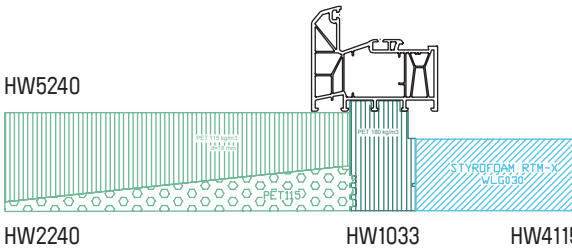


HW2240
U=0.23 W/m²K

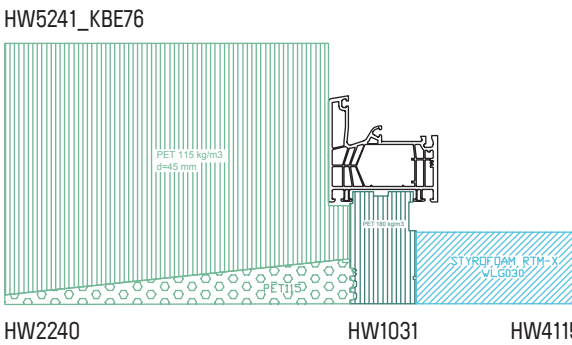
- > Second water-bearing layer
- > 100% waterproof
- > Applicable for all types of windows and windowsills
- > Error-free and fast installation without film sealing
- > Windowsill you can walk on
- > Lateral window sealing following flat roof guideline and DIN 18195 is available
- > Optional with drip edge profile
- > Can be combined with LPtherm reveal panel



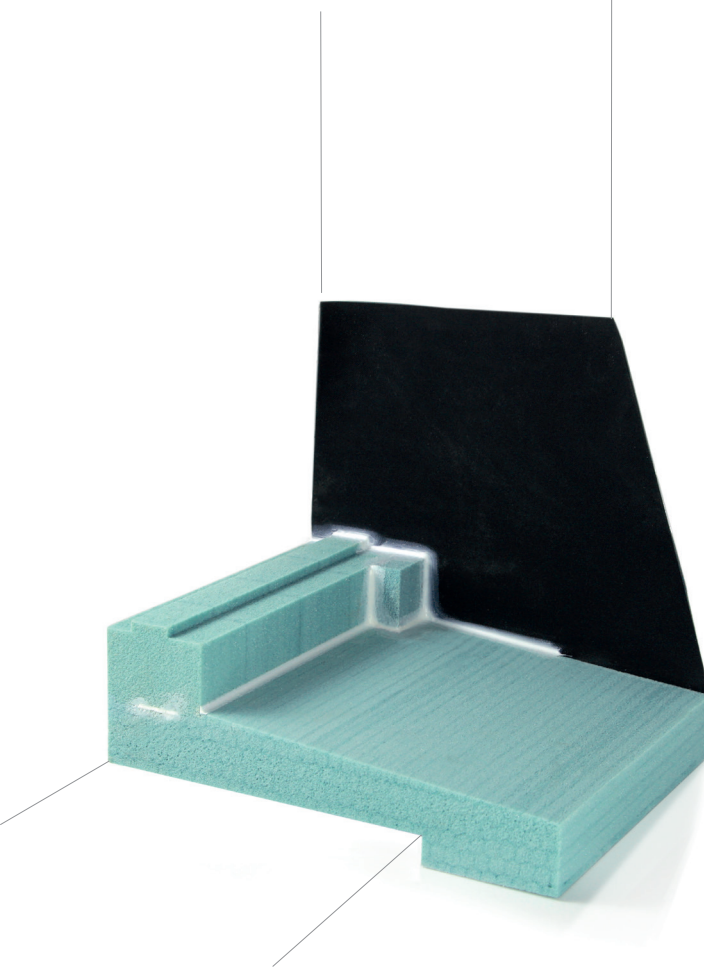
FDKtherm windowsill insulating and sealing wedge with full-length window base junction profile for pure insulation underneath the windowsill.



FDKtherm windowsill insulating and sealing wedge with full-length window base junction profile and low lateral end cap: trough formation through gluing of the parts with one another.



FDKtherm windowsill insulating and sealing wedge with full-length window base junction profile and high lateral end cap: window installation following "flat roof guideline", joined with a secure seal of the "interface gap".



FDKtherm / Windowsill Insulating and Sealing Wedge

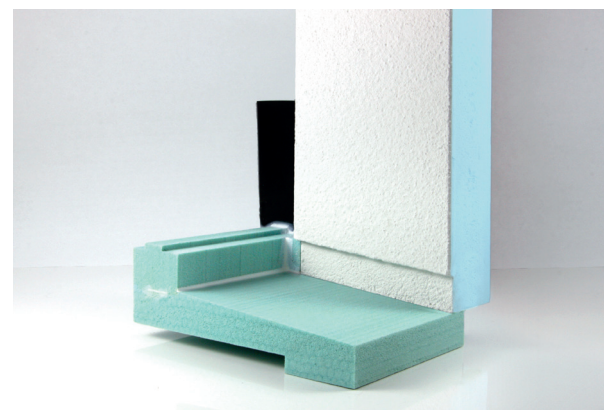
As complete system

- > Customized system solution
- > Batch production
- > Optional delivery on agency basis

Especially for manufacturers of timber-frame prefabricated homes or other builders with frequently recurring wall structures, we can develop customized installation and sealing solutions based on FDKtherm construction elements. Because our building components have a high degree of prefabrication, manhours required for sealing and window installation are greatly reduced.

Airtightness and impermeability to driving rain are significantly improved. These systems have been positively tested together with established manufacturers of EWIS systems multiple times.

The high product quality is supplemented by the development and implementation of customer-specific supply chain solutions.



Truly secure window installation: FDKtherm as second water-bearing layer, combined with LPtherm reveal panels.



A smooth and secure detail solution: FDKtherm with LPtherm.



- > Impermeable to driving rain in accordance with ift guideline MO-01/1
- > Climate cycle in accordance with EOTA-ETAG 004
- > Coating liability in accordance with DIN EN 1015-12



LPtherm / Reveal Panel

Reengineered reveal development. Discover new possibilities to optimize your building project with pre-coated and tested LPtherm reveal panels.

In addition to providing window frame insulation according to industry regulations, LPtherm reveal panels also save you time in installation due to their customized design specific to your individual installation situation. Using various core materials, we produce reveal panels that feature, for example, integrated rabbets to cover windowsill edges, or integrated guide rails.

Reveal panels are available unfinished, reinforced, or with a finishing coat.

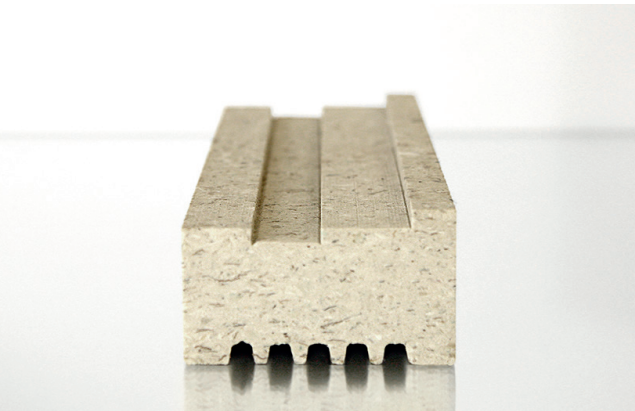
- > Prefabricated in width, height, thickness and processing of ends
- > Made from various core materials (XPS, PU, PET, ...)
- > Optionally with
 - integrated guide rail
 - rabbet for windowsill edge
 - mesh bracket
- > Available in various coating systems
- > Frame insulation according to industry standards
- > Can be combined with FDKtherm insulating and sealing wedge



Reveal panels for punch windows and elements that reach the floor.

PHONOTHERM® 200

Profile overview



basistherm / Window base junction profile

Window base junction profiles made from Phonotherm® 200 are especially applicable for heavy elements.

Despite greater bulk density, there are significant improvements in thermal bridge coefficients.

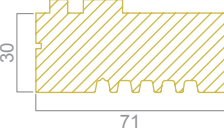
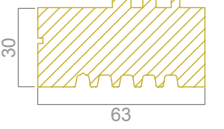
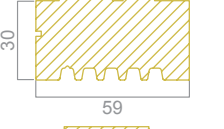
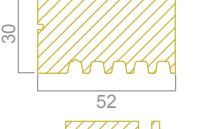
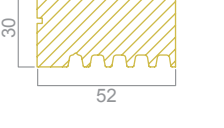
Window installation in accordance with DIN 4108 – Attachment 2 is feasible.

The standard interlocking structure allows easy connection with the substructure insulating profiles made from Phonotherm® 200.

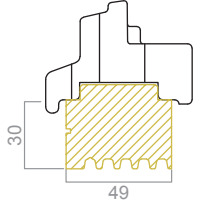
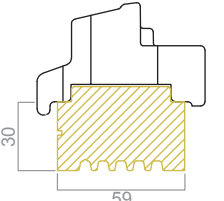
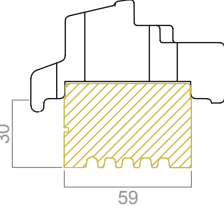
Standard delivery length: 2400 mm

Customized designs can be easily implemented upon request.

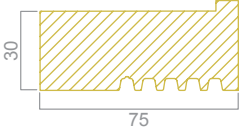
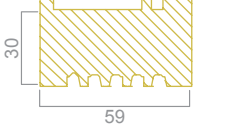
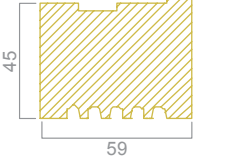
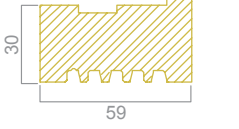
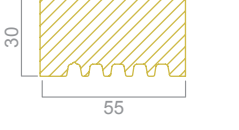
basistherm / PVC windows

85 construction series		PF01851_A* PF01851_I* U=0.94 W/m²K	VEKA AL90 Profine 88 (alt) Rehau ED86 + Geneo Aluplast e8000
80 construction series		PF01801_A* PF01801_I* U=1.05 W/m²K	Schüco SI 82 Salamander bE82 VEKA SL82 Inoutic Eforte 84
75 construction series		PF01751 U=1.13 W/m²K	Gealan S9000 Profine 76 Profine 88 (neu) Salamander SL76 Salamander bE73
70 construction series		PF01702 U=1.24 W/m²K	Schüco Corona CT 70
70 construction series		PF01701 U=1.24 W/m²K <small>*A = flush exterior I = flush interior</small>	Rehau ED70 Aluplast 70er Gealan S7000 + S8000 VEKA SL70

basistherm / Wood and wood-aluminum windows

	PF07681 U=1.23 W/m²K	IV68		PF07781 U=1.06 W/m²K	IV78
	PF07901 U=1.06 W/m²K	IV90			

basistherm / Aluminum windows

90/112 construction series		PF02901_A* PF02901_I* U=0.86 W/m²K	Schüco AWS 90/112
75 construction series		PF02755 U=1.11 W/m²K	Aluprof MB86
75 construction series		PF02754 U=1.11 W/m²K	Schüco AWS75 Heroal W72 Hueck WS72 Wicona Evo 75
75 construction series		PF02753 U=1.11 W/m²K	Schüco AWS75 Heroal W72 Hueck WS72 Wicona Evo 75
70 construction series		PF02701 U=1.18 W/m²K	Schüco AWS70

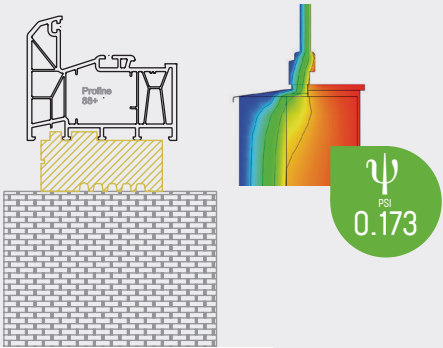
*A = flush exterior I = flush interior

Window installation in the reveal

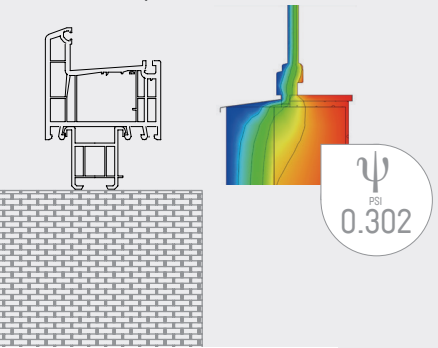
Already with a conventional installation of a window in the reveal, using a basistherm window base junction profile significantly reduces the thermal bridge coefficient. Additionally, windowsills can be screwed on tightly.

In the event of damage through penetrating water, the profile is not destroyed.

PVC window with basistherm



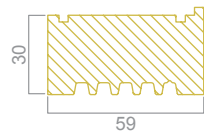
PVC window with PVC base profile



basistherm / Junction profile for door thresholds

To bridge the difference in floor height, the basistherm profiles for door thresholds serve as adapter between door threshold and substructure insulating profiles.

Standard delivery length: 2400 mm
Customized designs can be easily implemented upon request.

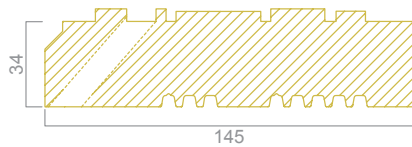


PF08751
U=1.06 W/m²K
Gutmann S80+ | Grundmaier TS566612 | Gealan S7000, S9000
Schüco ADS 75 + SI 82 | VBH greenteQ TB70 – 90 | Roto Eifel

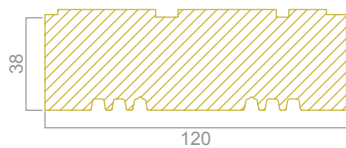
HSTtherm / Junction profile for lift/sliding doors

Heavy lift/sliding doors require a stable substructure that can be installed and set up at the construction in advance, if necessary.

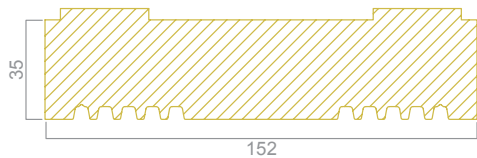
Standard delivery length: 2400 mm
Customized designs can be easily implemented upon request.



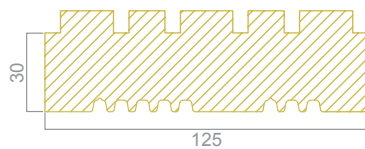
PF09701
U=0.52 W/m²K
Schüco ASS 70



PF09702
U=0.57 W/m²K
GU-thermostep 164



PF09703
U=0.46 W/m²K
Gutmann SC180



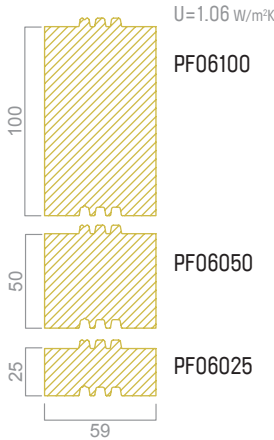
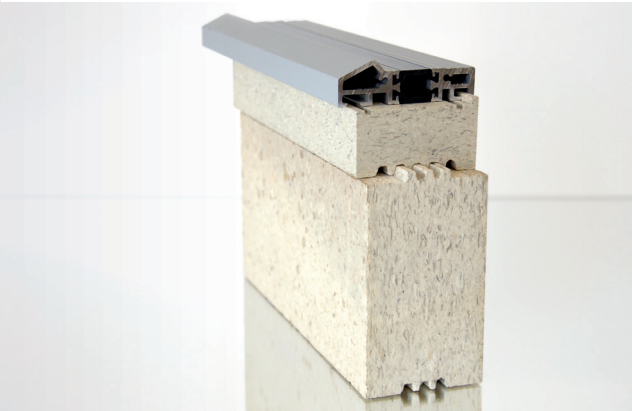
PF09706
U=0.55 W/m²K
MACO 465554W etc.

UDPtherm / Substructure insulating profile

With the substructure insulating profiles, you can adapt all profiles to your desired installation height.
By gluing the individual components with one another, you reduce the number of joints in your floor structure and achieve a stable, waterproof subconstruction for your building element. Customized heights can be attained through combinations of standard heights.

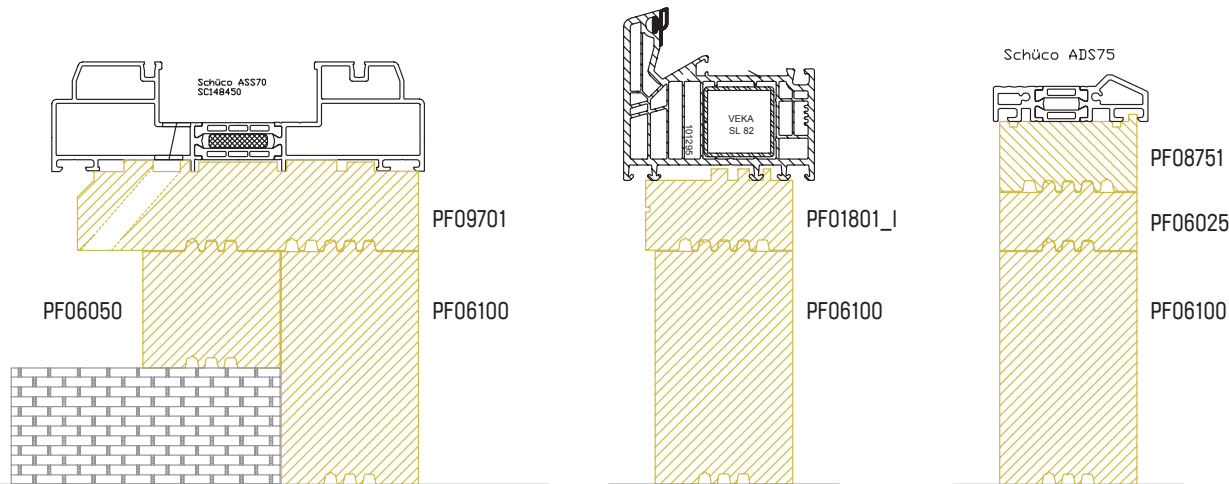
Modifications at the construction site can be made using regular wood-working equipment without sacrificing load bearing capacity or screw withdrawal strength. Customized heights upon request.

Standard delivery length: 2400 mm
Customized designs can be easily implemented upon request.



Installation situation
Windows as elements that reach the floor, door thresholds and lift/sliding door systems

By combining basistherm window base or door threshold junction profiles, HSTtherm lift/sliding door junction profiles, and UDPtherm substructure insulating profiles, any floor structure height can be achieved. Secured with an internal steel angle, the floor recess is also optimally insulated.

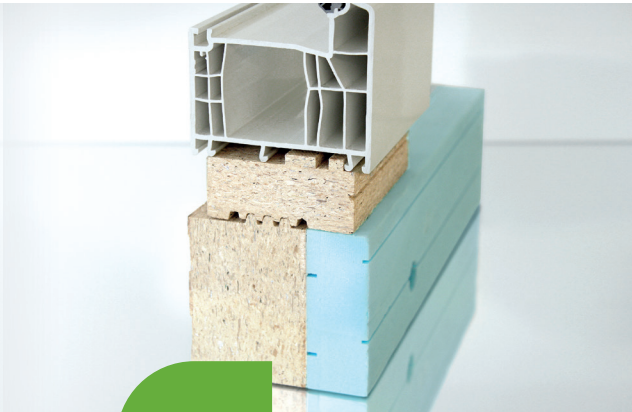
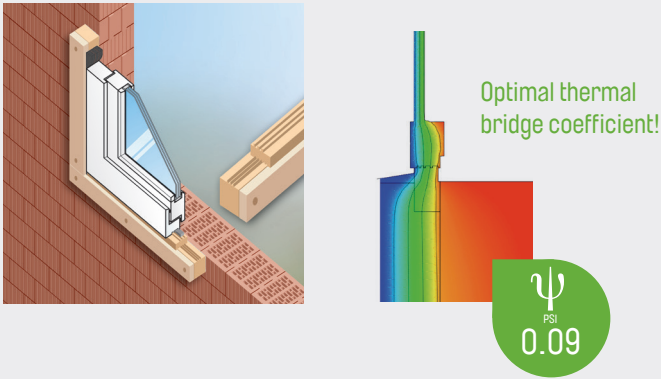


Window installation in the insulation layer or in double-shell masonry

By installing the window in the insulation layer with an installation frame **vowatherm**, the thermal bridge coefficient is again significantly reduced.

Testing of the front wall installation systems in accordance with ift guidelines M0-01/1 and M0-02/1 brought successful results. A comparison of sound measurements between a window installed in the center of the reveal and a window installed with a front wall installation frame with a 200 mm extension did not show remarkable differences. Installation of elements with fall protection (guard rail) directly on the frame only authorized upon consultation!

Please see our information sheet for technical details.



tested

> Extensive testing at ift Rosenheim



+ RC2 tested

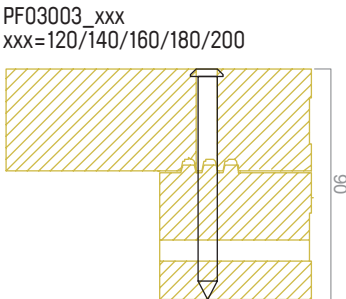
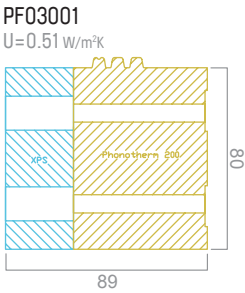


vowatherm / Front wall installation system

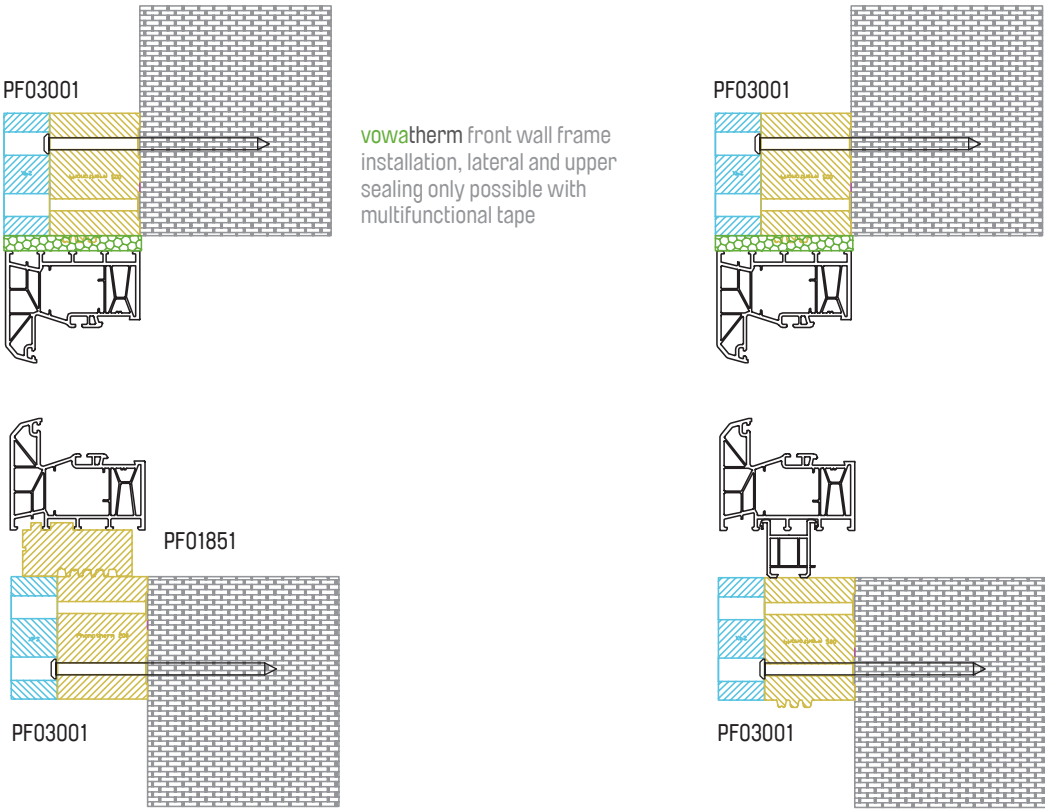
Install your building elements in the insulation layer to achieve thermal optimization and outstanding sound insulating conditions. Save time in the initial installation and easy removal in the event of restoration. Achieve a uniform joint even with structural tolerances.

Standard deliver length: 2400 mm

Project-specific assembly per window available!



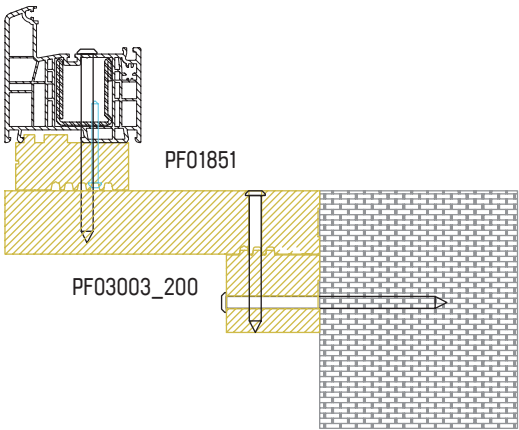
Installation situations



vowatherm front wall frame installation and **basis**therm window base junction profile for frames up to 90 mm in width

vowatherm front wall frame installation with PVC window base junction profile

Please observe minimum distance between screws!



vowatherm front wall frame installation with 200 mm extension and **basis**therm window base junction profile for frames up to 90 mm in width

Overview of our front wall installation system:

- ++ Extensive statics calculation available ++
- Optimal isothermal process
- Optimal airtightness and sound insulation, optimal impermeability to driving rain
- Load transfer and sealing via adhesive
- Fast and secure installation through drilling
- Less piecing together and less waste due to delivery length of 2400 mm
- Installation without primer
- High degree of immediate bond of adhesive > 1-person installation
- No gluing of additional insulating materials
- Angular frames for heavy elements are glued and screwed
- Project-specific assembly and packaging
- Multiple testing of system

TESTS

KERDYN™ GREEN FR

Fire performance DIN 4102 / February 18, 2016 / Holzforschung München (Wood Research Munich)

Fire performance EN 13501 / March 22, 2017 / LNE Trappes

FDKtherm

Testing of joint characteristics of a sealing system between window and building in new condition, as well as after simulated short-term stresses / 17-002602-PR01 (PB-E03-020310-de-01) / December 2017 / ift Rosenheim

LPtherm

Testing of joint characteristics of a sealing system between window and building in new condition, as well as after simulated short-term stresses / 17-002602-PR01 (PB-E03-020310-de-01) / December 2017 / ift Rosenheim

Mortar liability in accordance with DIN EN 1015-12 / February 2018 / ift Rosenheim

UDPtherm

Test of building connection in accordance with ift guideline M0-01/1 – joint characteristics / February 2018 / ift Rosenheim

Test of building connection in accordance with ift guideline M0-02/1 – Section 4.2 / February 2018 / ift Rosenheim

Long-term compressive strength in accordance with ift internal process / December 2017 / ift Rosenheim

RVBtherm

Measurement of airborne sound insulation ISO 10140-2 / April 2015 / Fraunhofer-Institut für Bauphysik IBP (Fraunhofer Institute for building physics)

PHONOTHERM® 200

General building inspectorate test certificate for Phonotherm® 200 / December 18, 2013 / MPA Dresden

Test of airborne sound insulation Phonotherm® 200 / July 6, 2011 / HFB Engineering GmbH / Leipzig

vowatherm

Building component test to test joint characteristics of a sealing and mounting system between window and building in new condition and after simulated short-term stresses / 14-002798-PR03 (PB-E03-020310-de-01) / January 2015 / ift Rosenheim

Sound test to examine the influence of the building connection on the sound insulation of the window
14-002798-PR05 (PB-E03-04-de-01) / January 2015 / ift Rosenheim

Building component test of wind load in the event of failed adhesion
14-002798-PR04 (PB-E03-02-de-01) / January 2015 / ift Rosenheim

Load capacity of window mounting in the installation frame / February 2015 / IFT Rosenheim

Load capacity of adhesion to building before and after simulated aging / February 2015 / IFT Rosenheim

RC2 Test / March 2016 / Prüfinstitut Schlösser und Beschläge Velbert

Certified Passive House Components / September 2016 / Passivhaus Institut Darmstadt

INSTALLATION ACCESSORIES

INSTALLATION ADHESIVE for front wall installation system as well as insulating and sealing wedge



PF11002
Plastic bag
870 g

In the front wall installation system, the hybrid adhesive supports

- > load transfer between front wall installation frame and masonry
- > sealing of the window casings to masonry and to one another
- > bonding and sealing of the window base junction profiles to the casings and to the window frame
- > bonding of the substructure insulating profiles with one another and to the respective base profile

For the insulating and sealing wedge, the hybrid adhesive supports

- > bonding of the insulating and sealing wedge in the reveal
- > mounting and sealing of window base junction profile and insulating and sealing wedge, as well as the lateral end caps
- > bonding of the windowsill onto the insulating and sealing wedge

Base	1 –K– moisture crosslinking silane-terminated polymer	Film formation time – dry at +20 °C / 50% RF application quantity 500µm PE/PVC	approx. 5 min In higher humidity or after spraying adhesive with water, film formation is significantly shorter.
Color in hardened condition	white	Curing speed at +20 °C / 50% RF up to attainment of final hardness	approx. 3 mm in 24 h 7d
Density according to EN 542 at +20°C	approx. 1.47 g/cm³	Temperature range for application	–40°C to +90°C, short term up to +120°C
Shore hardness according to DIN 53505	approx. 70 Shore A	Minimum processing temperature	starting at +10°C
Viscosity at +20°C	highly viscous – pasty		

Community design registered at the Office for Harmonization in the internal market (OHIM).
Granted utility model protection.

Attention – Special Notice:

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Company

P1

Material

P2

basistherm

Window base junction profile

P3+P11

UDPtherm

Substructure insulating profile

P4+P14

HSTtherm

Junction profile for lift/sliding doors

P5+P13

RVBtherm

Frame extension

P6

FDKtherm

Windowsill insulating and sealing wedge

P7

LPtherm

Reveal Panel

P10

vowatherm

Front wall installation system

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Tests

P17

Installation accessories

P17

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