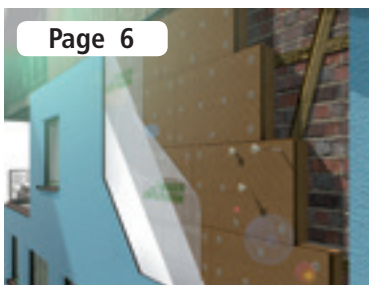
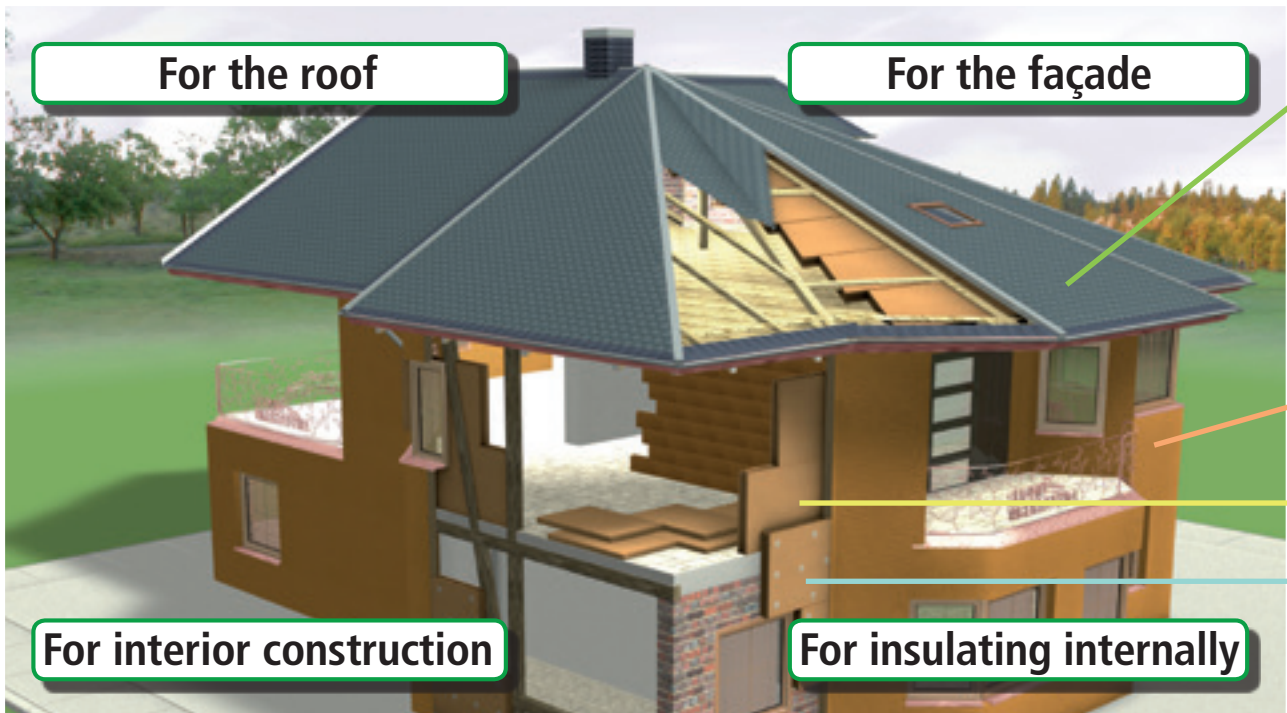


## *Udi*INSULATION SYSTEMS

Last a lifetime – with  
ecological, high-performance,  
wood fibres



# UdiProduct Overview / Wood-fibre insulation



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**UdiRECO® SYSTEM**  
 External thermal insulation composite system with intelligent levelling compensation



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**UdiIN RECO® SYSTEM**  
 The interior insulation system – specially designed for uneven surfaces



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**UdiFRONT® SYSTEM**  
 External thermal insulation composite system with a 15 year guarantee



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**UdiIN® SYSTEM**  
 Interior insulation system with a 15 year guarantee



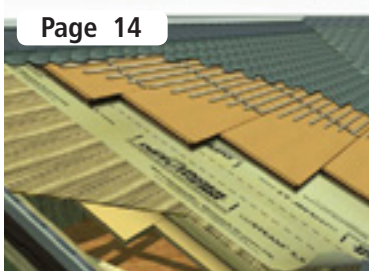
Page 12

**UdiSPEED® SYSTEM**  
 The efficient insulation system for timber-frame buildings



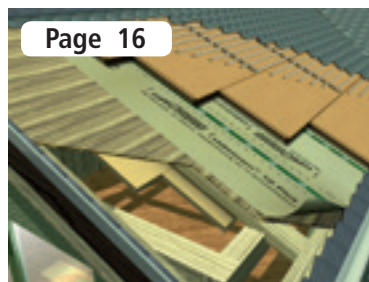
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**UdiIN 2CM® SYSTEM**  
 The quick and slim internal insulation system



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**UdiCLIMATE® SYSTEM**  
 The interior insulation system with integrated climate chambers



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**UdiTOP® SYSTEM**  
 The complete program for your roof



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**UdiSTEP® SYSTEM**  
 Wood-fibre, floor insulation

## For the roof:

### UdiFLEX® SYSTEM

*Flexible planning with a flexible insulation to meet the highest of demands*

### UdiTOP® SYSTEM

*The complete program for your roof*

## For the façade:

### UdiRECO® SYSTEM

*External thermal insulation composite system with intelligent levelling compensation*

### UdiFRONT® SYSTEM

*External thermal insulation composite system with a 15 year guarantee*

### UdiSPEED® SYSTEM

*The efficient insulation system for pre-fabricated, timber-frame buildings*

## For interior construction:

### UdiCLIMATE® SYSTEM

*The interior insulation system with integrated climate chambers*

### UdiSTEP® SYSTEM

*Wood-fibre, floor insulation*

## For interior insulation:

### UdiIN® SYSTEM

*Interior insulation system with a 15 year guarantee*

### UdiIN RECO® SYSTEM

*The interior insulation system – specially designed for uneven surfaces*

### UdiIN 2CM® SYSTEM

*The quick and slim internal insulation system*



# EDITORIAL



**Anka Unger**  
Managing director



**Dipl.-Ing. Bernd Unger**  
Company founder  
Research / Development

## Dear Reader,

It's great that you are interested our products and in a healthy option to insulate your building.

We are a family-run business in the second generation. As early as 1989, the company founder, Bernd Unger, developed the first wood-fibre insulation system for façades that was suitable for direct rendering. That is why we include the words „**The Original**“ in our logo.

Since 1989 we have been a system provider and manufacturer of a whole range of environmentally friendly, innovative, natural wood-fibre insulation systems. Our patented products are used to insulate façades, the interior side of external walls, drywall constructions and roofs. Our first insulation system, so to speak the mother of all our systems, was **UdiFRONT**®. This system is so good that it is still in use and continues to reflect our commitment to producing high quality products. It is comprised of various layers of specially pressed and heat-treated wood fibres. The special manufacturing process ensures a high level of durability, provides the ability to relieve tensions in the façade and optimises the structural properties.

Through our research on a wide range of materials and the experience gained from their practical application, we continuously develop additional, complete system, solutions with fully coordinated material combinations for our customers. Softwood fibres, with their unbeatable natural properties, are the basis for all our products. Approximately 80,000 completed construction projects with satisfied developers, architects and tradesmen are the proof of the excellent quality and high performance of our **UdiWOOD-FIBRE**® insulation products.

Increasing numbers of people are taking their responsibility for the future seriously and insulating their properties with sustainable, innovative insulation systems.

Dear reader, we would like to work together with you as equals and accompany you on the road to a more comfortable future.

Our brochure **UdiINSULATION SYSTEMS**® will take you through to your choice of product.

**That is our aim!**

**“He who chooses the beginning of the road chooses the place it leads to.”**

*Harry Emerson Fosdick*

# UdiCONTRIBUTION TO SUSTAINABILITY

## From softwood to a high-performance insulation material



Our wood-fibre insulation elements for **UdiRECO**<sup>®</sup>, **UdiSPEED**<sup>®</sup>, **UdiIN 2CM**<sup>®</sup> and **UdiCLIMATE**<sup>®</sup> are produced using special equipment. All of our fine quality renders/plasters, paints and filler products are produced according to our own specifications. These products are all standard system components.

The raw materials for our rigid, render-bearing and warp-free insulation boards are comprised to 98% from coniferous timber waste and in the dry process for our flexible insulation boards to 94%. As additives, we employ a maximum of 1.5 % PVAC adhesive to bond the layers of the render-bearing elements and < 6 % textile binder fibres for the flexible elements.

Our systems are always manufactured to comply with CE-conformity standards and the material quality is continually controlled and the systems regularly monitored. Tested and approved constructions can be found in our current planning documentation or in the internet under [www.udidaemmsysteme.de](http://www.udidaemmsysteme.de).

Detailed test reports, expert assessments and official approvals are available upon request.

The task of helping to retain the value of existing and newly-constructed buildings whilst at the same time protecting natural resources remains challenging in these times of continuing energy wastage. **UdiDÄMMSYSTEME** makes a contribution to achieving this difficult goal through our research, production and marketing of environmentally-friendly, wood-fibre insulation systems.

**UdiDÄMMSYSTEME** means:

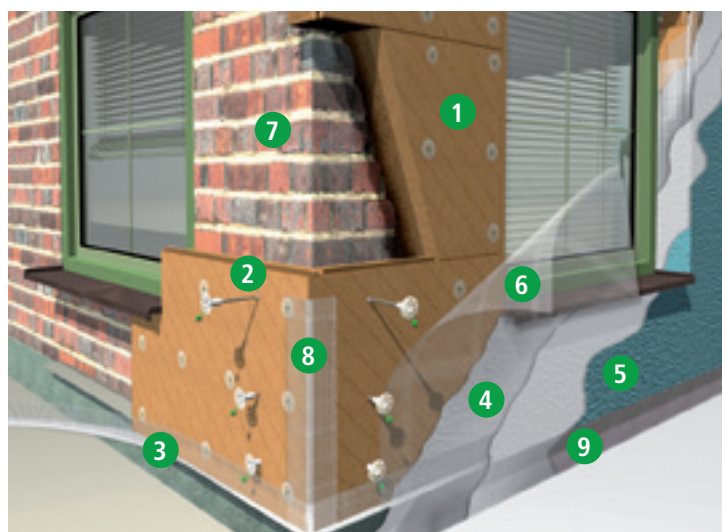
Increased living quality for you and sustainable climate protection for Mother Earth.

Wood fibres grow in natural coniferous trees, accumulate as a waste product in saw mills, store the absorbed CO<sub>2</sub> as a refined insulation material within their structure and make a life-long contribution to CO<sub>2</sub> storage and energy saving. Afterwards they can be returned to the natural cycle by burning or as compost.

**That's what we call sustainability!**

# UdiRECO® SYSTEM

External thermal insulation composite system with intelligent levelling compensation



- 1 UdiRECO® Wood-fibre insulation board
- 2 UdiASSEMBLY® SDM Reco (adjustable fixing – masonry)
- 3 UdiBASE® Plinth-End Cap Profile variable
- 4 UdiFOUNDATION COAT®
- 5 UdiPERL® Primer and Structured Fine Plaster
- 6 UdiREINFORCEMENT® Strengthening Mesh
- 7 Substrate: Masonry – rendered/non-rendered
- 8 UdiREINFORCEMENT® Corner Protection Profile
- 9 Perimeter insulation with UdiPlinth sealing slurry® and plaster coating

## The combination makes the difference.

The insulation system UdiRECO® is made of two different insulation layers. The flexible and soft layer provides a snug fit to the substrate and ensures a perfect insulating fit. The pressure-resistant, render-bearing insulating layer has a tongue and groove profile for optimal wind-tightness. The reinforcing render is applied to this layer and finished with a coat of fine plaster, which is available in various colours and granularities.

## → The advantages

- The soft insulation layer compensates for uneven surfaces
- Façades are better insulated than the current German energy regulations require
- Façades are less likely to develop algae or moss growth due to the “hot water bottle effect” (high thermal storage)
- Façades can be adjusted to an accuracy of a few millimetres
- No back-draughts
- No mould growth caused in living areas or in the construction
- Improved soundproofing
- Quick installation as adhesive is not required

## Components

Coniferous wood  
 max. 0.5 % Paraffin  
 1.5 % PVAc (For bonding the insulation layers)  
 < 6 % Binding fibres in the sandwich construction

## Technical data

Thermal conductivity Declared value $\lambda_D$	0,038/ 0,048 W/mK (compressed)
Design value $\lambda$	0,039 / 0,050 W/mK
Vapour diffusion resistance $\mu$	1 / 5
Condensation retention capacity	ca. 20 % of own weight
Specific enthalpy capacity $c$	2100 J/kg/K
Apparent density	ca. 55 / 270 kg/m <sup>3</sup>
Euroclass fire rating DIN EN 13501-1	E

## Dimensions

Format 1.300 x 790 mm, Coverage: 1.290 x 780 mm  
 Tongue and groove around the whole circumference  
 Insulation thicknesses: 80, 100, 120, 140, 160, 180 and 200 mm



The UdiRECO<sup>SYSTEM</sup> adapts to the surface to provide a snug, wind-tight fit

# UdiIN RECO® SYSTEM

The interior insulation system –  
specially designed for uneven surfaces

**Guaranteed  
15 Years**  
Complete system installed by a  
licensed specialist firm  
**Mould-free**

For insulating internally



- 1 UdiRECO® Wood-fibre insulation board with substrate leveling compensation
- 2 UdiASSEMBLY® SDM Reco (adjustable fixing – masonry)
- 3 UdiFOUNDATION COAT® mineral, vapour-retarding render
- 4 UdiREINFORCEMENT® Strengthening Mesh
- 5 Substrate: Masonry – rendered/non-rendered



Please note the guarantee conditions on page 9

## The insulation system can also be used for the room-side insulation of external walls.

Thermal storage, the intermediate storage of moisture, capillary-active and vapour-permeability - these are the benefits of the UdiIN RECO® interior insulation system. In contrast to foam or mineral-fibre insulation boards, the condensation which develops within system is absorbed, stored temporarily and through the natural drying of the wood fibres is transported back into the room air or to the exterior via the capillary effect.

The insulated component is protected from the excessive build-up of moisture.

Insulating internally using UdiIN RECO® wood-fibre insulation boards does not require a structurally questionable vapour barrier. Instead the functional, mineral render coating UdiFOUNDATION COAT® is applied to the whole surface. This fulfils the functions of a finishing coat, a plaster bearer and provides a targeted regulation of the moisture transport by means of its intelligent vapour-retarding properties.

Based on over 20 years of proven practise, we offer you a 15-year guarantee that there will be no mould growth within the construction. This has been proven in a long-term study, over a period of 10 years, on an installed system; through our practical experience over the last two decades and through the craftsmanship of our network of licensed UdiCERTIFIED INSTALLERS.



## ➔ The advantages

- ➔ Adjustable and compensating – for uneven interior walls
- ➔ No mould growth, guaranteed for at least 15 years
- ➔ Wind-tight and compact against the substrate
- ➔ No adhesive and no moisture from a mortar bed
- ➔ No bearer structures required
- ➔ Directly affixed to the interior of the wall and then adjusted
- ➔ Capillary-active and diffusion-permeable
- ➔ No installation-related drying times
- ➔ Suitable for insulating thick and thin walls from the inside
- ➔ Resonance-free soundproofing due to the combination design
- ➔ The vapour-retarding plaster coat regulates water vapour levels
- ➔ Free choice of finishing coat using lime, clay, paint, wallpaper or tiles or plaster
- ➔ Ideal for listed buildings

## Udi LICENCING 2-Day Seminar

### Day 1 – Theory – At the UdiDÄMMSYSTEME GmbH headquarters

- Why do we insulate?
- The differences between the various **UdiINSULATION SYSTEMS**
- Manufacture of the **UdiPRODUCTS**
- Structural physics „SPECIAL“
- Experiment: Sound / Water vapour / Fire test
- Potential applications / Areas of application / Roof / Façade / Interior construction
- Calculation / Price comparison
- Guarantee system 15 years
- Building reports – Interior insulation
- Sales arguments / Unique selling points
- References

### Day 2 – On-site training – At your own building project site

(You can specify the date for this training day)

- Practical implementation / Detailed installation - special features / Joints and abutments
- Survey of the building



LIZENZIERTER  
**UdiFACHHANDWERKER**

Lizenz.-Nr. .... für

**UdiIN® SYSTEM UdiRECO® SYSTEM**  
**UdiIN RECO® SYSTEM**  
**UdiIN 2CM® SYSTEM**

der Teilnehmer/ Firma

.....

.....

Anwendung

Verarbeitung

Detaillösungen

Systemkomponenten

Bauphysik

Kalkulation

Argumentation



ist berechtigt, sich als **UdiFACHHANDWERKER** zu bezeichnen und die oben genannten Systeme zu verarbeiten.  
Umfangreiche Kenntnisse in Theorie, Praxis und Bauphysik wurden erfolgreich für alle **UdiDÄMMSYSTEME** nachgewiesen.

Der lizenzierte **UdiFACHHANDWERKER** steht mit seinem Namen und mit seinen erworbenen Kenntnissen und Fertigkeiten für höchste Verarbeitungsqualität und Sicherheit.

ORT, DATUM .....

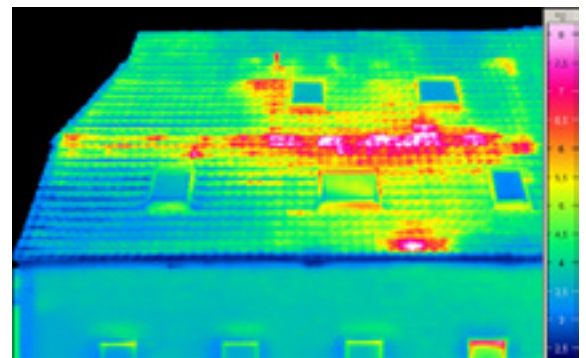
**Udi** DÄMMSYSTEME GmbH

UdiDÄMMSYSTEME GmbH  
Oberhofener Straße 2  
09117 Chemnitz  
Deutschland

Tel: 0371 - 33 71 38 - 0  
Fax: 0371 - 33 71 38 - 64  
info@udidammssysteme.de  
www.udidammssysteme.de

## Udi ARCHITECTS 1-Day Seminar

- Why do we insulate?
- The differences between the various **UdiINSULATION SYSTEMS**
- Exterior and interior insulation
- Fibre manufacturing - Wet and dry processes
- Structural physics „SPECIAL“
- Experiment: Sound / Water vapour / Fire test
- Potential applications / Areas of application / Roof / Façade / Interior construction
- Practical implementation / Detailed installation - special features / Joints and abutments
- Survey of the building



## Udi BUILDING SITE TRAINING

- Individual training in the installation of the **UdiDÄMMSYSTEME** incl. a detailed discussion of all the installation issues relating to the project
- Details of the duration and cost of this training are available on request





# UdiGUARANTEES®

15 years of peace of mind –  
Insulate with our guarantee package

15 YEARS

## Insulate with our additional guarantee package

The ETICS **UdiFRONT®** and the interior insulation systems **UdiIN®** and **UdiIN RECO®**, made from natural wood fibres, have been in use successfully for twenty years and have established themselves in the top class of insulation products. We are so convinced of the quality of our products that we offer developers the choice of an optional guarantee package, when the complete system installation is conducted by a **UdiCERTIFIED INSTALLER**.



Ask about our 15-year GUARANTEE for:

### More than 15 years mould-free

- **unique freedom from mould-growth guarantee**
- lifelong, health-promoting, insulation for you, your family and your children
- excellent vapour permeability and moisture transport ensure no mould development

### More than 15 years warp-free

- **no warping of the insulation boards – guaranteed!**
- storm-proof façade up to wind speeds of 300 km/h with our **UdiFRONT®SYSTEM**
- smooth walls with no warping or bulging
- the fixing heads and board edges stay concealed permanently
- visibly warp-free surfaces - even when coated in very dark colours

15 YEARS  
MOULD-FREE

### More than 15 years crack-free

- together with the insulation boards, our specially developed finishing coatings can absorb movements in the substrate
- consistently dry building substance with no condensation
- crack-free without any gap development
- over 2 million square metres installed with our Original-System – without any cracks developing

### Free choice of colours

- your individual dream colours for the façade are available in the complete colour spectrum
- individual colour-choice for your living areas in combination with **UdiIN®SYSTEM**
- choose from over 1000 colour shades, for example the **UdiCOLOR®SYSTEM** or NCS-System
- all colours, from dark to light, are, when technically feasible, available without any restrictions in the colour luminosity

To ensure the longevity of the system, all building system components and their method of installation must correspond with our licensing specifications and be carried out by a **UdiCERTIFIED INSTALLER**. All construction components must comply with our license conditions. All installed components must correspond to our complete systems.

Developers will receive the full 15-year guarantee for the installed insulation system, if the qualified **UdiCERTIFIED INSTALLER** employs all relevant system components from our product range. A special quality assurance system is an integral component in ensuring a correct installation and the longevity of the system. On completion, the developer will receive the guarantee certificate from the **UdiCERTIFIED INSTALLER**.

# UdiFRONT® SYSTEM

Complete façade protection at its best



- 1 Wood-fibre insulation board **UdiFRONT®**
- 2 System fixings – **UdiASSEMBLY® SDH** for timber substrates or **SDM** for masonry to affix the insulation boards
- 3 The boards are coated with our specially developed **UdiFOUNDATION COAT®** and **UdiREINFORCEMENT® Strengthening mesh** to hinder the development of surface cracks
- 4 The system is finished with a high performance, fine quality plaster coating from the **UdiPERL®** range. This rainproof and air-permeable plaster is available in a large choice of structured finishes and colour shades from the **UdiCOLOR® SYSTEM** (when technically possible, any colour can be supplied, subject to a surcharge). A finishing coat of paint is recommended for very dark coloured plasters to provide a more brilliant colour finish. Optionally, our silicate plaster (**UdiSIKATO®**) or a similar product, may also be used.

The **UdiFRONT® SYSTEM** is an efficient, premium quality, façade insulation system. Its natural wood fibres, of different densities, harmonize with our tried and tested, specially designed, fine quality plasters, which are available in a wide range of colours and structures. The system supports the open-diffusion and vapour-permeable characteristics of the walls, absorbs stresses in the construction and provides complete protection in the form of heat retention, shielding against cold in the winter and heat in the summer and excellent soundproofing. The result is a wonderful room climate.



The user will benefit from significant and permanent energy savings with the added benefit of reduced CO<sub>2</sub>-emissions.

Developers will receive the 15-year guarantee for the installed insulation system from the **UdiCERTIFIED INSTALLER**. The guarantee covers freedom from mould growth, warping, the development of cracks and provides a full choice of colours without any restrictions on the luminosity.

## → The advantages

- made from natural coniferous softwood
- awarded the "natureplus Eco-label" (insulation board)
- recommended as early as 1999 by the environmental magazine ÖKOTEST as the best insulation system
- kind to the skin when handling or installing
- lower energy losses in relation to the building element
- amortisation after 5 years possible
- approved by the German Institute of Building Technology
- long-term experience
- more than 2 million m<sup>2</sup> installed
- soundproofing

# DIBt



## Technical data **UdiFRONT® SYSTEM**

Thermal conductivity Declared value $\lambda_0$	0.043 W/mK
Thermal conductivity Design value $\lambda$	0.045 W/mK
Vapour diffusion resistance $\mu$	5
Specific enthalpy capacity $c$	2100 J/kg/K
Apparent density	ca. 190-210 kg/m <sup>3</sup>
Euroclass fire rating DIN EN 13501-1	E
Dimensions: Format 130 x 79 cm, 250 x 125 cm (60 mm), Tongue and groove around the whole circumference; Insulation thicknesses: 60, 80, 100 and 120 mm (use multiple layers for greater thicknesses)	

### System approval

Z-33.47-663 for timber substrates



**UdiFRONT® SYSTEM** has established itself as an unbeatable insulation solution for timber-framed buildings.

# UdiIN<sup>®</sup> SYSTEM

Interior insulation system with a 15 year guarantee

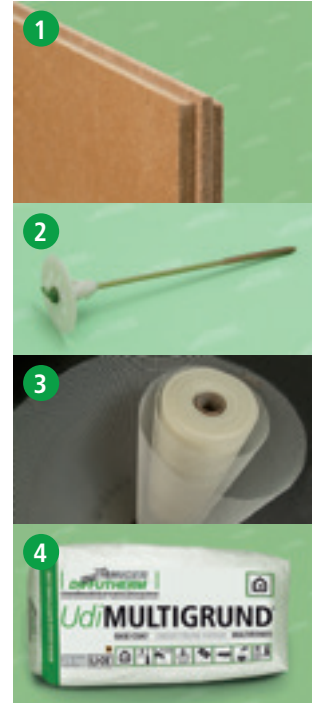


Please note the guarantee conditions on page 9



- 1 Wood-fibre insulation board **UdiIN<sup>®</sup>**
- 2 **UdiASSEMBLY<sup>®</sup> SDM Fixing**
- 3 **UdiREINFORCE-MENT<sup>®</sup> Strengthening Mesh**
- 4 **UdiFOUNDATION COAT<sup>®</sup>**
- 5 **UdiLIVE<sup>®</sup> Loam Base Render**

Substrate (Masonry, half-timbered or timber-frame)



For the demanding developer **UdiIN<sup>®</sup> SYSTEM** is the solution of choice for existing buildings which can not or should not be insulated externally e.g. listed buildings, those abutting property boundaries or simply to retain the current optical look.

The system's breathability, soundproofing and active vapour diffusion properties with an integrated, water vapour retarder ensure a controlled moisture level within the insulation layer, a short drying-out period and provide a warm and comfortable room climate.

## → The advantages

- specially-designed system
- in use for 20 years
- the solution for rooms with limited space
- universally applicable
- diffusion-permeable and 'breathable'
- reduces noise levels
- stores heat
- all types of finishing coatings possible

## UdiFOUNDATION COAT<sup>®</sup> = intelligent vapour retarder + render-bearer

A special coating for interior insulation systems from **Udi-DÄMMSYSTEME**. This intelligent vapour retarder limits the level of condensation. It serves as a reinforcement coat and bearer layer for fine quality plasters, paint, wallpaper, tiles and other coatings.

Granularity: ca. 0.4 mm;

Compressive strength: ca. 4 - 9 N/mm<sup>2</sup>; μ-Value: ca. 125;

Reinforcement layer thickness: min. 4 mm (according to the required vapour retardation value)

## Technical data UdiIN<sup>®</sup> SYSTEM

Thermal conductivity Declared value $\lambda_D$	0.043 W/mK
Thermal conductivity Design value $\lambda$	0.045 W/mK
Vapour diffusion resistance $\mu$	5
Specific enthalpy capacity $c$	2100 J/kg/K
Apparent density	ca. 190-210 kg/m <sup>3</sup>
Euroclass fire rating DIN EN 13501-1	E
Dimensions: Format 130 x 79 cm,	
Tongue and groove around the whole circumference	
Insulation thicknesses: 60, 80, 100 and 120 mm (use multiple layers for greater thicknesses)	

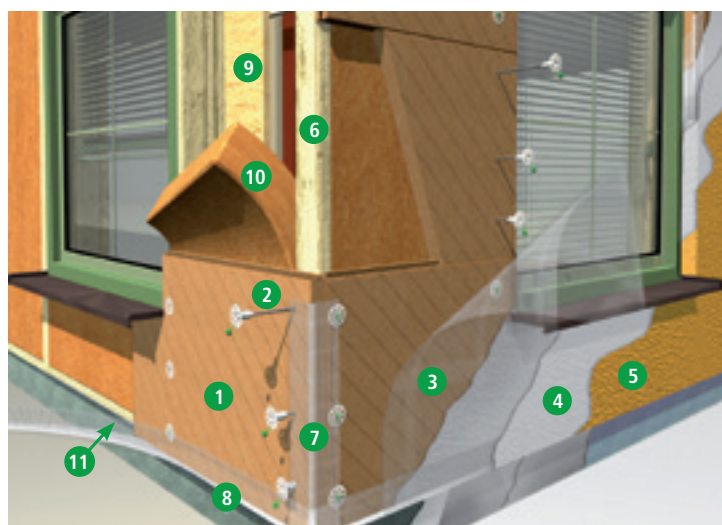
### System approval

Z-33.47-663 for timber substrates



# UdiSPEED® SYSTEM

The efficient insulation system for timber-frame buildings



- 1 UdiSPEED® or UdiFRONT® Wood-fibre insulation board
- 2 UdiASSEMBLY® SDH (adjustable fixing – timber constructions) oder UdiASSEMBLY® Staples
- 3 UdiREINFORCEMENT® Strengthening Mesh
- 4 UdiFOUNDATION COAT®
- 5 UdiPERL® Fine quality plaster or similar
- 6 Substrate: Timber-frame construction, directly clad
- 7 UdiREINFORCEMENT® Corner Protection Profile
- 8 UdiBASE® Plinth End-Cap Profile variable
- 9 Bracing area with wood-based board
- 10 UdiFLEX® flexible wood-fibre insulation board for the void
- 11 UdiJOINTING TAPE®

The UdiSPEED® SYSTEM embodies our many years of experience in the field of timber constructions. The corresponding system components, such as fixings, connecting profiles and plaster coatings round off the vapour-permeable system. The tried and tested, easy to handle format with tongue and groove joints around the whole circumference provides stability and a formed fit without thermal bridges. The UdiSPEED® offers you top-quality combined with sophisticated thermal insulation technology.

## Technical data UdiSPEED® SYSTEM

Thermal conductivity Declared value $\lambda_D$	0.048 W/mK
Thermal conductivity Design value $\lambda$	0.050 W/mK
Vapour diffusion resistance $\mu$	5
Condensation retention capacity	ca. 20 % of own weight
Specific enthalpy capacity c	2100 J/kg/K
Longitudinal flow-resistance as a complete system	> 5 kNs/m <sup>4</sup>
Apparent density	ca. 270 kg/m <sup>3</sup>
Euroclass fire rating DIN EN 13501-1	E

### Components:

Coniferous wood, max. 0.5 % Paraffin, 1.5 % PVAc (For bonding the insulation layers)

### System approval

Z-33.47-663 for timber substrates

## → The advantages

- warp-free due to the diagonally grooved surface
- meets the highest demands of timber construction
- short drying times
- space-saving due to slim wall constructions
- healthy accommodation
- universal use for renovations



UdiSPEED® is suitable for installing directly to the substrate in new and existing timber constructions (e.g. here with a timber-frame building)

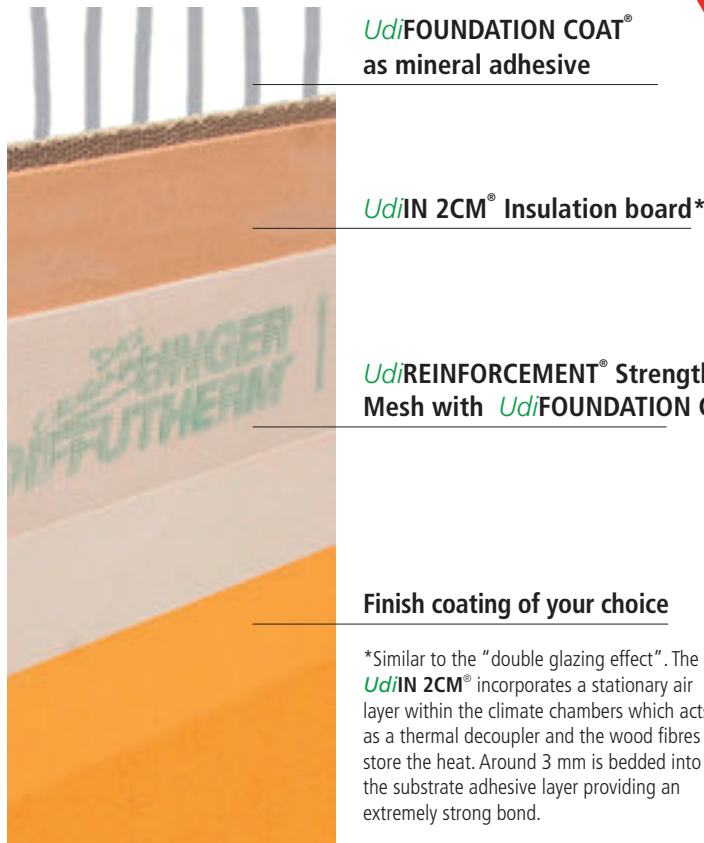
# UdiIN 2CM<sup>®</sup> SYSTEM

The quick and slim internal insulation system

**INNOVATION**  
Based on 25 years of experience

- Quick
- Slim
- Warm

For interior construction



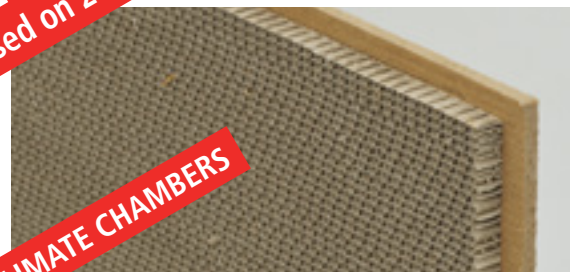
UdiFOUNDATION COAT<sup>®</sup>  
as mineral adhesive

UdiIN 2CM<sup>®</sup> Insulation board\*

UdiREINFORCEMENT<sup>®</sup> Strengthening  
Mesh with UdiFOUNDATION COAT<sup>®</sup>

Finish coating of your choice

\*Similar to the "double glazing effect". The UdiIN 2CM<sup>®</sup> incorporates a stationary air layer within the climate chambers which acts as a thermal decoupler and the wood fibres store the heat. Around 3 mm is bedded into the substrate adhesive layer providing an extremely strong bond.



CLIMATE CHAMBERS

UdiIN 2CM<sup>®</sup> Insulation board\*

Our interior insulation is not only simple and thereby cost-efficient to install but UdiIN 2CM<sup>®</sup> also provides decisive energy-saving benefits, especially in rooms that are only sporadically used and heated (assembly halls, residential rooms etc.).

The internally insulated rooms can be heated very quickly as the solid external walls must not be warmed along with the room. This factor is often overlooked and offers huge potential for saving energy.

In a test measurement on a building with traditional brick walls, the U-value improved from 1.3 before to 0.5 after the installation.

- Quickly installed without wall plugs
- Warm wall surfaces
- For every room where space is limited
- Increases the surface temperature
- Bridges cracks
- The sensation of cold disappears

## → Applications

- Listed buildings
- Private houses, apartments
- Schools, hospitals, kindergartens
- Community and assembly rooms
- Holiday homes, offices and many more

## → The advantages

- Easy installation
- Cost-saving attachment and fixing
- Sporadically used rooms warm up very quickly
- Perceptibly warmer exterior wall surfaces in winter
- Helps to save energy
- Reduces noise pollution within buildings
- Reduces e.g. the U-value of a sandstone wall by half!
- Impedes mould growth
- No restrictions in the choice of finishing coating

Of course, this principle can also be applied to ceilings and internal roof slopes in need of renovation.



This sight of this beautiful façade has been retained thanks to UdiIN 2CM<sup>®</sup> internal insulation

### Technical data:

Thermal conductivity Design value  $\lambda$ : 0.070 W/mK  
Apparent density wood fibre: 210 kg/m<sup>3</sup>  
Thickness: 23 mm (3 mm in the adhesive bed)  
Format: 115 x 75 cm  
Euroclass fire rating - wood fibre as per DIN EN 13501-1: E  
Waste Code as per EWC-Code: 030105, 170604  
Wood fibre manufacture and conformity control as per DIN EN 13986

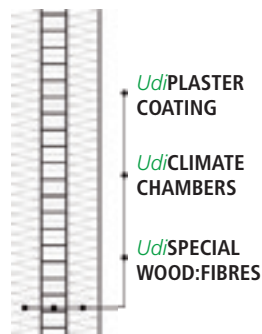
# UdiCLIMATE® SYSTEM

The interior insulation system with integrated climate chambers

THE NEW WAY TO BUILD – LIGHT & EASY



UdiCLIMATE® is applicable as an underside, roof insulation board or dry lining layer for walls



**Up to a 50% reduction in the sound energy**

UdiCLIMATE® is an extremely versatile interior construction board that can be directly plastered. It can be used as an internal, rafter insulation and for ceiling areas as well as on stud walls and substructures. The board is free from harmful substances and is easy to install. The three interconnected capillary-active insulating layers, consisting of a layer of almost stationary air columns in a special, climate-chamber, cell structure enclosed within two wood fibre layers, harmonize perfectly.

This sandwich structure guarantees flexural rigidity without any warping of the surface when used with plasters or blown-in insulation. In a test report, the airborne noise measurements before and after the installation show a halving of the incident sound energy, despite the slim construction. UdiCLIMATE® is the natural alternative to traditional cladding options.

## ➔ The advantages

- ➔ Highly insulating despite its slim construction
- ➔ easy one-man installation
- ➔ can be coated with loam/clay and lime plasters
- ➔ maintains the room climate and absorbs cold radiation
- ➔ up to 80 cm centre-lines with offset mounting pattern

## Technical Data UdiCLIMATE® SYSTEM

Format	115 x 75 cm
Insulation thickness	30 mm
Coefficient of thermal resistance R	0.604 m² KW
Weight per board	ca. 4.65 kg
Vapour diffusion resistance	5
Apparent density wood-fibre layer	210 kg/m³
Euroclass fire rating DIN EN 13501-1:	E
Vapour retardation value with UdiFOUNDATION COAT	ca. 1 Meter

Test report: MFPA Nr. PB.4.2/16-154-1

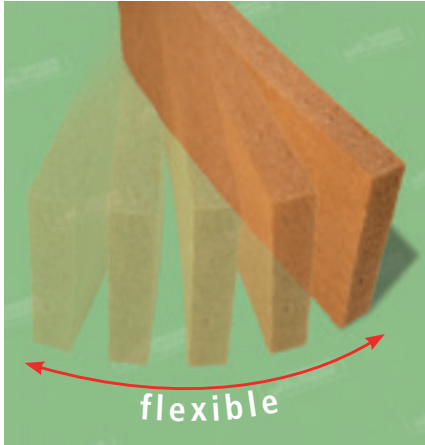
### Components:

- 66.0 % natural fibres from coniferous waste wood
- 31.0 % Kraft paper from natural wood
- 1.5 % Sodium silicate
- 0.5 % Marble dust and binding agent

**FLEXIBLE**

# UdiFLEX<sup>®</sup> SYSTEM

*Plan and insulate flexibly – to meet the highest demands*



Suitable for use in the following areas (in accordance with EN 4108-10):



Insulation of timber-framed constructions



Insulation between rafters and battens

Due to its snug-fitting characteristics and resistance to settling, it fits into any void. UdiFLEX<sup>®</sup> is kind to the skin and does not cause any irritation. In combination with our special UdiSTEAM<sup>®</sup> SYSTEM it is possible to create insulated constructions which are vapour permeable but also air-tight. Moisture is absorbed and then released again without affecting the building structure or the properties of the insulation. Buildings insulated with the UdiFLEX<sup>®</sup> remain cooler for longer in the hot summer months. A heat shield of over 10 hours is possible with an insulation thickness of only 20 cm – without the need to use any extra air-conditioning systems.

## → The advantages

- Regulates the air moisture due to its high absorbency
- Large thermal storage capacity for summer heat shielding
- Resonance-free acoustic absorption due to the fibre structure
- Kind to the skin and irritation-free
- Simple to use – suitable for a wide range of applications
- Adaptable to all construction situations



## Technical data UdiFLEX<sup>®</sup> SYSTEM

Thermal conductivity Declared value $\lambda_0$ DIN EN 13 171	0.038 W/mK
Thermal conductivity Design value $\lambda$	0.039 W/mK
Euroclass fire rating DIN EN 13501-1	E
Apparent density	ca. 55 kg/m <sup>3</sup>
Vapour diffusion resistance	1
Specific enthalpy capacity c	2100 J/kg K

### Components:

93% softwood fibres, ca. 7 % Polyolefin binding fibres and traces of ammonium phosphate fire retardant agent



UdiFLEX fits into every gap



# UdiTOP<sup>®</sup> SYSTEM

*The complete program for your roof*



A third of the energy generated to heat a house is lost through an uninsulated roof. Whether you own an old house or are planning to build a new one, the **UdiTOP<sup>®</sup>** provides you with a vapour permeable roof construction that insulates and blocks the radiation of the cold from the outside, thereby ensuring that the interior remains warm. The insulation boards can also be installed as an extra insulating layer on rear-ventilated façades.

The **UdiTOP<sup>®</sup> SYSTEM** deliberately does not employ water vapour barriers thereby ensuring that the roof can breathe - allowing a natural moisture exchange between the interior and exterior air. This creates a warm, comfortable, room climate and combats the development of mould. The **UdiTOP<sup>®</sup> SYSTEM** combines environmental-friendliness with comfort. This sophisticated combination of thermal insulation and vapour permeability provides an outstanding insulation solution, regardless of whether it is for installation on top of or between the rafters or for cladding constructions. The health-promoting properties of the **UdiTOP<sup>®</sup> SYSTEM** combined with its excellent building physics values makes it the right insulation system for you and your property!



## Technical Data UdiTOP<sup>®</sup> SYSTEM

Parameters / Test Standard	Classification	
	UdiTOP <sup>®</sup>	UdiTOP <sup>®</sup> Premium
Thermal conductivity $\lambda_D$ DIN EN 13171	0.048	0.046 W/mK
Design value	0.050	0.048 W/mK
Fire behaviour classification DIN EN 13501-1	E	E
Apparent Density EN 1602	ca. 270	ca. 240 kg/m <sup>3</sup>
Compressive strength	$\geq 200$ kPa	$\geq 100$ kPa
Water vapour diffusion resistance coefficient EN 12667 $\mu$	5	5
Specific enthalpy capacity c DIN EN ISO 10456	2100 J/kg K	2100 J/kg K

### Components

Natural coniferous waste wood, lignin binding agent  
Waste Code EWC-Code 030105

### Manufacture and conformity control

EN 13 171

Available insulation thicknesses:

**UdiTOP<sup>®</sup>**: 22, 35, 52, 60 mm

**UdiTOP<sup>®</sup> Premium**: 60, 80, 100, 120 mm

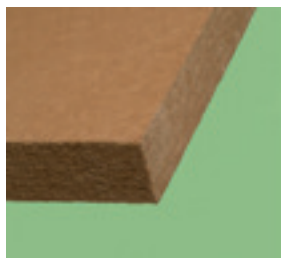


**UdiTOP<sup>®</sup> – summertime heat shielding and windproofing combined in one product**



# UdiSTEP® SYSTEM

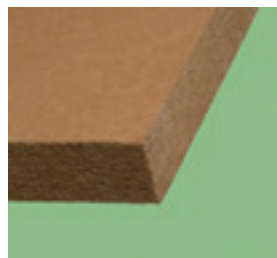
*Insulation system for warm, sound-absorbing, floors*



**UdiTHERM® SK**  
With flat edges  
Living areas



**UdiSTEP® 8**  
Beneath laminate flooring



**UdiTHERM® strong**  
Pressure-resistant, beneath  
screed  
Business premises



**UdiTHERM® NF**  
With tongue and groove  
edges  
Living areas

This insulation system offers a wide range of products for all floor areas, from the floor of a ventilated roof area to insulating under a laminate floor covering. Here you will find an individual insulation board solution that is right for you. Due to its high compressive strength, the system is applicable universally and is equally ideal for various types of floor constructions. You'll feel the natural difference to standard insulation boards.

## ➔ *The advantages*

- ➔ Sound insulating
- ➔ Footfall-noise absorbent
- ➔ Available in various combinations from 8 to 200 mm
- ➔ Heat retaining

**UdiSTEP® SYSTEM** for loft floors (limited loading/tread weight)

**Example construction** from top to bottom

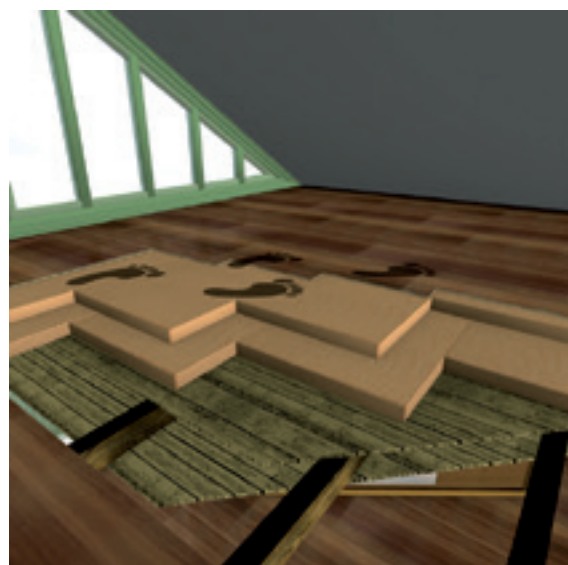
**UdiTHERM® strong** 80 mm

**UdiTHERM® SK** 80 mm

Unfinished or existing floor, e.g. for standard, timber joist floors or concrete with a moisture retarder membrane



## Installation example:



# UdiSTEAM<sup>®</sup> SYSTEM

*Efficient and ecological, air- and wind-tight sealants*

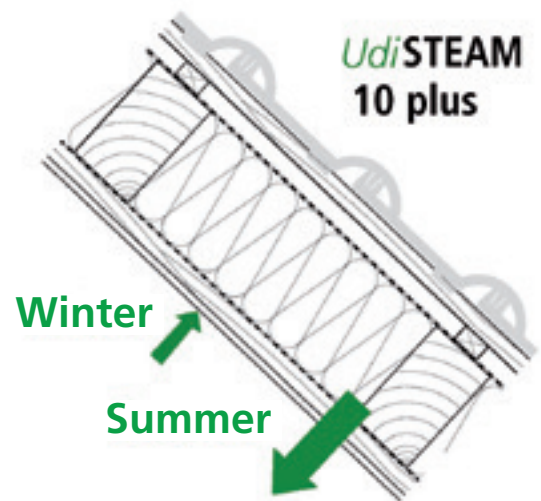


**Wind sealant sheeting, vapour retarders and specially developed adhesives**

After many years of research and development work in the area of thermal optimisation, **UdiDÄMMSYSTEME** have managed to achieve a symbiosis between functionality and efficiency with our **UdiSTEAM<sup>®</sup> SYSTEM**. This reliable system provides a high level of air-tightness whilst ensuring that the building remains vapour permeable. Our economical vapour retarders and wind sealant sheeting, combined with our specially developed adhesive systems, provide a comprehensive range of solutions in order to protect your house from the effects of external and internal moisture ingress.

Our wide range includes high-performance vapour retarders made from Kraft-paper and also modern, 'intelligent' vapour retarders with moisture variable SD-values between 1 and 12 metres which adapt to the humidity level. If desired, the sheets can be joined together using our special, flexible, adhesive tapes or permanently bonded using liquid adhesive. Comprehensive laboratory tests and practical experience have confirmed the long-term functionality of our products and ensure ease of installation and a structurally secure construction.

## MOISTURE-ACTIVE



**Structurally perfect and energy-saving**

# UdiSERVICE

## UdiDELIVERY

Our efficient logistics system guarantees quick deliveries and the permanent availability of our products and systems wherever they are needed – regardless of whether you need a box of fixings or full truckload of insulation boards.



## UdiCONTACT

Under the telephone number +49 (0) 371-33 71 38 0 you can reach our team of specialists who will be happy to answer your questions relating to **UdiINSULATION SYSTEMS** und **UdiBUILDING PRODUCTS**.



## UdiPLANNING

**UdiDÄMMSYSTEME** offers a complete service providing building physics expert knowledge and information on the statutory requirements relating to the insulation market. In order to help you calculate the material need for your project, we provide a comprehensive calculation help program in the internet.



## UdiTRAINING

In our training centre at the **UdiDÄMMSYSTEME** Company HQ, our team offers a comprehensive training and education program for all interested parties such as architects, planners, energy advisors or tradesmen, developers, students or apprentices. Tradesmen can also obtain an installers license.

**BECOME A LICENSED PARTNER**



## The UdiGUARANTEE – an overview

Our **UdiFRONT**® and **UdiIN**® insulation systems are manufactured to the highest quality standards and all components are optimally matched. They are subject to continuous quality controls. If all the original **UdiComponents** are used and the system is correctly installed by a licensed **UdiCERTIFIED INSTALLER**, we provide a 15-year guarantee covering the functionality of the system and the following properties: no development of cracks, no mould growth in the construction, no bulging or warping of the surfaces and an unrestricted choice of colours for the façade.

**OPTIONAL 15-YEAR GUARANTEE**



## UdiENVIRONMENT

Our **UdiPRODUCTS** insulation materials are manufactured exclusively from softwood waste fibres from renewable sources. In 1999, our façade insulation system **UdiFRONT**® was tested and recommended by the leading German ecological consumer magazine "Öko-Test" as the 'best in class' thermal insulation system. Our renewable insulation materials absorb large quantities of CO<sub>2</sub> during the growth phase and keep it stored permanently during use. These are significant advantages over insulation products that are produced from oil. All waste material and off-cuts can be disposed of or composted without any problems.



## UdiDATA

Technical and safety data sheets, test certificates and official Building Inspectorate approvals for all of the products and systems offered in this brochure are available, upon request, in printed form or can be downloaded from our homepage under [www.udidaemmsysteme.de](http://www.udidaemmsysteme.de).



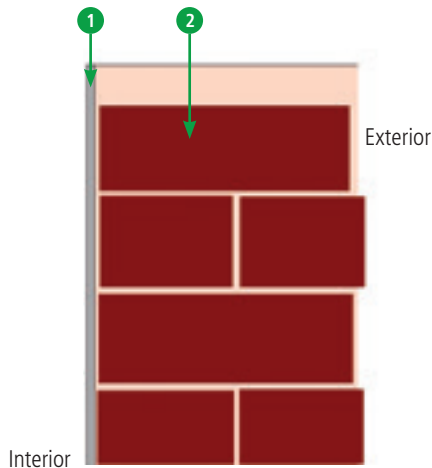
# UdiINSULATION SYSTEMS

*in use – Example calculations*

## WALL – Solid brickwork (older/existing building), plastered on both sides – FAÇADE INSULATION

### BEFORE

Construction from the interior to the exterior

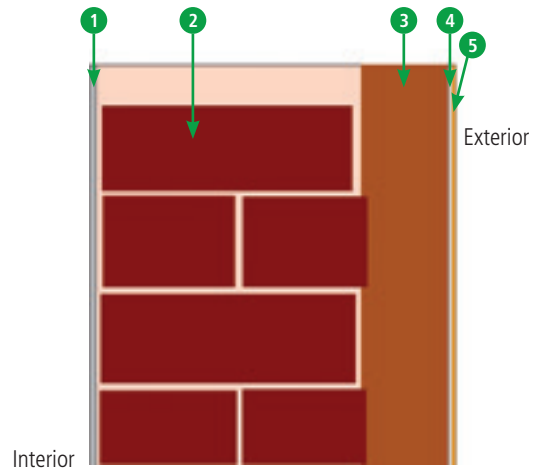


- 1 Interior lime plaster 15 mm
- 2 Traditional solid brick 365 mm

U-value: 1.51 W/m<sup>2</sup>K  
 Phase change: 12.9 hrs.  
 Surface temperature: 14.1° C



### AFTER

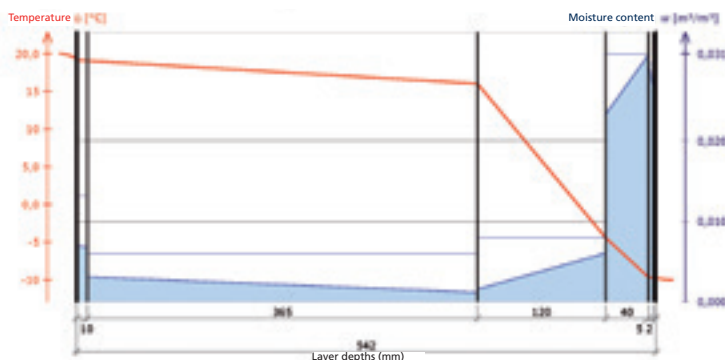


- 1 Interior lime plaster 15 mm
- 2 Traditional solid brick 365 mm
- 3 UdiRECO® Insulation system 160 mm
- 4 UdiFOUNDATION COAT® 5 mm
- 5 UdiPERL® Fine plaster 2 mm

0.22 W/m<sup>2</sup>K  
 19.5 hrs.  
 19.1° C



### Temperature and moisture profile



Condensation (super-hygroscopic moisture) is shaded in blue!

This construction configuration meets the current German energy-efficiency regulations' standards. An improvement of around 85 %, based on the insulated external surface, was achieved. The summertime heat shielding increased by around 5 hours. The construction remained vapour-permeable and capillary-active. The room climate was maintained.

### Explanation:

The U-value (formerly the k-value) is the unit for the thermal insulation properties of building elements. The phase change denotes the time (in hours) for the afternoon heat maximum to progress from the exterior to the interior of the construction. This value is decisive in assessing the summertime heat shielding of building elements. The surface temperature is dependent on the characteristics of usage for the building.



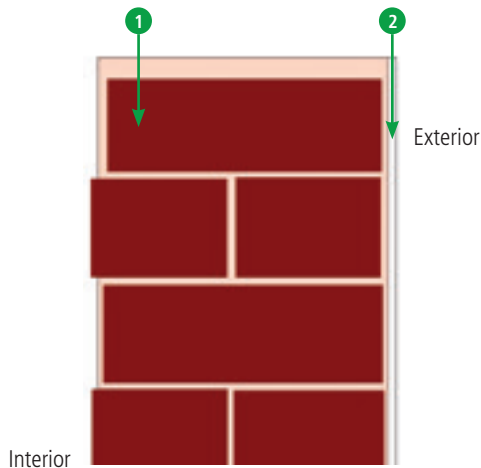
# UdiINSULATION SYSTEMS

*in use – Example calculations*

## WALL – Solid brickwork (older/existing building), plastered on both sides – INTERIOR INSULATION

### BEFORE

Construction from the interior to the exterior

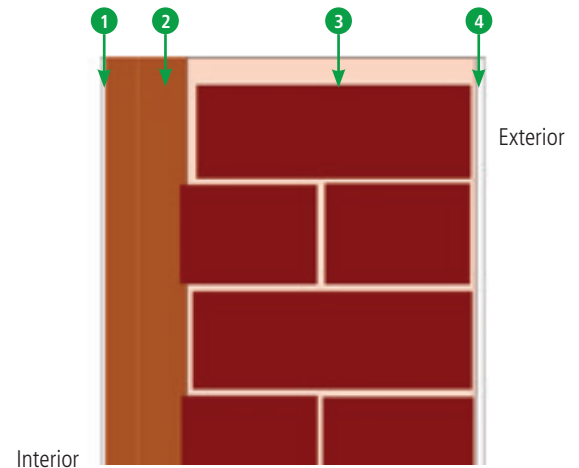


- 1 Traditional solid brick 365 mm
- 2 Exterior mineral plaster 10 mm

U-value: 1.51 W/m<sup>2</sup>K  
 Phase change: 12.9 hrs.  
 Surface temperature: 14.1° C



### AFTER

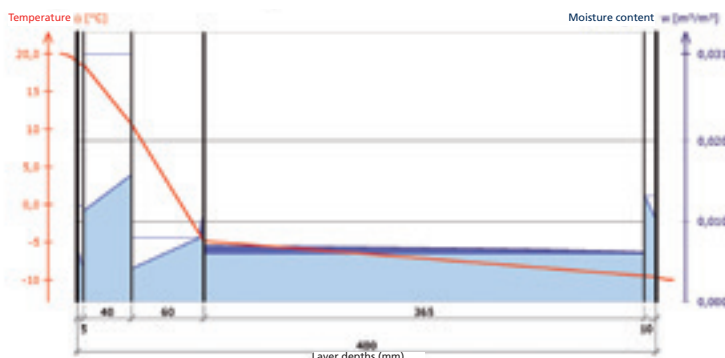


- 1 UdiFOUNDATION COAT® 5 mm
- 2 UdiIN RECO® Insulation system 100 mm
- 3 Traditional solid brick 365 mm
- 4 Exterior mineral plaster 10 mm

0.34 W/m<sup>2</sup>K  
 19.5 hrs.  
 18.7° C



### Temperature and moisture profile



Condensation (super-hygroscopic moisture) is shaded in blue!

This construction configuration meets the current German energy-efficiency regulations' standards. An improvement of around 77 %, based on the insulated external surface, was achieved. The summertime heat shielding increased by around 5 hours. The construction remained vapour-permeable and capillary-active. The room climate was maintained.

#### Explanation:

The U-value (formerly the k-value) is the unit for the thermal insulation properties of building elements. The phase change denotes the time (in hours) for the afternoon heat maximum to progress from the exterior to the interior of the construction.

This value is decisive in assessing the summertime heat shielding of building elements. The surface temperature is dependent on the characteristics of usage for the building.



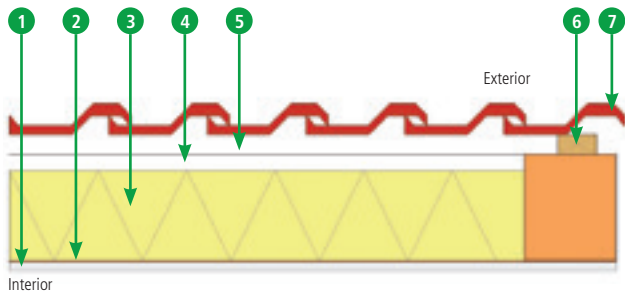
# UdiINSULATION SYSTEMS

*in use – Example calculations*


## ROOF – RENOVATION

### BEFORE

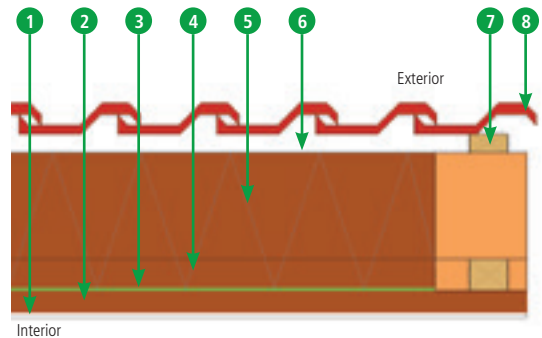
Construction from the interior to the exterior




- 1 Gypsum board 12,5 mm
- 2 Vapour retarder membrane 0,3 mm
- 3 Mineral wool 120 mm
- 4 Air layer 20 mm
- 5 Membrane 0,5 mm
- 6 Rear-ventilated battens 25 mm
- 7 Roof covering

U-value: 0.41 W/m<sup>2</sup>K  
 Phase change: 5.0 hrs.  
 Temperature-amplitude-ratio (TAV): 0.36 (36 %) 

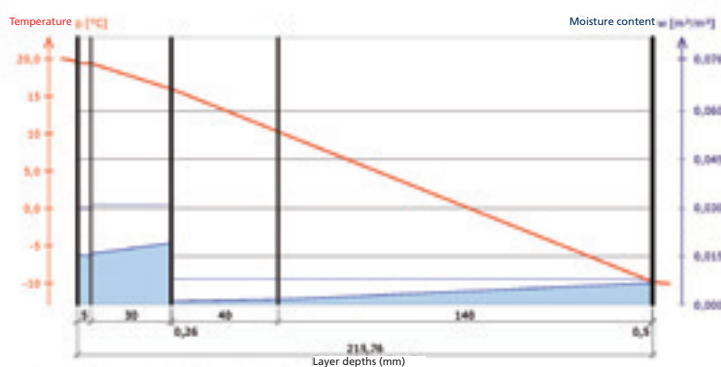
### AFTER



- 1 UdiFOUNDATION COAT® 5 mm
- 2 UdiCLIMATE® 30 mm
- 3 UdiSTEAM® 10 plus 1 mm
- 4 UdiFLEX® Insulation board flexible 40 mm
- 5 UdiFLEX® Insulation board flexible 140 mm
- 6 Membrane 0,5 mm
- 7 Rear-ventilated battens 25 mm
- 8 Roof covering

U-value: 0.23 W/m<sup>2</sup>K  
 Phase change: 10.5 hrs.  
 Temperature-amplitude-ratio (TAV): 0.076 (8 %) 

### Temperature and moisture profile



Condensation (super-hygrosopic moisture) is shaded in blue!

This construction configuration meets the current German energy-efficiency regulations' standards. An improvement of around 43 %, based on the insulated external surface, was achieved. The summertime heat shielding increased from 5 hours before to 10.5 hours after. The construction remained vapour-permeable and capillary-active. The room climate was maintained.

### Erläuterungen:

The U-value (formerly the k-value) is the unit for the thermal insulation properties of building elements.

The phase change denotes the time (in hours) for the afternoon heat maximum to progress from the exterior to the interior of the construction.

The temperature-amplitude-ratio (TAR) is the temperature difference of the inner surface divided by the temperature difference of the outer surface of a particular building element.

The last two values are decisive in assessing the summertime heat shielding of building elements.

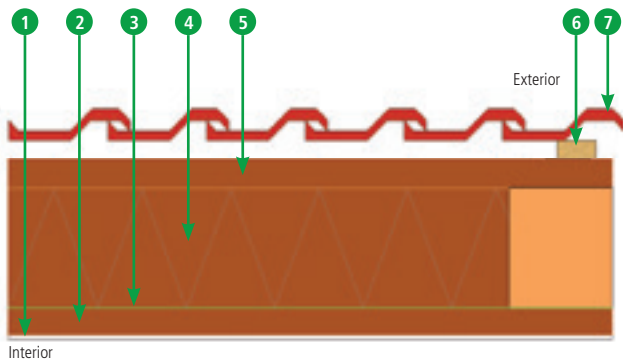


# UdiINSULATION SYSTEMS

*in use – Example calculations*

## ROOF – NEW CONSTRUCTION

Construction from the interior to the exterior

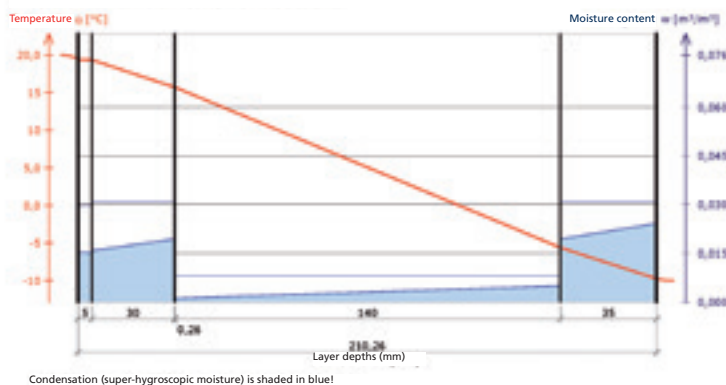


- 1 UdiFOUNDATION COAT® 5 mm
- 2 UdiCLIMATE® 30 mm
- 3 UdiSTEAM® 10 plus 0,26 mm
- 4 UdiFLEX® Insulation board flexible 140 mm
- 5 UdiTOP® 35 mm
- 6 Rear-ventilated battens 25 mm
- 7 Roof covering

U-value: 0.23 W/m²K  
 Phase change: 11.2 hrs.  
 Temperature-amplitude-ratio (TAV) 0.025 (3%)



### Temperature and moisture profile



This construction configuration meets the current German energy-efficiency regulations' standards. The level of summertime heat shielding achieves an optimal value of over an 11-hour phase change. The whole roof construction is planned to be completely vapour-permeable and capillary-active. This leads to a stable, uniform room climate under the roof.

#### Erläuterungen:

The U-value (formerly the k-value) is the unit for the thermal insulation properties of building elements.

The phase change denotes the time (in hours) for the afternoon heat maximum to progress from the exterior to the interior of the construction.

The temperature-amplitude-ratio (TAR) is the temperature difference of the inner surface divided by the temperature difference of the outer surface of a particular building element.

The last two values are decisive in assessing the summertime heat shielding of building elements.



We will prepare a complete and non-binding offer including structural physics calculations for **UdiSYSTEMS®** for your building. Please complete the following form and include a sketch of the cross-section of the wall(s) and send it us either by fax or by post. For window sills, please send us a separate request.

Planner: \_\_\_\_\_

Developer: \_\_\_\_\_

Contact person: \_\_\_\_\_

Contact person: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

Post code, town, country: \_\_\_\_\_

Post code, town, country: \_\_\_\_\_

Telephone: \_\_\_\_\_

Telephone: \_\_\_\_\_

Telefax: \_\_\_\_\_

Telefax: \_\_\_\_\_

E-Mail: \_\_\_\_\_

E-Mail: \_\_\_\_\_

### 1. Select insulation system

- UdiRECO<sup>®</sup> SYSTEM   
  UdiIN RECO<sup>®</sup> SYSTEM   
  UdiCLIMATE<sup>®</sup> SYSTEM  
 UdiIN 2CM<sup>®</sup> SYSTEM   
  UdiSPEED<sup>®</sup> SYSTEM   
  UdiFRONT<sup>®</sup> SYSTEM  
 UdiIN<sup>®</sup> SYSTEM   
  UdiTOP<sup>®</sup> SYSTEM   
  UdiFLEX<sup>®</sup> SYSTEM  
 UdiSTEP<sup>®</sup> SYSTEM

### 2. Building

- Older/existing construction     New construction  
 Interior insulation     Exterior insulation

#### Masonry type

- Perforated bricks/blocks     Solid bricks/blocks  
 Mixed masonry

#### Timber construction

- Timber frame/studs     Solid timber/Log built construction  
 Pre-fabricated timber construction

#### Half-timbered

- External insulation     Infill insulation

#### Other constructions

### 3. Required insulation thickness

- 20 mm     30 mm     40 mm  
 60 mm     80 mm     100 mm  
 120 mm     140 mm     160 mm  
 180 mm     200 mm  
 \_\_\_\_\_ mm according to official recommendation  
 Insulation recommendation from **UdiDÄMMSYSTEME** requested (see my sketch on opposite page)

### 4. Determination of quantity requirements

Circumference of the building / the rooms \_\_\_\_\_ m  
 Height to the eaves / room height \_\_\_\_\_ m  
 Number of building corners (Internal and external) \_\_\_\_\_ Stück  
 Number of windows \_\_\_\_\_ Stück  
 Number of doors \_\_\_\_\_ Stück  
 Area to be insulated *including windows/doors* \_\_\_\_\_ m<sup>2</sup>  
 Window area \_\_\_\_\_ m<sup>2</sup>  
 Door area \_\_\_\_\_ m<sup>2</sup>  
 Effective area to be insulated *without windows/doors* \_\_\_\_\_ m<sup>2</sup>

#### Available space for window reveal insulation

- 20 mm     40 mm     60 mm  
 80 mm     100 mm

Window reveal depth /building shell \_\_\_\_\_ cm

Total length of window reveals/lintel \_\_\_\_\_ m  
(without window sill)

Total length of door reveals/lintel \_\_\_\_\_ m  
(without doorstep)

Total length of window sill areas \_\_\_\_\_ m

Total roof slope length from ridge to wall plate \_\_\_\_\_ m

Effective area to be rendered/plastered \_\_\_\_\_ m<sup>2</sup>



Cross-sectional sketch of planned wall construction (please show the correct dimensions)																			

**5. Surface / final coating**

- Scratched surface structure – Granularity \_\_\_\_\_ mm
- Rubbed surface structure – Granularity \_\_\_\_\_ mm
- Smooth plaster

UdiLIVE® Fine plaster system (for interior use, coloured)

UdiPERL® Fine quality façade paint

**6. Paint/colour**

- UdiCOLOR® System \_\_\_\_\_
- Special paint/colour \_\_\_\_\_

**7. Special options**

- UdiALU® Aluminium Window Sills
  - uncoated                       dark anodised
  - silver anodised                 RAL-coated

**8. Installers and merchants**

- Addresses of licensed UdiCERTIFIED INSTALLER
- Addresses of UdiSYSTEM MERCHANTS

**9. Contact**

- Prompt technical telephone support
- Technical field service with on-site advisory service

**10. Training**

- I am interested in your seminars. Please send me details.

**11. My comments**

\_\_\_\_\_  
Town, Date

Signature X \_\_\_\_\_

## Tests /Approvals/ Fire protection / Background information

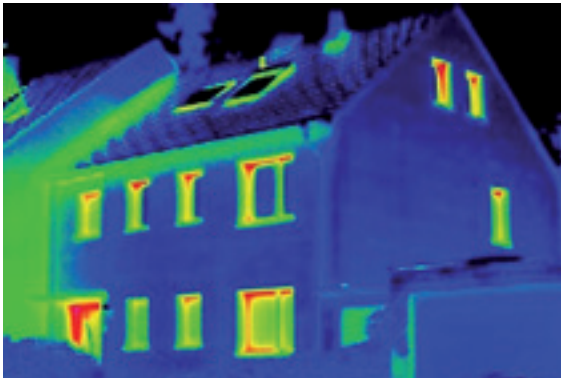
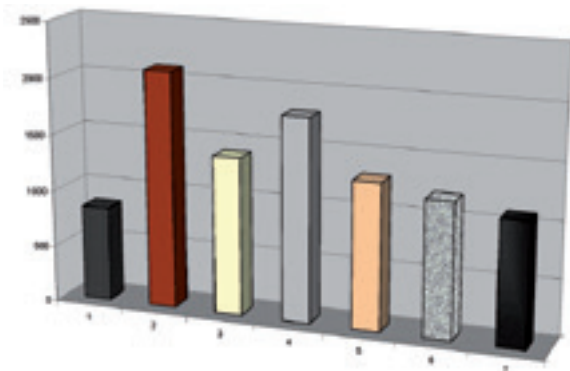






Photo: RPO

The **UdiFRONT® ETIC system** was evaluated in a research project on effective physical moisture protection measures conducted by the Technical University, Dresden. The simulation, over a 5.5 year period, on the behaviour of moisture in timber constructions with directly cladded, timber frames, for a west facing wall subjected to the climate in Essen, Germany, provided the following results: No moisture in the insulation; all processes confirm the capillary effect of the wood-fibre ETICS.



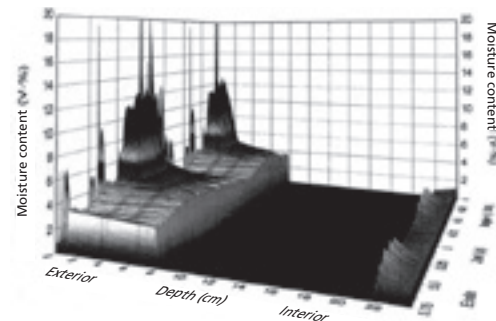
	<b>UdiFRONT®</b> Insulation system 60 mm Space saving*: 94 %
	<b>Timber wall</b> 200 mm Space saving*: 80 %
	<b>Traditional brick wall</b> 450 mm Space saving*: 55 %
	<b>Concrete wall</b> 1.020 mm Space required 100 %

### ➔ Thermal imaging test

The thermal imaging analysis of buildings provides useful information on the thermal condition of the building. Building elements with different wall temperatures are clearly visible. The picture of the house shows image sections that are characteristic for the thermal condition of the building. The thermal images after the renovation did not show any significant areas of thermal losses.

### Explanation of the thermal imaging method

The temperature of all areas of a building's skin are measured and displayed optically as coloured regions e.g. red, green, yellow, blue. The lighter the colour e.g. yellow, red, the greater the heat loss.



Computational simulation over 5.5 years. Direct cladding **UdiFRONT® ETICS** on timber frame. The rise and fall of the moisture in the construction over the seasons is clearly recognizable.

### Thermal insulation values

The graph on the left shows how various selected insulation materials provide protection against the winter cold. A 6cm layer of the **UdiFRONT®** and **UdiSPEED®** wood-fibre insulation systems insulates as well as 102 cm of concrete! When comparing insulation materials not only the U- and λ-values but also the thermal storage capacities should be considered. **UdiFRONT®** and **UdiSPEED®** wood-fibre insulation boards exhibit excellent values when compared with other options. Selected insulation materials and the various thermal storage capacities (**UdiFRONT®** is shown in brown).

### UdiFRONT®

offers an optimal use of the construction space. The thinner the wall, the more living space is available for the same level of energy efficiency.

Example: An identical u-value is provided by a 36 cm thick perforated brick wall or a timber-frame wall insulated with a 6 cm thick **UdiFRONT® SYSTEM**. This means a practical saving of 5.5 m<sup>2</sup> of living space (based on a house with a floor area of 120 m<sup>2</sup>)

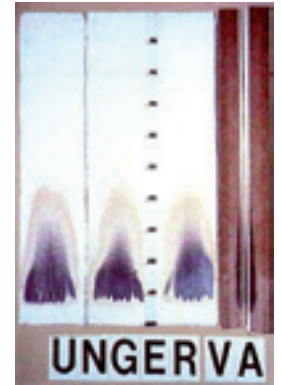
\* compared to concrete wall



## Fire protection

Within the scope of the tests required for the European Technical Approval, the **UdiFRONT® ETICS** system was classified in the building materials class B-s2,d0 according to EN 13501-1:2017 + A1:2009. Due to a statutory re-organisation, this approval was not extended. The properties of the boards remain however unchanged.

- No toxic gas emissions
- No undefined spreading of fire
- Extinguishes flames itself
- No spalling of the plaster



General Building Inspectorate approval from the DIBt in Berlin

## General Building Inspectorate approvals

**UdiINSULATION SYSTEMS**, so-called ETICS (External thermal insulation composite systems) are officially regulated in a General Building Inspectorate approval from the German Inspectorate for Building Technology (DIBt) or a European Technical Approval (ETA) because these building elements are subject to safety restrictions.

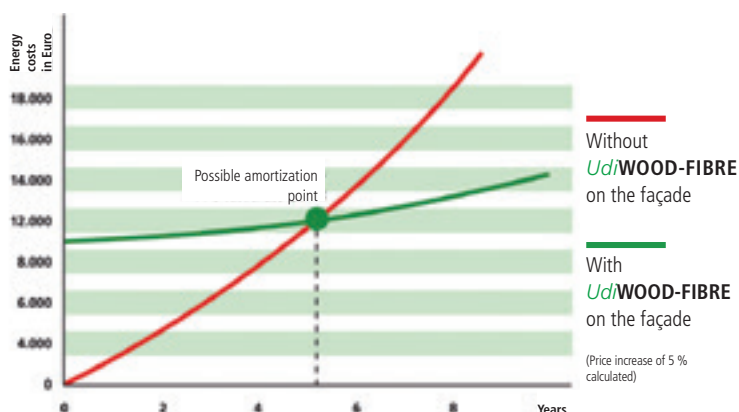
Currently, the approvals are only issued for a period of five years and contain the following:

- Description of the ETICS and the areas of application
- Description of the properties and the composition of all the system-relevant components e.g. the insulation, the plaster components, the paint and accessories
- Production, packaging, transport, storage and designation/labelling
- Certificate of compliance
- Rules for the design and measurement
- Rules for the installation
- Handover certificate to confirm the system has been correctly installed

The proof of usability for the individual **UdiINSULATION BOARDS** is regulated according to the requirements of the European standard EN 13171. This is confirmed by the award of the CE-label. Assurance of the lasting quality of the **UdiINSULATION BOARDS** and **UdiINSULATION SYSTEMS** is ensured through third-party monitoring by recognized test, monitoring and certification bodies.

## Getting a grip on heating costs

It's clear to everyone that insulation helps to save energy but many people are also interested in how long it will take before it pays for itself. Using our own specially developed simulation program we can determine the likely amortization point at which the savings pay for your investment. A well planned and correctly installed insulation measure usually pays for itself in only a few years.



Example of an old, brick-built building with 100 mm **UdiFRONT®** façade insulation.

## At the end of the 90's ÖKO-TEST compared 17 insulation systems

In the issue 04/99 the acclaimed ecological, consumer magazine ÖKO-TEST published the results of the evaluation of 17 different ETICS systems.

Only three systems were awarded the best mark "Recommended"

One of them was **UdiFRONT**.



## Reference Buildings – Historical Buildings in Germany



### Water tower Süptitz near Leipzig

Project: Complete renovation 2011

Built: 1890

Building use: Residential and business premises

*Udi*IN RECO 80 und 100 mm interior insulation



### Old water mill in Noßdorf near Cottbus

Project: Complete renovation 2007

Built: 1624

Storeys: Partial cellar, two storeys, loft conversion

Building use: Public museum / Residential building

*Udi*IN 60 mm interior insulation



## Reference Buildings – Historical Buildings in Germany



### Magnificent villa in Altchemnitz

Project: Complete renovation 2003

Built: 1890

Storeys: Cellar, two storeys, loft conversion

Building use: Residential and business premises

*UdiIN* System 80 mm interior insulation



### Gothic journeyman's hostel, next to the Albrechtsburg in Meissen

Project: Complete renovation with interior insulation 2001 -2003

Built: 1501

Building use: Private residential building

*UdiIN* System 60 mm interior insulation



## Reference Buildings – Historical Buildings in Germany



### The founder's house – Margarete Steiff, soft toy manufacturer in Giengen/ Brenz



Project: Complete renovation 2007

Built: 1874

Building use: Today used as a museum with shop and factory

*Udi*Insulation systems Interior and exterior insulation



Before



After



### Vierseitenhof in Schellenberg/Erz mountains

Project: Interior insulation with integrated wall heating 2013

Built: um 1860

Storeys: 3 floors

Building use: Residential building with a partial half-timbered structure

*Udi*IN System 120 mm and 80 mm / *Udi*MULTIGRUND loam/clay plaster



## Reference Buildings – Historical Buildings



### Half-timbered building, Jägermeister Mast AG in Wolfenbüttel, Germany

Project: Complete renovation with interior insulation  
on 1998 - 2001

Built: Around the 15th century

Building use: Business premises

*Udi*IN System 60 and 100 mm interior insulation



### Renowned inner-city location, Luxemburg

Project: Interior insulation 2012

Built: Around the 19th century

Storeys: 5 floors

Building use: Residential and office premises

*Udi*IN RECO System 100 mm with *Udi*-  
FOUNDATION COAT and fine lime plaster



## Reference Buildings – Newly constructed timber-framed buildings (Germany)



Building: Leipzig-Neukiritzsch / Saxony (Newly constructed timber-framed building with *UdiFRONT*® 60 mm)



Building: Berlin school Bad Nenndorf / Lower Saxony (Solid masonry building with projecting façade *UdiSPEED*® 40 mm)



Building: Day nursery, Oberursel in the Taunus region / Hessen (Newly constructed timber-framed building with *UdiFRONT*® 80 mm)



Building: BAUFRTZ Munich-Eichenau / Bavaria (Solid timber with timber-frame combination and *UdiFRONT*® 60 mm)





## Reference Buildings – Historical Buildings in Germany



### The worsted yarn spinning mill in Brandenburg

Project: Renovated 2016

Converted to 15 luxurious, holiday, loft apartments

Building type: Striking brick structure with a listed façade (preservation order)

Built: 1881

Building use: Business premises

*Udi*IN RECO: 100 mm with Multigrund and loam/clay, insulated internally



## Reference Buildings – Germany



### → Lübeck

Schleswig Holstein

Winner of the KfW-Award  
(Reconstruction loan Corporation)  
Insulated with 160 mm *UdiRECO*



### → Hannover

Lower Saxony

Private house  
Timber-framed new construction  
Façade insulated with 40 mm *UdiSPEED*



### → Bad Hindelang

Bavaria

Hotel renovation  
Façade insulated with 160 mm *UdiRECO*



### → Neu Anspach

Hessen

Hotel and tourist centre  
New construction  
Façade insulated with 60 and 100 mm  
*UdiFRONT* Various constructions

## Reference Buildings – Europe



### Bagnols en Forêt



France

Passive house in the South

Façade insulated with 200 mm *UdiRECO*



### Prag



Czech Republic

Renovation of residential block

Façade insulated with 200 mm *UdiRECO*



### Piacenza



Italy

Private house

Façade insulated with 100 mm *UdiRECO*



### London



Great Britain

Somerset House

Roof insulated with *UdiFLEX* and *UdiSTEAM*



## OUR SYSTEM RANGE:

### For the roof:

#### **UdiFLEX®** SYSTEM

*Flexible planning with a flexible insulation to meet the highest of demands*

#### **UdiTOP®** SYSTEM

*The complete program for your roof*

### For the façade:

#### **UdiRECO®** SYSTEM

*External thermal insulation composite system with intelligent levelling compensation*

#### **UdiFRONT®** SYSTEM

*External thermal insulation composite system with a 15 year guarantee*

#### **UdiSPEED®** SYSTEM

*The efficient insulation system for pre-fabricated, timber-frame buildings*

### For interior insulation:

#### **UdiIN®** SYSTEM

*Interior insulation system with a 15 year guarantee*

#### **UdiIN RECO®** SYSTEM

*The interior insulation system – specially designed for uneven surfaces*

#### **UdiIN 2CM®** SYSTEM

*The quick and slim internal insulation system*

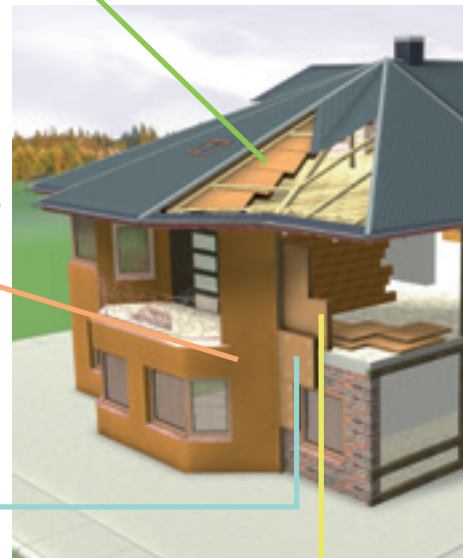
### For interior construction:

#### **UdiCLIMATE®** SYSTEM

*The interior insulation system with integrated climate chambers*

#### **UdiSTEP®** SYSTEM

*Wood-fibre, floor insulation*



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We are always happy to advise you: