



**GERMAN SYSTEM WINDOWS AND DOORS**

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# REHAU GERMAN WINDOW DESIGN

## ABOUT REHAU

REHAU delivers "Unlimited Polymer Solutions" and is the premium worldwide brand for polymer-based innovations and systems in building solutions, automotive and industry. The company generates continuous growth through its expertise and innovative capabilities in materials development, systems design and surface technology. We are already directing our developments toward such future-significant topics as energy efficiency, renewable energy, water management, mobility and future living. Over 20,000 employees at over 170 locations around the world ensure the success of the independent and privately held company.





Performance Summary  
Structural: up to CW-PG70  
Acoustical: up to 45 dB  
Thermal: down to 0.13\*  
\* based on simulation

The GENE<sup>®</sup>O window design is for the eco-conscious home or building owner serious about energy efficiency.

Our innovative, high-tech RAUFIPRO<sup>™</sup> material and unique profile design takes REHAU tilt-turn technology to its highest levels of strength and thermal performance, while the 40% lighter profile reduces transportation and installation costs. This system is offered in white and can be laminated with solid color or woodgrain foils.

- 1 RAU-FIPRO profile core**  
Ensures excellent stability and torsional rigidity making it possible to build larger windows without steel reinforcement
- 2 Six-chambered frame**  
Provides unmatched thermal insulation, to the level of German Passivhaus standards
- 3 Innovative compression-seal technology**  
Reduces closing pressure significantly, making window operation easy and extending the service life
- 4 Multiple locking points surrounding the sash**  
Provide extra security, tighter seal and greater comfort
- 5 Integrated reinforcement system with screw bosses**  
Allows highest installation stability and security
- 6 2 3/32" (53 mm) glazing channel**  
Accommodates triple glazing, increasing both thermal and acoustical insulation



MORE INFORMATION ABOUT GENE<sup>®</sup>O



<https://www.youtube.com/watch?v=MV8xAkrj1dc>



DELIGHT is a know-how which allows 10% more solar light penetration due to lowered profile.

Uf=  
1.2  
W/m<sup>2</sup>K

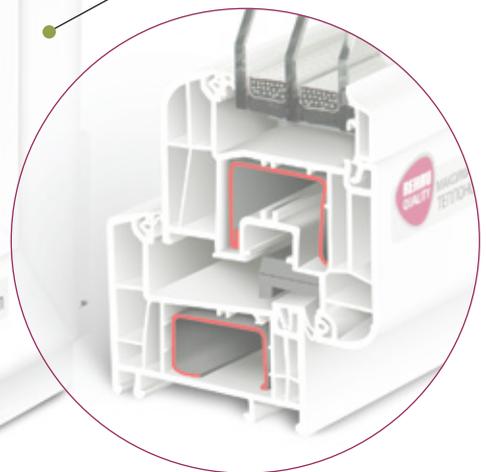
40 mm triple pane glazing with low-e soft coating

Available with warm edge spacer bar – Chromatech Ultra, certified by Passive House Institute. Reduction in heat loss (Uw value) 0.1-0.2 W/m<sup>2</sup>K

Thanks to a high-quality, high-definition finish (HDF), smudges can be quickly and easily removed using conventional detergents.

Galvanised steel reinforcement

REHAU Silicone (RAU-SIK) is physiologically harmless, has the ability to repel water and form watertight seals, high in gas permeability, low in chemical reactivity and provides excellent resistance to oxygen, ozone and UV light.



Depth 70 mm,  
5 chambers

# REHAU SIB

# RS70



The REHAU SIB System is multi-chambered profile designed specially for severe Siberian climate.

40 mm thick triple glazing with low-e.  
Ug-Value: 0.8 W/m<sup>2</sup>K

Uf=  
**1.4**  
W/m<sup>2</sup>K

Available with warm edge  
spacer bar - Chromatech Ultra

Thanks to a high-quality,  
high-definition finish (HDF),  
smudges can be quickly  
and easily removed using  
conventional detergents.

Galvanised steel reinforcement

EPDM rubber seal



3 chambers in frame and sash.  
Thickness 70 mm



REHAU EURO is entry level solution designed for mass market. The 60 mm system with 3 chambers offers reliable solutions for windows, which are economical and efficient. Two sealings protect against dust, wind and rain. The smooth surface and the design of the profiles are ideal for fuss-free maintenance.

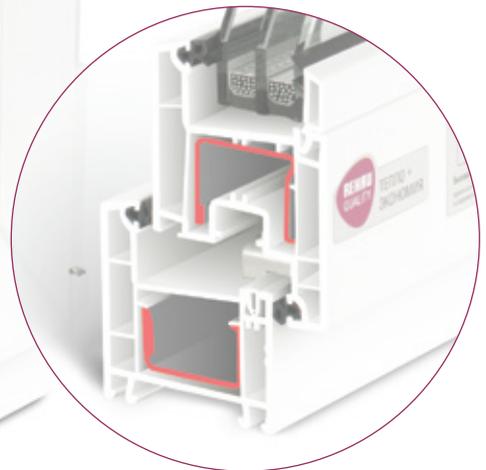
Available in double or triple glazing  
(24 mm or 32 mm thick)

$U_f = 1.6$   
 $W/m^2K$

Galvanised steel reinforcement

EPDM rubber seal

Thanks to a high-quality, high-definition finish (HDF), smudges can be quickly and easily removed using conventional detergents.



3 chambers in frame and sash.  
Thickness 60 mm



The REHAU tilt-slide system is a premium door solution for spaces that do not allow for traditional inswing doors. The unique sash design tilts and slides parallel to the fixed unit with the touch of a finger. Optimal profile design and compression-seal technology contribute to outstanding performance. Available in white color, the system can also be laminated with solid color or wood-grain foils. Matching windows in a variety of configurations are also available.



- 1 Unique design**  
Operates in top venting and sliding positions
- 2 Multiple locking points**  
Create a tight seal against sound, air and water infiltration
- 3 Ergonomically shaped aluminum turn handle**  
Controls every function
- 4 High-quality European hardware**  
Operates easily and quietly
- 5 Built-in security in tilt position**  
When in the tilt position, the sash automatically engages the locking mechanism providing security against being pulled open
- 6 Available in all range of profiles**  
Can be made from Euro, SIB, Delight and Geneo systems.

CHECK HOW TILT-SLIDE DOOR WORKS



<https://www.youtube.com/watch?v=FSpthGHEf-0>

The REHAU Geneo HST lift-slide door design is an impressive option for creating unique and inspiring living spaces. In contrast to conventional sliding doors, this specially engineered door system can be built to fill significantly larger than normal openings while offering an almost effortless sash operation and instant architectural appeal. Superior sealing properties provide outstanding performance and comfort.



Performance Summary  
Structural: up to CW-PG55  
Acoustical: up to 40 dB  
Thermal: down to 0.20\*

\*based on simulation



- 1 Supreme quality hardware and precision rollers**  
Ensures smooth operation of up to 550 lbs (250 kg) of sash weight over the lifetime of the door
- 2 Compression seals all around the sash perimeter**  
Assures high water performance, less air infiltration and good sound insulation
- 3 Robust, thermally broken frame**  
Allows four-panel configurations up to a size of 32 ft (10 m)
- 4 Large reinforcement chambers in the sash**  
Allows for wide openings and heavy glass weights
- 5 Four-chambered sash and thermally broken frame**  
Provides high energy efficiency
- 6 Sash has large glazing capacity**  
Accommodates special high-performance glass up to 2 1/16" (52mm) in thickness



# AS INDIVIDUAL AS YOU

LOOKS THAT FIT  
YOUR LIFESTYLE

You'll live with your choice of windows and doors for years to come. Why settle for anything less than custom-built vinyl designs that meet your needs?

Our unique selection of styles, colors and high performance features is certain to complement your building and your lifestyle.

Choose from:

- Custom sizes, shapes and trim options that add architectural appeal
- Vinyl finishes that look like real wood yet need less maintenance
- Designs that can meet nearly any energy or structural goal and keep rooms quiet



## Colors

If you are looking for architectural appeal and the ability to customize your windows, REHAU's advanced foil lamination process lets you create the look of wood on your vinyl windows. Foils in a variety of solid colors are also available to provide distinctive appeal to any building façade.



## Mulled Units and Accessory Profiles

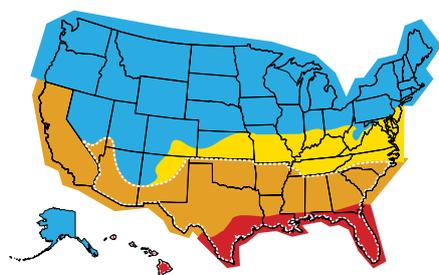
Windows of different types can be joined or mulled together to form a wide variety of attractive designs. These mulled units can be properly reinforced to ensure the finished product performs admirably.

REHAU provides all the components necessary to manufacture mulled units that are both structurally sound and aesthetically pleasing. We also provide a variety of accessory profiles including brickmolds, J-channels, jamb extensions and drywall returns for adapting our windows to different wall configurations.

# ENERGY, ACOUSTIC AND HURRICANE IMPACT TEST RESULTS

Windows	Configuration	Largest Size Tested	Energy Star <sup>®</sup>								Acoustic	Hurricane
			US Zone				Canada Zone					
			Zone 1	Zone 2	Zone 3	Zone 4	Zone 1	Zone 2	Zone 3	Zone 4		
	Picture	72" x 72"	Blue	Yellow	Brown	Red			Green	Light Green	N/A	Green
	Single-Hung	44" x 63"	Blue	Yellow	Brown	Red			Green	Light Green	37	Green
	Single-Slider	69" x 48"	Blue	Yellow	Brown	Red			Green	Light Green	N/A	
	Double-Hung	44" x 63"	Blue	Yellow	Brown	Red			Green	Light Green	36	
	Double-Slider	63" x 44"	Blue	Yellow	Brown	Red			Green	Light Green	35	
	Casement	36" x 72"	Blue	Yellow	Brown	Red	Purple	Light Purple	Green	Light Green	40	Green
	Awning	48" x 16"	Blue	Yellow	Brown	Red			Green	Light Green	N/A	
	Tilt-Turn	44" x 60"	Blue	Yellow	Brown	Red	Purple	Light Purple	Green	Light Green	43	Green
Doors	Sliding Patio	72" x 80"	Blue	Yellow	Brown	Red			Green	Light Green	35	
	Out-Swing Hinged	72" x 96"	Blue	Yellow	Brown	Red		Light Purple	Green	Light Green	N/A	Green
Curtain Wall	Curtain Wall	N/A	Blue	Yellow	Brown	Red		Light Purple	Green	Light Green	N/A	

<sup>1</sup>Sound Transmission Coefficient



- **Northern**  
Mostly Heating
- **North/Central**  
Heating & Cooling
- **South/Central**  
Cooling & Heating
- **Southern**  
Mostly Cooling
- Alternative**  
Criteria Allowed



Maps courtesy of Energy Star

Energy Star for Windows, Doors and Skylights - Climate Maps

## Nachweis Berechnung des Wärmedurchgangskoeffizienten

Prüfbericht  
Nr. 13-000494-PR01  
(PB 01-A01-06-de-02)



**Auftraggeber** REHAU AG + Co.Verwaltung Erlangen  
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91058 Erlangen-Eltersdorf  
Deutschland

**Grundlagen \*)**  
EN 14351-1:2006+A1:2010  
EN ISO 10077-1:2008-09  
EN ISO 10077-2:2012-02  
EN ISO 10211:2007-12  
SG 06-verpflichtend  
NB-CPD/SG06/11/083 2011-09  
ift-Richtlinie WA-15/2 2011-02  
ift-Prüfbericht 13-001212-PR02  
(PB-K20-06-de-02)  
ift-Prüfbericht 13-000494-PR01  
(PB 01-A01-06-de-01)

**Produkt** Einflügeliges Kunststoff Fenster

Bezeichnung System: **GENEO**

Leistungsrelevante  
Produktdetails **Material Polyvinylchlorid (PVC-U) hart; Öffnungsrichtung nach innen; Breite in mm 1230; Höhe in mm 1480; Flügelrahmen-Blendrahmen; Ansichtsbreite B in mm 115; Flügelrahmen; Artikel-Nummer 1532036; Breite in mm 77; Dicke in mm 86; Füllung der Kammer; Lieferbezeichnung Thermomodul EPS; Wärmeleitfähigkeit in W/(m K) 0,031; Blendrahmen; Artikel-Nummer 1532015; Breite in mm 72; Dicke in mm 86; Füllung der Kammer; Lieferbezeichnung Thermomodul EPS; Wärmeleitfähigkeit in W/(m K) 0,031; Mehrscheibenisoliervglas; Aufbau in mm 4/12/4/12/4; Einstand in mm 17; Wärmedurchgangskoeffizient  $U_g$  in W/(m² K) 0,6 (Angabe des Auftraggebers); Abstandhalter; Lieferbezeichnung Thermix TX.N plus**

Besonderheiten **Tennung des Glasfalzbereichs durch PVC-weich Lippe**

### Darstellung



### Ergebnis

Berechnung des Wärmedurchgangskoeffizienten  
nach EN ISO 10077-1:2006-09



$$U_w = 0,79 \text{ W/(m}^2\text{K)}$$

### Verwendungshinweise

Die ermittelten Ergebnisse können vom Hersteller als Grundlage für den herstellereigenen zusammenfassenden ITT-Bericht verwendet werden. Die Festlegungen der geltenden Produktnorm sind zu beachten.

### Gültigkeit

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

### Veröffentlichungshinweise

Es gilt das "Merkblatt zur Benutzung von ift-Prüfdokumentationen". Das Deckblatt kann als Kurzfassung verwendet werden.

### Inhalt

Der Nachweis umfasst insgesamt 7 Seiten und Anlagen (3 Seiten).

ift Rosenheim  
08.07.2013

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