



Barrier 80+

Comfort synthesis in 80 mm

We seem to have a paradox, with the same materials and same technology, we have obtained a better product. If we take into consideration our constant desire for self-improvement, then things become clear: yes, there is still room to make better use of what we have at hand, and without minimising the role of innovation, we understand that at its core lies this permanent desire to evolve.

*On a scale of windows and doors made of classic PVC profiles, **Barrier 80+** is on the highest level, revealing an unexpectedly high architectural and technical potential: architectural due to a complete system of profiles that can cover any configuration specific for residential buildings, due to formal freedom and variety of colours, due to top performances of insulation and protection indicators.*

***Barrier 80+** can be entitled a product of the future. Our care for energy saving, in our clients' homes as well as in the manufacturing process, proves its sustainability.*

***Barrier 80+** windows and doors meet the needs of a large variety of residential uses, providing the design and safety that you need.*



Barrier® Representative



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- Barrier 100
- Barrier 86
- Barrier 80+**
- Barrier 70
- Barrier 60
- Barrier Doors
- Barrier Sectional Doors
- Barrier Rolls
- Barrier Architect
- Barrier Partner

windows and doors that protect your home



up to **50%** high-quality thermal insulation

windows and doors made with new PVC and synthesis profiles - SYNEGO residential

Barrier 80+

80+ concept

Entire windows science in 80 mm

Synthesis of the most efficient PVC windows and doors

The first sign of market maturity is when value, not price, becomes the main criterion of selection. As a sign of respect for our customers' budgets, we have launched **Barrier 80+**, a synthesis product that centralises everything we know in this field of quality windows, a product of progress achieved through experience, without outbidding purchasing budgets.

Top performances centralised in 80 mm

with the same high-quality materials and features - this is how we define progress



Thickness of glass package (max.)

51 mm

Best insulation capacity of its class



Profile thickness

80 mm

Result of consistent research and direction in relation to market requirements



Anti-burglary protection

up to class RC 3

Provides good anti-burglary protection



Soundproofing coefficient

$R_{w,p} = 47$ dB

Optimum soundproofing capacity



Thermal insulation coefficient

$U_f < 1.0$ W/m²K

Excellent thermal insulation



Profile surface

HDF

Smooth, compact and easy to maintain surface



Resistance class to wind action

Class C5/B5 (according to DIN EN 12210)

Optimum sealing



Pressure sealing class

Class A (according to DIN EN 12207)

Very good static resistance to pressure from adjacent elements

Sometimes, an obstacle in the natural development of a company is to lose the vision, figuratively speaking: one cannot see the forest for the trees. We reviewed everything we know, we evaluated all our knowledge about the technological processes and materials that we use. Our conclusion is clear, we can focus these synergies in a new synthesis product.

Barrier 80+ is the highest level ever reached in terms of classical PVC windows and doors. Same material, with reduced sizes even, allowed us to create, just through geometric reconfiguration, by recomposing the points system, a higher and never seen before performance.

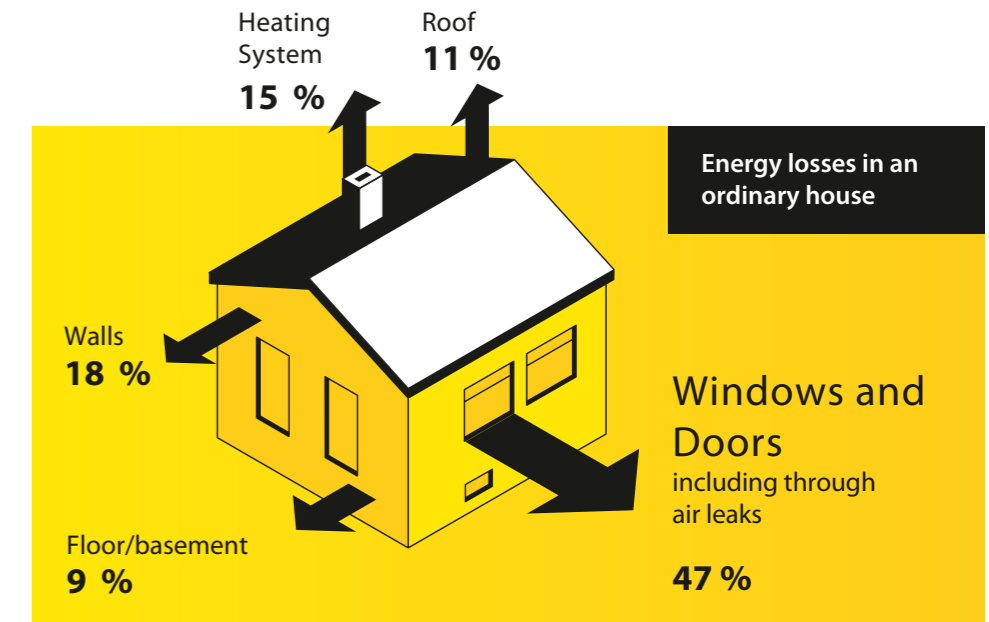


80+ comfort

Comfort starts with the right temperature

Top thermal insulation, low heating costs

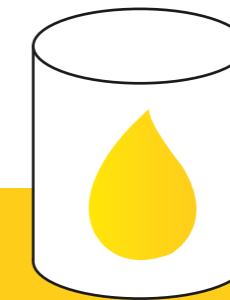
"Saving" on windows proved - both practically and theoretically - to be exactly the opposite, actually it is a continuous loss. 50% higher thermal insulation (compared to standard windows), provided by **Barrier 80+**, provides big fuel savings every year.



Source: Warentest Foundation

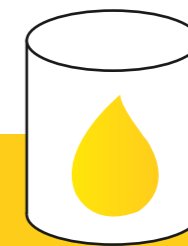
Window influence on energy consumption

In the case of wooden windows from the 1980s



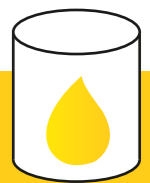
35.500
kg/wood

In the case of current standard windows



17.100
kg/wood

Barrier 80+



10.300
kg/wood

Calculation requisites: windows surface of 25 m², wood consumption - equivalent fuel in 25 years wooden windows with $U_w = 2.79 \text{ W/m}^2\text{K}$, standard PVC windows with $U_w = 1.36 \text{ W/m}^2\text{K}$; **Barrier 80+** with $U_w = 0.66 \text{ W/m}^2\text{K}$

Thermal insulation higher by 50%

compared to current standard windows

Old windows are the largest source of energy loss in a home. They are poorly insulated, being technologically obsolete. The result is easily calculated: significant energy loss through windows, with negative implications on your budget and family comfort.

Barrier 80+ thermally insulates your house from the very first day. Now you can relax and not worry about your heating bills. Subsequent increases in energy prices will have a limited impact on your budget.



80+ silence

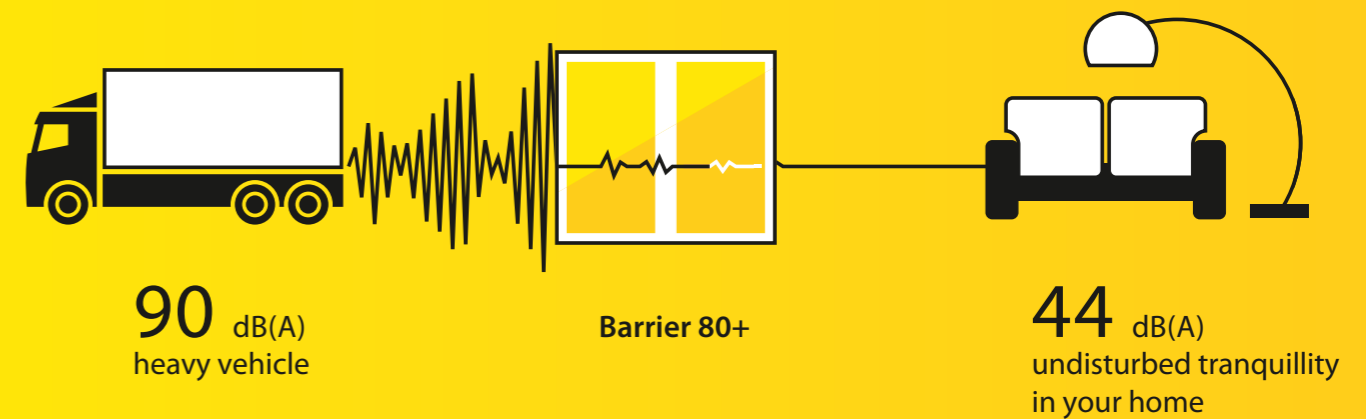
You will hear only what you want to hear

First-class, undisturbed soundproof insulation

Loud traffic noise, your neighbour's lawnmower, or a building site across the street, every day you are besieged by loud noises. **Barrier 80+** simply devours these unwanted vibrations, providing a peaceful oasis inside your home.



New Barrier 80+ windows and doors



Significant reduction of noise

Source: www.hug-technik.com/inhalt/ta/schallpegel_laermpegel.html

Noise is reduced up to 22 times

Due to the special geometry of air chambers and improved configuration of gaskets, vibrations are dissipated before reaching your home.

Noise pollution is a disturbing factor to your health and your family's health. Prolonged exposure to high and constant noise may lead to severe psychosomatic disorders, being an acute stress factor. There are studies showing an increased number of cardiovascular diseases due to loud noise.

Incidental noises, that cannot be reduced, can alter your well-being and comfort, completely compromising your work, as well as your psychological state.

Barrier 80+ filters all these noises, and protects the silence in your home.

Barrier 80+ Profile

Barrier 80+ windows and doors are made with SYNEGO, new PVC and synthesis profiles

80+ technical

Thermal insulation with three sheets of glass
glass thickness up to 51 mm

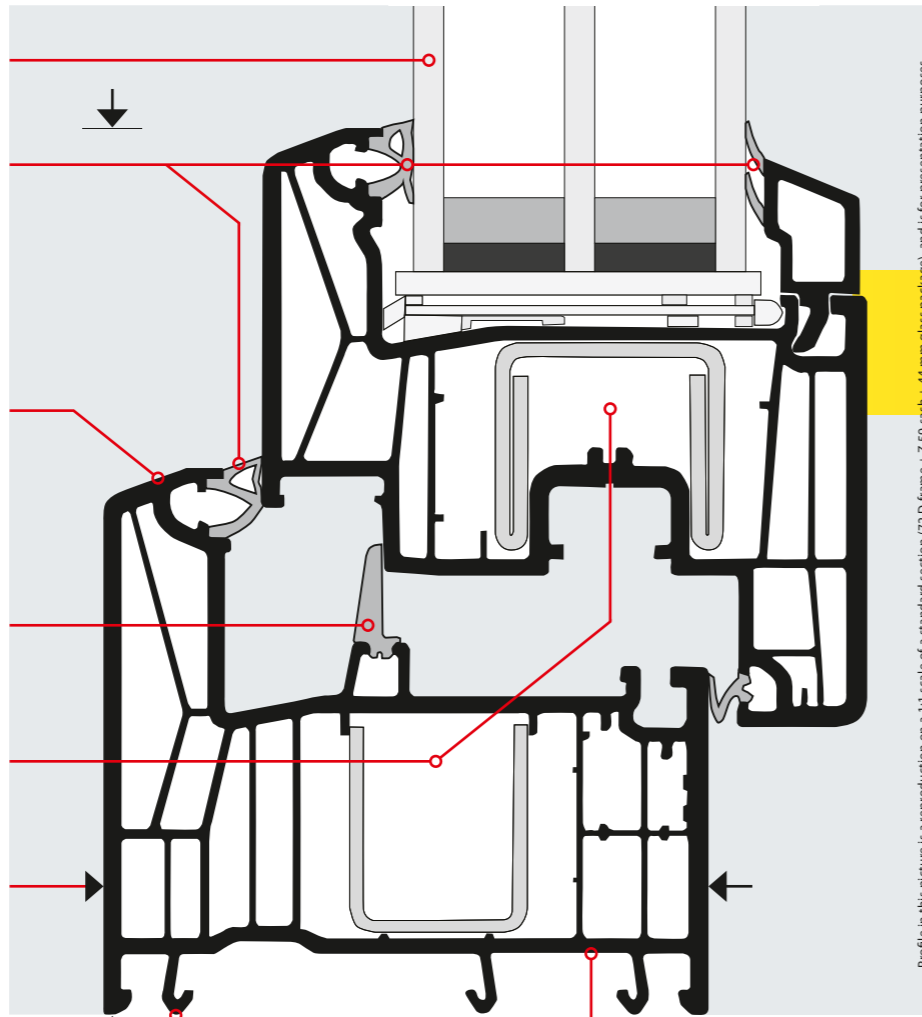
Gaskets for reliable protection
against draft and humidity. Co-extruded gaskets system is suitable for a wide range of applications and requirements. Material is soft in order to allow easy cleaning.

HDF surfaces
(High Definition Finishing) glossy, smooth, easy to clean surfaces with an impeccable image. In case of sealing profiles with foils, the adhesion of coloured foils is very high.

A third level of sealing
(optional rigging version, with median gasket).

7 chambers in frame
6 chambers in window sash
for top insulation.

Constructive depth of 80 mm
for slim ratios. Design of interior chamber walls provides special stability to profiles, which is above average.



Profile in this picture is a reproduction on a 1:1 scale of a standard section (72 D frame + Z 59 sash + 44 mm glass package), and is for presentation purposes.

Slight visible height, of 117 mm
for higher incidence of light. We also have profiles that provide greater heights: 127, 144 or 154 mm.

Longer hooks provide easier and safer clipping of ancillary profiles (window sills, extension profiles etc.).

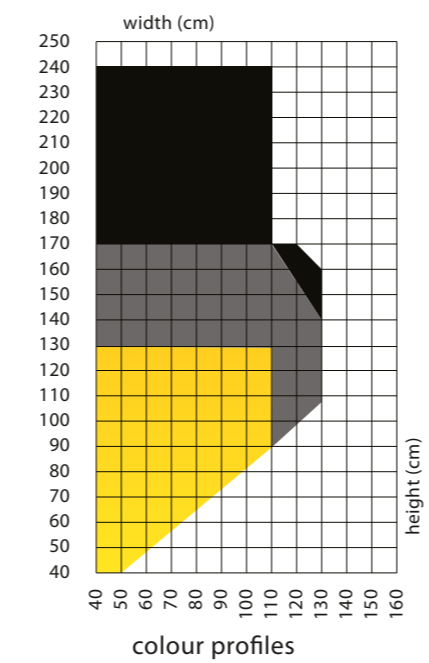
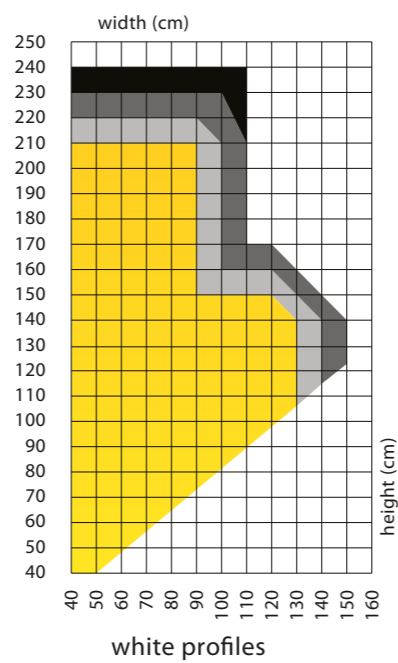
Complete system of PVC profiles
range of profiles includes parts for most constructive typologies of residential windows and doors.

Features of mobile meshes of doors made with Z59 profiles can vary depending on the type of frame: doors with full perimeter marginal frame have mechanical resistance (class B5/C5) and resistance to showery rains (class 9A), better than doors with sill (class B4/C4, respectively class 8A). Air permeability is the same for both types of doors (class 4).

indicative dimensions of mobile mesh (Z59) depending on the type of reinforcement*

- 28 (35) x 28 x 2 (1,5) mm (U)
- 41,8 x 28 x 2 mm (L)
- 30 (35) x 28 x 2 mm (U)
- 41 x 28 x 2 mm (U)

* - depending on glass weight, additional measures may be needed for reinforcement/stiffening. Please talk to a Barrier specialist.



architecture of profile chambers improved



increased mechanical resistance - up to class B5/C5



top thermal insulation up to $U_f = 0.94 \text{ W/m}^2\text{K}$ (with median gasket)

complete system of profiles and points
HDF surfaces, wide range of colours
plating with aluminium profiles,
glass packs up to 51 mm

Barrier 80+ comfort synthesis in 80 mm residential windows and doors



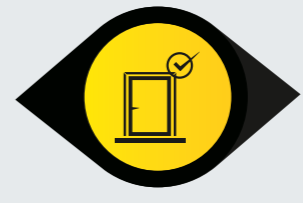
resistance to extreme weather conditions (rain and wind), low air permeability



energy saving up to 50% compared to classical wooden carpentry



top anti-burglary protection (class RC3)



increased soundproofing (class SSK5)

- energy saving
- thermal insulation
- soundproofing
- median gasket
- anti-burglary safety
- air impermeability
- colours
- more light
- automations
- forecast resistance
- innovative materials

SYNEGO centralises top performance of PVC REHAU profiles

The main feature is flexibility, offered by the dual gaskets system and wide range of profiles and subsystems, which allow us to manufacture any configurations of residential windows and doors.

The well-balanced design of interior chambers make SYNEGO one of the best PVC profiles, so that you can obtain energy savings up to 50% compared to traditional carpentry.

| Technical data | | | |
|-------------------------------|--|--|-------------------------|
| | Contact gasket | Central gasket | |
| Thermal insulation of profile | U_f up to 1.0 W/m ² A | U_f up to 0.94 W/m ² A | |
| Thermal insulation of window | Glass (U_g value)* | Total insulation value (U_w value)* | |
| | 0.8 W/m ² K | 0.94 W/m ² K | 0.92 W/m ² K |
| | 0.7 W/m ² K | 0.87 W/m ² K | 0.86 W/m ² K |
| | 0.6 W/m ² K | 0.81 W/m ² K | 0.79 W/m ² K |
| | 0.5 W/m ² K | 0.74 W/m ² K | 0.72 W/m ² K |
| | 0.4 W/m ² K | 0.67 W/m ² K | 0.66 W/m ² K |
| Noise protection | up to $R_{w,p} = 46 \text{ dB}$ (clasa SSK5) | | |
| Anti-burglary resistance | up to RC 3 | | |

* - Values calculated for manufacturing glass panel with "warm edge" rod. In case of using aluminium rods, these parameters will have lower values. Please consult a Barrier specialist for more details on these differences.

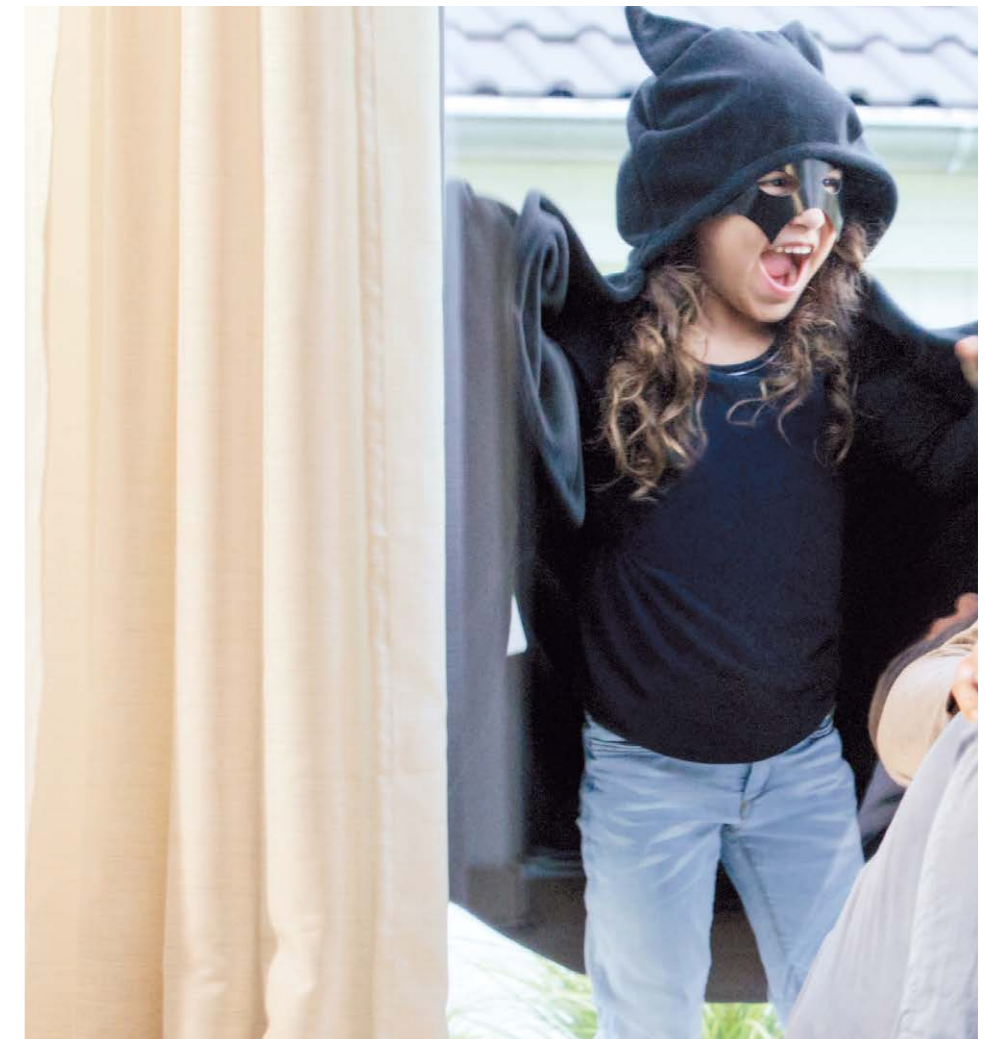


80+ safety

Nobody enters without being invited by you

Anti-burglary resistance is a priority for Barrier 80+

Home means family, safety, comfort and peace. **Barrier 80+** windows and doors complete your need for privacy and protection.



Resistance class RC 1



Resistance class RC 2 / RC 2N



Resistance class RC 3



Protection against burglaries up to 10 times better

in comparison to windows without anti-burglary systems

80% of house breaking is achieved through easily accessible doors and windows. In over a third of cases, home breaking remains just an attempt due to improved security technology. Burglars prefer easy targets, windows or doors that can be opened in a few seconds.

Barrier 80+ provides different solutions to increase the safety of windows and doors in your home. Identify together with your Barrier representative risk areas and evaluate the safest solutions.



80+ image

Your vision becomes reality

A variety of colours and shapes, a single product: Barrier 80+

A person's first impression is important, but what matters most is the joy of having windows and doors in the colours and shapes that you've dreamed of. **Barrier 80+** is chromatically designed for you.



Over 220 colours

Variety: wood, aluminium, solid colours or aluminium colours. Aluminium protections can be painted in any RAL colour, and your window façades can have different colours: mahogany on the inside and, why not, anthracite on the outside.

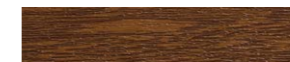
Freedom of shapes

The complete system of PVC profiles provides a variety of architectural structuring alternatives. Also there is a complete freedom of window and door shapes, suitable for modern buildings or restorations.

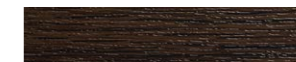
Standard 1



Sapeli
(Mahogany)
9.2065 021 – 116700



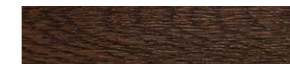
Golden Oak
(Golden Oak)
9.2178 001 – 116700h



Eiche Dunkel
(Morreiche)
9.2052 089 – 116700



Eiche Rustikal
(Dark Oak/Rustic Oak)
9.3149 008 – 116700



Nussbaum V
(Walnut)
9.2178 007 – 116700



Anthrazitgrau Genarbt
(Grey Anthracite Txt)
7016 05 – 116700



Anthrazitgrau Glatt
(Grey Anthracite Lis)
7016 05 – 808300

Standard 2



Schwarzbraun / Braun Genarbt
(Dark Brown)
8518 05 – 116700



Grau
(Grey)
7155 05 – 116700



Streifen-Douglasie
(Douglasie)
9.3152 009 – 116700



Basaltgrau
(Basalt Grey)
7012 05 – 116700



Dunkelgrun
(Dark Green)
6125 05 – 116700



Irish Oak
(Irish Oak)
9.3211 005 – 114800



Weiss 9152
(White)
02.20.91.000001 – 116801



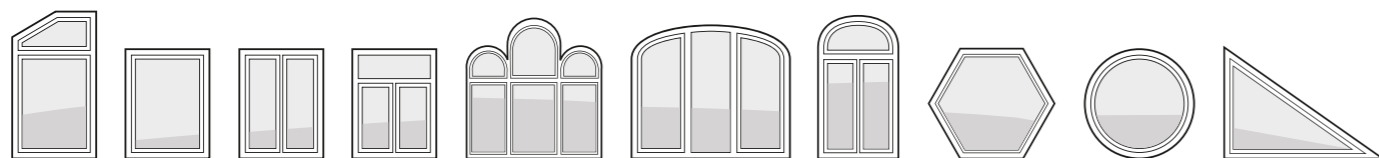
Cremweiss 1379
(Cream)
02.20.11.000001 – 116701



AnTEAK
(Antique Barrier)
9.3241 002 – 119500

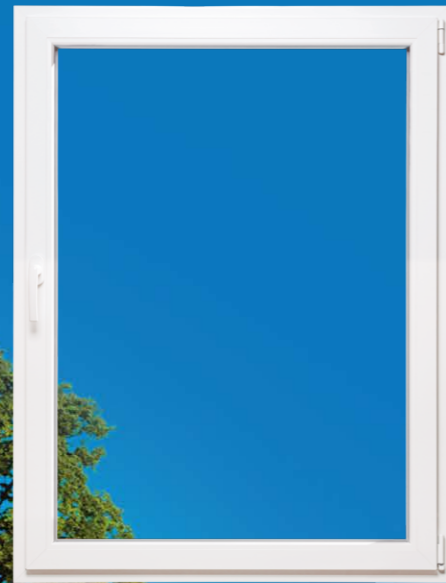
Genarbt = with streaks
Glatt = smooth, lis

Standard 1 - delivery from stock 5-10 days
Standard 2 - delivery from stock 15-20 days



Protecting the environment with intelligent technology

When the environment is protected, your home is safe



80+ eco sustainability



the future
is in your
hands

Total sustainability means that we take into consideration how materials and energy consumption is used throughout the entire cycle of manufacturing and use of **Barrier** windows and doors. We recycle old windows, and raw materials are recovered, improved and reinserted in the manufacturing cycle.



As a result of our experience and know-how, we are actively involved in developing products that respect the environment. Therefore, our goal is to significantly increase the level of sustainable manufacturing by 2020.

Only profiles bring a CO₂ decrease of 1,000,000 kg per year

due to using secondary raw materials

Energy saving

During the manufacturing process we reduce energy consumption through a series of measures that optimise our activity. Computerisation of manufacturing stages, good organisation help us obtain the same products with less energy consumption. Environment protection starts here.

Our efforts to increase energy efficiency do not stop after **Barrier 80+** windows and doors are delivered: we continue to work diligently in order to identify solutions that bring energy and operation savings, and the direct beneficiary of all of this is you.