

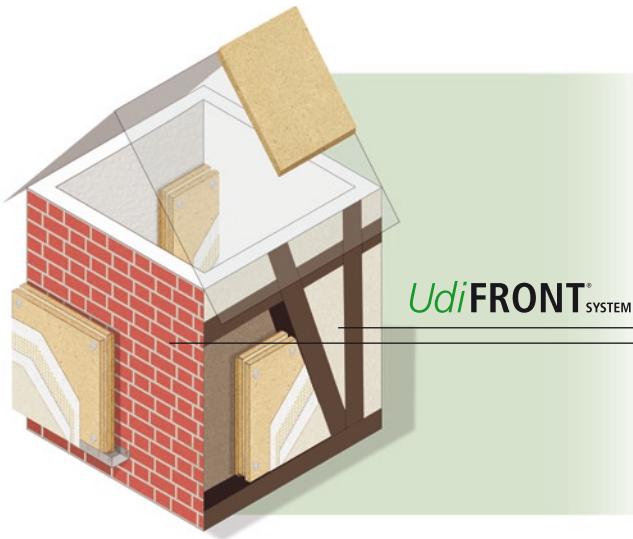
*Udi***FRONT**<sup>®</sup> SYSTEM

*The cost effective, intelligent system  
for exterior wall insulation*



# UdiFRONT<sup>®</sup> SYSTEM

*Top quality wood-fibre thermal insulation employing a bonded sandwich-layer construction for increased efficiency.*



UdiFRONT<sup>®</sup> SYSTEM is a top quality, proven and certified composite thermal insulation system. Developed by UNGER-DIFFUTHERM for the modern, environmentally-conscious developer.

The UdiFRONT<sup>®</sup> SYSTEM with its water-vapour permeable design allows walls to breathe naturally. It absorbs and relieves stresses in the building structure and provides outstanding protection against heat loss, the effects of the cold and excess heating of the building due to the sun. This ensures an excellent room climate combined with super sound-proofing qualities.

Our highly efficient wood-fibre, sandwich-layer construction is available in combination with our tested and specially selected top quality renders in a wide range of attractive colours and textured finishes for all types of external walls.

In addition to environmentally-friendly aspects, UdiFRONT<sup>®</sup> SYSTEM insulation solutions offer ecological and building physics benefits for new buildings and for the modernisation of all types of existing buildings. The result is a tried and tested wall insulation system which means you don't have to make compromises.



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# UdiFRONT<sup>®</sup> SYSTEM

*The innovative insulation system solution for all types of new and existing buildings*



## **Ecological and health-promoting**

- manufactured from softwood fibres exclusively from renewable sources
- kind to the skin – both to the touch and when installing
- tested and recommended by the leading German ecological consumer magazine "Öko-Test" as the "best in class" thermal insulation system



## **Cost savings**

- save up to 79 % on your current heating costs
- a typical amortisation (return on investment) period of 5 years



## **Tested and certified**

- by the German Institute for Building Technology (DIBt) in Berlin for both timber-framed and masonry constructions
- tested for its fire safety standards, weather resistance, durability/life expectancy and insulating properties
- over 2 million square metres of insulation have already been successfully installed



## **Universal spectrum**

- for all types of masonry and concrete buildings
- for all types of timber and timber-framed buildings
- applicable to special construction types i.e. half-timbered buildings



## **guaranteed**

- mould free
- warp free
- the render system remains free from cracks
- the coloured-render systems remain colour-true a life-time long



## **top class water vapour diffusion**

- the UdiFRONT<sup>®</sup> SYSTEM does not employ plastic membranes thereby ensuring that the natural moisture exchange between the interior and exterior airflows are not inhibited – creating a healthy, moisture balanced room climate



## **acoustic insulation**

- the special sandwich-layer construction means that an insulation layer of only 6 cm provides 54 dB of sound proofing



*The Original  
Tried and tested since 1989.*

# UdiFRONT<sup>®</sup> SYSTEM

*Reduces your heating bills considerably*

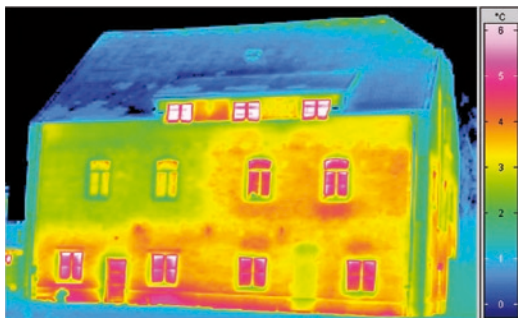


## The Energy-Pass is here

With the introduction of the energy pass, it is now possible for potential buyers or tenants to more accurately estimate the expected energy and heating costs of a property. By insulating your property with *UdiFRONT<sup>®</sup> SYSTEM* you can improve the energy rating on your energy pass and make your property more attractive to interested parties.

*We're sure you know how much fuel your car uses but do you know how much energy your house uses?*

Unger Diffutherm GmbH can tell you exactly how high your house's heating energy consumption will be when you install a *UdiFRONT<sup>®</sup> SYSTEM*.



### Thermography

Energy losses can be made visible by the use of a thermal imaging camera. The red and light coloured areas are costing you real money!



### Blowerdoor-Test (Pressure Differential test method)

This method checks for possible energy leaks in the building by flow measurements and the use of artificially produced fog.

# UdiFRONT<sup>®</sup> SYSTEM

*Helping you to save money*

## Subsidies and grants

Due to increasing energy costs and greater environmental awareness, more money is being made available by the government and other institutions to improve the energy efficiency of buildings. These measures range from subsidies and grants to low-interest loans and refunds of purchase taxes. Now is the time to take advantage of these benefits.

Please contact your local authority and/or other relevant institutions to learn more about the financial support available.



**Government subsidies reduce the cost of building**

## A money saving example

By means of the example of a typical 1930's brick built house with an interior floor space of around 1600 square feet (150 square meters), you can easily see how quickly the UdiFRONT<sup>®</sup> SYSTEM pays for itself. The sooner you decide on the UdiFRONT<sup>®</sup> SYSTEM, the sooner you can start saving!

If you are considering building a new property, we recommend that you install the UdiFRONT<sup>®</sup> SYSTEM from the very beginning as the installation is easier than a subsequent application. When modernising existing buildings, the UdiFRONT<sup>®</sup> SYSTEM provides far more advantages than simply repairing cracks and other damage to the existing render.

*Apart from the roof, the highest levels of energy loss in a building are through the exterior walls. These contribute about 30% of the total energy loss. By using the UdiFRONT<sup>®</sup> SYSTEM with a 60 mm insulation layer, you can reduce these losses by up to 65 % and with a 100 mm insulation layer up to 79 %.*



**Based upon an annual price increase of 5 %**

— without UdiFRONT<sup>®</sup> SYSTEM      — with UdiFRONT<sup>®</sup> SYSTEM  
Annual price increase of 5 %



**The Original**  
*Tried and tested since 1989.*

# UdiFRONT<sup>®</sup> SYSTEM

*Helps to keep you warm and increases the value of your property*



*Timber-framed building with a UdiFRONT<sup>®</sup> SYSTEM 60 mm*

**When designing the facade of your building the UdiFRONT<sup>®</sup> SYSTEM provides you with a comprehensive range of textures and tones including solutions for external cladding.**

## Protects the substance of your property and increases its value

You will notice and appreciate the positive thermal effects of the UdiFRONT<sup>®</sup> SYSTEM, above all on cold days. The temperature differences of the external walls caused by wind, weather and seasonal differences can be drastically reduced. The temperature of the external walls is maintained at approximately the same temperature the whole year round.

The UdiFRONT<sup>®</sup> SYSTEM protects the building from external moisture and eliminates the development of cracks through frost and the resulting damage. Due to the system's excellent moisture repellent properties, algae and mould cannot take hold.

The UdiFRONT<sup>®</sup> SYSTEM helps to increase the value of your property. Lower heating costs and a noticeable improvement in the comfort of the room climate are convincing arguments when selling or renting your property.



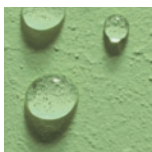
### The classic exterior render: protects against all types of weather

An unlimited choice of combinations of structured or smooth finishes for all surfaces. The top quality finishing coat is available in a wide range of structured finishes with various grades of granularity. The special formulation ensures not only brilliant colours but also a very low soiling tendency. Our specially developed renders for the plinth area harmoniously round off our product spectrum.



### Facade profile: Set your own stylish accent

You can restore the authentic optical impression of historical facades or give modern facades that "something special".



### UdiPERL<sup>®</sup> COLOR SYSTEM: The 'stay clean' paint with the lotus-effect

Use the brilliant colours of our exterior paints to give your property that something special! Our paints employ the latest technology to protect against dirt sticking to the facade.



### External cladding: Classic brickwork designs

These cladding systems are extremely flat, mineral based, light and durable and are therefore particularly suited as a final protective layer for your UdiFRONT<sup>®</sup> SYSTEM. They are available in a range of traditional brickwork designs.

# UdiFRONT<sup>®</sup> SYSTEM

More living space for you

## Space saving

When designing how energy efficient a new building will be, you have two options: Either make the walls thicker or build thinner walls and insulate them properly i.e. timber walls with UdiFRONT<sup>®</sup> SYSTEM. Both variations provide the same level of insulation but take up different amounts of space. Thicker walls take up living room and cost more due to the need for additional materials, stronger foundations and higher building costs.

*UdiFRONT<sup>®</sup> SYSTEM offers you 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 6 cm thick wood framed wall insulated with UdiFRONT<sup>®</sup> 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 120m<sup>2</sup>)*

\* compared to concrete wall



**UdiUNGER-DIFFUTHERM<sup>®</sup>**  
60 mm  
Space saving\*: 94 %



**Timber wall**  
200 mm  
Space saving\*: 80 %



**Traditional brick wall**  
450 mm  
Space saving\*: 55 %



**Concrete wall**  
1.020 mm  
Space required: 100 %



**The Original**  
Tried and tested since 1989.

# UdiFRONT<sup>®</sup> SYSTEM

*Protects your house and your health*



## Think about your future health – even when building

More than 22 thousand contented UNGER-DIFFUTHERM customers have chosen the UdiFRONT<sup>®</sup> SYSTEM – without any health-related complaints. This has been possible due to the system's intelligent design and the careful selection of products which harmonise perfectly. UdiFRONT<sup>®</sup> SYSTEM has been scientifically tested and is subject to continuous strict quality controls.

The UdiFRONT<sup>®</sup> SYSTEM is an active insulation system. It provides continuous water vapour diffusion for a comfortable room climate whilst protecting your property from the effects of the weather.

### Product benefits:



#### The proven health promoting effects of the UdiFRONT<sup>®</sup> SYSTEM

- kind to the skin - with no itching or irritations when handling or installing
- environmentally neutral manufacture from softwood derived from renewable sources
- tested and recommended by the leading German ecological consumer magazine "Öko-Test" as the "best in class" thermal insulation system
- The room moisture level is kept in balance – the moisture is stored and dispersed using the natural capillary effect
- No mould development on the walls



#### The UdiFRONT<sup>®</sup> SYSTEM retains the heat longer on cold days

- through its excellent heat storage capacity of 2100 kJm<sup>3</sup>
- providing impressive insulation values with an insulating layer of only 6 cm
- by radiating the stored warmth reducing the need to heat continuously



#### UdiFRONT<sup>®</sup> SYSTEM in summer refreshingly cool

- the density of the insulation board – with a weight of 220 kg/m<sup>3</sup> – functions as an excellent "heat shield" against the effects of the sun
- the exterior walls remain comfortably cool for longer
- energy saving – as additional air conditioning is no longer required

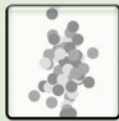


# UdiFRONT<sup>®</sup> SYSTEM

*Guaranteed quality – permanently*

## Insulate with the peace of mind of a guarantee package

The UdiFRONT<sup>®</sup> SYSTEM has been tried and tested over many years and has established itself in the top class. We are so convinced of the quality of our products that we offer a comprehensive guarantee package.



### UdiMould-free-GUARANTEE<sup>®</sup>

- unique freedom from mould growth guarantee
- lifelong health-promoting insulation system for you, your family and your children



### UdiWarp-free-GUARANTEE<sup>®</sup>

- unique guarantee that the UdiFRONT<sup>®</sup> SYSTEM insulation boards will remain warp-free
- storm-proof facade – up to wind speeds of 185 mph
- the UdiFRONT<sup>®</sup> SYSTEM surface always remain smooth
- warp-free under thermal stress (i. e. extremes of temperature)



### UdiCrack-free-GUARANTEE<sup>®</sup>

- unique crack-free guarantee for rendered facades
- the UdiFRONT<sup>®</sup> SYSTEM ensures that the substance of the building remains dry
- over 2 million square metres have been installed since 1989 – without any cracks developing!



### UdiColour choice-GUARANTEE<sup>®</sup>

- your individual dream colours for the exterior render are available in the complete colour spectrum

This factory guarantee is valid for **15 years** from the date of the completed installation and is supplied by the Udicertified installer.



**The Original**  
**Tried and tested since 1989.**

# UdiFRONT® SYSTEM

*Keeps working for a lifetime*



## Functionality

Attention to detail is decisive in ensuring the long-lasting functionality of the UdiFRONT® SYSTEM. We can provide you with well thought out and proven solutions for all areas of your property – from the cellar to the roof. These include the choice of the correct accessories and information on professionally trained and certified installers. Don't take any risks – demand the UdiFRONT® SYSTEM from a Udicertified installer.

UdiUNGER-DIFFUTHERM®  
 UdiFOUNDATION COAT®  
 UdiFIBRE MESH®  
 UdiSTRUCTURED RENDER®  
 UdiCOLOUR SYSTEM®  
 Foundation (timber, masonry etc.)

## The UdiFRONT® SYSTEM in detail



### Mounting and fixing the insulation boards

Our insulation boards are installed from the bottom of the facade to the top and are permanently fixed to the surface using special storm-proof anchors/fixings. This method provides an air-tight protection against the wind. The lower edge is sealed using our plinth rail system.



### Strengthening mesh

The next layer is comprised of a strengthening mesh and a specially mixed foundation render which provides the system with increased external stability and weather protection. This is the base for a durable and crack-free top layer of finishing render.



### Surface design

Once the foundation render is dry, a final textured finishing render coat is applied. This is coloured according to your individually selected colour preference. The UNGER-DIFFUTHERM trained installer will then give the finishing coat the surface structure/texture you desire. From inside the building you will feel the difference made by the UdiFRONT® SYSTEM, from the outside you will only see the new structured render.

## Ideal complimentary products



- UdiPROTECT-E-SMOG® SHIELDING SYSTEM provides effective electro-smog protection
- Udi WINDOW SILL® SYSTEM – High-tech aluminium in a wide range of colours
- UdiPERL® COLOUR SYSTEM for permanent colour-fastness and a stay-clean facade

## TERMS AND CONDITIONS OF THE GUARANTEE

**Please note: This guarantee is applicable to the facade insulation system *UdiFRONT<sub>SYSTEM</sub>* incorporating *Udi<sub>ORIGINAL</sub>* UNGER-DIFFUTHERM INSULATION ELEMENTS under applicable German Law. Please use this as additional information only and not for legal purposes under your own countries laws.**

### § I. Guarantee

Unger-Diffutherm GmbH, Blankenburgstraße 81, 09114 Chemnitz, Germany, agree to provide an extended warranty of 15 years for the insulation system *UdiFRONT<sub>SYSTEM</sub>* in the following insulation layer thicknesses of 60, 80, 100, 120, 140, 160, 180 und 200 mm, and providing that this insulation layer has been professionally sealed and coated using *UdiSTRUCTURED RENDER*. This guarantee takes effect from the date of the final inspection and/or official acceptance of the installation.

### § II. cope of the guarantee

Unger-Diffutherm GmbH guarantees that, within the terms and conditions of this guarantee and under conditions of proper usage in external areas, the *UdiFRONT<sub>SYSTEM</sub>* will remain free of mould development (including the interior), that the insulation boards will remain warp-free and that the system will not suffer from or exhibit cracks in the surface render of greater than 0.5 µm. Mould development that can not be directly linked with or proven to be caused by the *UdiFRONT<sub>SYSTEM</sub>* are excluded. This guarantee also excludes damages through improper treatment, handling or usage, in particular through excessive loading or wear, robust mechanical influences e.g. crushing or heavy impacts etc or the poor construction or faulty design of the substructure. Furthermore, this guarantee also excludes damages caused through improper maintenance, cleaning or repair of the facade; optical impairments or altered optical impressions due to variations in seasonal lighting or differing climatic conditions; acts of God/Force Majeur.

### § III. Installation by qualified installers

This guarantee only applies to installations of the *UdiFRONT<sub>SYSTEM</sub>*, *UdiFOUNDATION RENDER*, *UdiSTRUCTURED RENDER*, *UdiFIBRE MESH*, etc., which have been performed by Unger-Diffutherm GmbH licensed Udi Installers. This guarantee does not apply to installations of the *UdiFRONT<sub>SYSTEM</sub>* which contain non-licensed components from other manufacturers.

### § IV. Guarantee eligibility

The rights afforded under the terms and conditions of this guarantee are only applicable to and may only be exercised by the developer. The developer is defined as a person or persons who have purchased the *UdiFRONT<sub>SYSTEM</sub>* from a licensed Unger-Diffutherm *UdiSystem merchant* for the purposes of installation in a newly-built construction or for the modernisation/renovation of an existing building and in which the installation has been performed by a licensed *Udi certified installer*.

Alternatively, a developer may also be a person who, following appropriate training, has been granted a license by Unger-Diffutherm GmbH as a *Udi certified installer* and has installed the *UdiFRONT<sub>SYSTEM</sub>* themselves.

### § V. Scope of the guarantee and the determination of faults

The guarantee provided by Unger-Diffutherm GmbH is restricted to faults in the materials and those material characteristics which are expressly guaranteed in writing in the official Unger-Diffutherm specifications. Unger-Diffutherm GmbH guarantees that in the case of proven faults in the materials or the design of the materials contained within the *UdiFRONT<sub>SYSTEM</sub>*, or faults relating to the guaranteed material characteristics and provided that the *UdiFRONT<sub>SYSTEM</sub>* has been installed by a licensed Udi-certified installer, to replace or repair the faulty components at the earliest practicable opportunity after the determination of the fault. On determination of the fault the developer must, without delay, provide Unger-Diffutherm GmbH with all relevant documentation i.e. purchase receipt, the *UdiQUALITY CONTROL CERTIFICATE* and the *UdiGUARANTEE CERTIFICATE* for their inspection.

In order that the alleged fault may be investigated and determined, the developer must make a formal complaint in writing to Unger-Diffutherm GmbH. Unger-Diffutherm GmbH must, within an appropriate period, be given the opportunity to inspect and assess the alleged fault. If an agreement between the developer and Unger-Diffutherm GmbH concerning the alleged fault cannot be reached, the developer is free, if necessary at his own expense, to contract an independent assessor to determine the nature and scope of the alleged fault. Unger-Diffutherm GmbH also reserves the right to engage an independent assessor, if necessary at their own expense.

### § VI. Guarantee Obligations

Within the scope of this guarantee, Unger-Diffutherm GmbH assumes responsibility for expenditures relating to the removal, dismantling or provision of access to system components which are faulty or do not comply with specified and guaranteed characteristics (De-installation costs) and for the costs of the subsequent installation (mounting or installation of fault-free materials or those which comply with the specified product characteristics).

The sum under guarantee is restricted to the installation value of the *UdiFRONT<sub>SYSTEM</sub>*. Unger-Diffutherm GmbH guarantees that the aforementioned activities will be performed by a licensed *Udi certified installer*. The statutory guarantee and warranty periods apply to all system components that have been repaired or replaced, as long as these have not already expired.

### § VII. Guarantee restrictions and exclusions

An entitlement under the terms and conditions of this guarantee only exists if the system and its components are correctly and professionally installed by an Unger-Diffutherm trained and licensed *Udi certified installer*, in accordance with the current installation guidelines and standards valid at the date of installation.

A guarantee entitlement is also excluded if changes or repairs to the delivered products are undertaken without the express authorisation of Unger-Diffutherm GmbH or if a fault is discovered and the appropriate damage minimisation measures are not immediately undertaken. Additionally, all damages which can not be proven to be related to faults in the system materials or the absence of guaranteed material characteristics, and which are caused, for example, due to wear through poor maintenance, non-compliance with the guidelines for usage, inappropriate storage, handling or installation, excessive loading, faults in or damage to other elements of the construction, third-party error or other circumstances beyond the control of Unger-Diffutherm GmbH are excluded. Furthermore, a guarantee entitlement does not exist in the case of a combination of system components/products (renders, strengthening mesh, adhesives tapes etc) from other manufacturers and which have not been supplied by Unger-Diffutherm GmbH and in the case of product combinations which do not comply with the Unger-Diffutherm GmbH installation guidelines and standards.

The developer will also have no entitlement under terms and conditions of this guarantee if Unger-Diffutherm GmbH is also held liable for damages by the system merchants themselves or by an injured third-party as a result of statutory or contractual liability relating to the same faults or missing material characteristics as those pursued by the developer.

### § VIII. Commencement of the guarantee

This guarantee only applies to *UdiFRONT<sub>SYSTEM</sub>* products which have been supplied on or after 01.01.2008 by Unger-Diffutherm GmbH or one of their system merchants (supplied by Unger-Diffutherm GmbH), which have been installed by a Unger-Diffutherm GmbH licensed *Udi certified installer* and for which a *UdiQUALITY CONTROL CERTIFICATE* and the *UdiGUARANTEE CERTIFICATE* are available for inspection.

Chemnitz, January 1st, 2008



**The Original  
Tried and tested since 1989.**

**Unger-Diffutherm offers you further top quality wood-fibre insulation systems:**

**UdiTOP<sup>SYSTEM</sup>**

*The complete program for your roof*

**UdiIN<sup>SYSTEM</sup>**

*The interior insulation system for listed buildings and other beautiful facades*

**UdiFRONT<sup>SYSTEM</sup>**

*The proven insulation system for tomorrow, available today*

**UdiSPEED<sup>SYSTEM</sup>**

*The efficient insulation system for pre-fabricated buildings*

**UdiRECO<sup>SYSTEM</sup>**

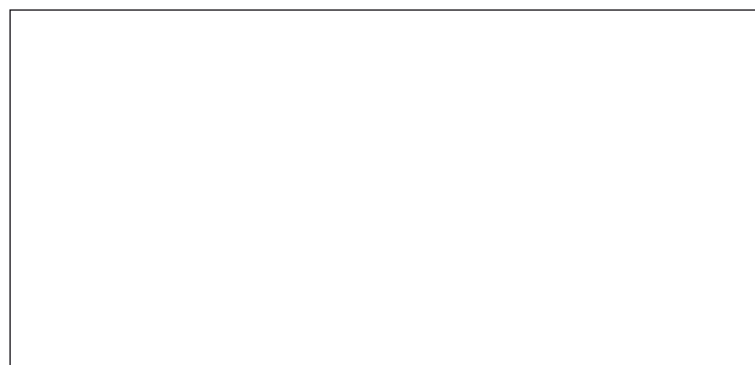
*A new exterior insulation system – specially designed for building modernisations\**

**UdiCLIMATE<sup>SYSTEM</sup>**

*The interior insulation system with integrated climate chambers*



For further information please visit our homepage [www.unger-diffutherm.com](http://www.unger-diffutherm.com) or contact:



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\*expected availability: mid 2008