HIGH-QUALITY WINDOWS & DOORS

SYSTEMS:

WOOD ALUMINIUM:
ENERGATE 1202+ · ENERGATE 1202 · ENERGATE 963

WOOD:
ENERGATE 1042+ · ENERGATE 1042 · ENERGATE 802

EXCELLENT THERMAL INSULATION:

<table>
<thead>
<tr>
<th>SYSTEM</th>
<th>1202+ &amp; 1042+</th>
<th>1202 &amp; 1042</th>
<th>963 &amp; 802</th>
</tr>
</thead>
<tbody>
<tr>
<td>$U_h$</td>
<td>0.73*</td>
<td>0.98*</td>
<td>1.2*</td>
</tr>
<tr>
<td>$U_w$</td>
<td>0.66*</td>
<td>0.74*</td>
<td>0.8*</td>
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</tbody>
</table>

Sysytems 1202+ & 1042+ and 1202 & 1042 are passive house suitable.

* Values specified are calculated for tested window: Dual action, single opening window with triple insulating glass $U_h = 0.5 \text{ W/m}^2\text{K}$ · Window Size: 1.23 x 1.48 m · Norm: EN ISO 10077-1

SPECIFICATIONS:

- Solid wood window or with additional insulation
- Triple insulating glass $U_g = 0.5 \text{ W/m}^2\text{K}$ with special fibreglass spacer
- Our system has been successfully tested during many blower door tests
- Certification by accredited testing facilities
- All products are CE-certified
- Solvent free water-based three-layer wood coating system
- Two continuous gaskets
- Timber type: Spruce, larch, oak
- Aluminium cladding with plugged corner connection with welded corners available
- Many product types: A variety of functions

Triple insulating glass with $U_h = 0.5 \text{ W/m}^2\text{K}$

Fiber glass spacer · Color: black

In case of obscure or ornamental glass, it will be on the middle of the insulated glass unit
Winner of Solar Decathlon · Architects: Technische Universität Darmstadt · Germany
### Standard Product Types

<table>
<thead>
<tr>
<th>Product group</th>
<th>Product type</th>
<th>MATERIAL: WOOD ALUMINIUM</th>
<th>MATERIAL: WOOD</th>
<th>MATERIAL: WOOD ALUMINIUM &amp; WOOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.000</td>
<td>Windows</td>
<td></td>
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<tr>
<td></td>
<td>Patio doors with flat threshold</td>
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<tr>
<td>1.021</td>
<td>fixed window</td>
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<tr>
<td>5.000</td>
<td>Lockable patio doors with flat threshold</td>
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<tr>
<td>7.000</td>
<td>Folding sliding doors</td>
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<tr>
<td>8.000</td>
<td>Lift &amp; sliding doors</td>
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<tr>
<td>X.XXX.3 -.4</td>
<td>Outwards opening</td>
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</tbody>
</table>

- = available
- = not available

- Arched windows: not available in + systems with PUR core
- Concealed hinges: available for product from group 1.000

### Aluminum - Standard Colors

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### Wood - Colorsystem: SPRUCE - Picea Abies

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### Wood - Colorsystem: OAK & LARCH

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Ludwig International GmbH - Fenestration Products & Building Envelope Solutions
Door leaf made of multilayer board

- Thermal transmittance of the door blank up to $= 0.93 \text{ W/m}^2\text{K}$ (Spruce)
- ALU Cladding Exterior
- Door leaf: Aluminum panel 3 mm thickness
- Door frame: Aluminum profile - clipped
- Door leaf made of multilayer board, strengthened with solid wood frame and integrated stabilizers against default
- Excellent thermal insulation $U_d$ (depending on model, spruce) up to $1.0 \text{ W/m}^2\text{K}$
- 2 gaskets all around 3-point locking with 3-dimensional-adjustable special hinges
- Durable function: All our doors pass 200,000 opening and closing cycles in the long time test
- DIN-EN-Norm tested
- Bullet-resistant for special safety claims upon request
- Considerably tested with a standard tool set to burglary safety
- Wood choices: Spruce, larch, oak

For Thermal optimal results, we recommend 40mm frame extension as thermal divider between inside and outside.
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