ENERGY EFFICIENCY IN PERFECTION
ONLY THE BEST FOR THE FUTURE – THE GENEO® WINDOW SYSTEM
MADE FROM HIGH-TECH RAU-FIPRO® MATERIAL
UNRIVALLED IN QUALITY AND TECHNOLOGICAL INNOVATION
Thanks to their technological advances and their performance characteristics, windows & doors constructed from GENEO® profiles put all previous systems in the shade.

- The first fully self reinforced window profile system

- Made from a high-tech fibre reinforced composite material RAU-FIPRO® which is fully recyclable up to six times.

- The most energy-efficient profile available for windows ranging from low energy houses (e.g., $U_e = 1.1 \text{ W/m}^2\text{K}$) to passive house standards (e.g., $U_e = 0.73 \text{ W/m}^2\text{K}$).

- The best possible level of sound insulation without steel reinforcement, achieving previously unattainable values (glass 50 dB = $R_w, 47 \text{ dBA}$) for sound insulation class 5 – and including optimal thermal insulation.

- Break-in protection up to resistance class 3. Without steel reinforcement, resistance class 2 – including optimal thermal insulation.

- Investing in the best frame/sash combinations possible future proofs your investment should better performing glass become available.


Save your energy! There is no better way to change your energy budget to meet future needs.
GENEO® WINDOW PROFILE SYSTEM
THERE IS NO BETTER WAY TO CHANGE YOUR ENERGY BUDGET TO MEET FUTURE NEEDS

GENEO® profiles allow the most energy-efficient windows available to be created. They create the comfortable environment you have always wanted.

The fully self reinforced profile design requires no steel, thus eliminating thermal bridges through which valuable energy can be lost. The best possible break-in protection and previously unattained sound insulation are included.

**GENEO® MD plus,**
Passive House standard - certified

Ug value = 0.5 W/m²K
Uf value = 0.77/0.78 W/m²K
Uw value = 0.67 W/m²K *

Calculated savings **
Savings using GENEO® MD plus:
Gas: 3555 kWh / annually
CO₂ reduction: 648 kg / annually
CO₂ reduction: 22,680 kg***
Energy saving: 17%

**GENEO® MD plus,**
Suitable for Passive Houses

Ug value = 0.6 W/m²K
Uf value = 0.91 W/m²K
Uw value = 0.80 W/m²K *

Calculated savings **
Savings using GENEO® MD plus:
Gas: 2,614 kWh / annually
CO₂ reduction: 480 kg / annually
CO₂ reduction: 16,800 kg***
Energy saving: 15%

**GENEO® MD plus,** surpasses the latest Part L 2010 regulations1)

Ug value = 1.0 W/m²K
Uf value = 0.91 W/m²K
Uw value = 1.1 W/m²K *

Calculated savings **
Savings using GENEO® MD plus:
Gas: 1,961 kWh / annually
CO₂ reduction: 360 kg / annually
CO₂ reduction: 12,600 kg***
Energy saving: 13%

* Window size: 1230 × 1480 mm.
** Based on: timber/plastic windows from the 1970s with an approximate Uw value of 3.0 W/m²K and a typical detached house with 120 m² of floor space and 25 m² of total window area.
** Based on lifespan of window being 35 years as indicated in the BRE Green Guide
Heating method: Gas
**WINDOWS MADE OF GENEØ® PROFILES**

**SOUND INSULATION AND BREAK-IN PROTECTION**

- **INCLUDING HIGH-TECH**

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**Centre seal**
With its three surrounding seal levels, the GENEØ® window profile offers the best possible insulation characteristics. The highly elastic seal material which is resistant to continuous stress guarantees a long service life.

**Sleek design**
The profile design offers an elegant, sleek appearance (115 mm) for even the largest elements. Combined with REHAU’s innovative adhesive technology, even floor-length windows can be created with the necessary degree of stability.

**Optimized thermal insulation**
GENEO® possesses functional chambers which can be employed for a variety of purposes. For example, the GENEØ® MD plus uses thermal modules to optimise the insulation properties to provide an enhanced thermal performance.

**RAU-FIPRO® profile core**
The profile core made from the high-tech material RAU-FIPRO® gives GENEØ® window profile systems maximum stability.

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**Sound Insulation Class 5**
- Glass 50 dB = $R_w, P = 47$ dB
- Including optimal thermal insulation.

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<table>
<thead>
<tr>
<th>Sound Insulation class</th>
<th>Traffic density</th>
<th>Distance between the home and the center of the street</th>
<th>Recommended window sound insulation value*</th>
<th>Glass</th>
<th>$R_w, P$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Residential street, 1,500 vehicles/day</td>
<td>3-12 m</td>
<td>26-29 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Residential street, 1,500 vehicles/day</td>
<td>12-6 m</td>
<td>30-34 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Federal highway, 30,000 vehicles/day</td>
<td>150-80 m</td>
<td>35-39 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Federal highway, 30,000 vehicles/day</td>
<td>80-30 m</td>
<td>40-44 dB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Freeway, 50,000 vehicles/day</td>
<td>70-40 m</td>
<td>45-49 dB</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Noise level which the window can dampen.

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**Basic security**
- Basic security is adequate for windows which are difficult to access.

**Resistance class 1**
- Low protection against the use of levers.

**Resistance class 2**
- Improved protection against the use of simple tools such as screwdrivers, pliers and wedges.

**Resistance class 3**
- Best possible protection against the use of heavy tools such as a crowbar.

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**Break-in protection:** For security in every situation.
GENEO® PROFILE SYSTEMS
FOR WINDOWS WITH A FUTURE
RAU-FIPRO®- THE INNOVATIVE, HIGH-TECH MATERIAL

1. Unbeatably stable
RAU-FIPRO® – represents high-tech in combination with an innovative material formulation. The highest level of profile core stability sets new benchmarks for window profile systems.

2. Uniquely innovative
With a high-tech fibre composite material, this branch-specific innovation sets an example. Following work done with aircraft construction and Formula 1 design, fibre composite materials now also offer the best performance in the area of window design.

3. Highest quality
The best initial materials combined with the highest manufacturing benchmarks result in the outstanding quality and long service life of profiles made from RAU-FIPRO®, under even the highest stress levels.

An overview of all properties:
GENEO® window profile systems

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction width</td>
<td>86 mm / 6 chamber system</td>
</tr>
<tr>
<td>Thermal insulation</td>
<td>( U_f ) up to 0.85 W/m²K (MD plus)*</td>
</tr>
<tr>
<td>Sound insulation, sound insulation class (VDI 2719):</td>
<td>Up to sound insulation class 5** (Glass 50 dB = ( R_{w,p} ) 47 dB)</td>
</tr>
<tr>
<td>Break-in protection</td>
<td>Up to resistance class 3</td>
</tr>
<tr>
<td>Surface</td>
<td>High value, smooth, sealed and easy maintenance</td>
</tr>
<tr>
<td>- Ideal for low energy houses and energy conscious renovation</td>
<td>- Up to the passive house standard</td>
</tr>
<tr>
<td></td>
<td>- For upscale home construction</td>
</tr>
</tbody>
</table>

* \( U_f = \) Profile thermal insulation value
** Including optimal thermal insulation

Compare price and performance and you will choose windows made from GENEO® profiles.

Please get in touch with us to find out more.
On the first floor of The London Building Centre in Store Street, seven tilt and turn GENEO® windows have been installed to replace 1960s aluminium frames as part of an overall refurbishment programme which is aiming to achieve a BREEAM Excellent rating.

The refurbishment is a means of demonstrating how even a building which is approaching 100 years old can be refurbished to BREEAM Excellent standards.

The Uw Value of the windows has been improved from 4.5W/m²K to less than 0.8 W/m² utilising the triple glazed GENEO® solution.

REHAU GENEO® windows have been installed throughout a project carried out by Orbit Heart of England Housing Association which aims to maximise the energy efficiency of a traditional 1900s mid terrace house.

Orbit Heart of England set itself a target of using mainstream affordable solutions to refurbish the house using Passivhaus principles.

The installation, in Foleshill Road Coventry, is within the qualifying area under the Community Energy Savings Programme (CESP) where energy providers have committed to delivering energy efficiency measures and improving standards to reduce fuel bills.