

# BAVARIA Window Systems



Premium  
Premium AL  
EVO





## Contents

Quality by tradition	page	3
BAVARIA Premium window	page	4
BAVARIA Premium AL window	page	5
BAVARIA EVO	page	6
Designs	page	7
Refurbishment and modernisation	page	8–9
Saving energy	page	9
BAVARIA security package	page	10–11
Sound insulation and glazing bars	page	12
The fascination of colour	page	13
Useful extras	page	14
Examples	page	15

## BAVARIA vinyl windows.

BAVARIA-Fensterbau is a name that stands for more than 25 years' experience in the manufacture of high-quality, durable vinyl windows, doors and front doors.

BAVARIA vinyl windows offer a number of convincing advantages compared to windows made from other materials. vinyl is extremely weather resistant and robust, easy to clean and keeps noise out and heat in. BAVARIA windows are recyclable and therefore environmentally-friendly.

Whether new builds or refurbishment projects – BAVARIA vinyl windows leave nothing to be desired in terms of quality, colour and design, employing modern window technology to keep your home warm and draught-free.



*BAVARIA-Fensterbau in 1981*



*Our company today: We produce high-quality products employing modern production facilities.*



*Head office of BAVARIA in Landshut today.*



*Classic offset sash*

*Design sash, round*



*Design sash, bevelled*



## BAVARIA Premium

A perfectly designed interior structure of the window frame profile with 5 insulating chambers prevents the formation of cold bridges and improves thermal insulation. BAVARIA standard sealing glazed units (U<sub>g</sub> value 1.1 according to DIN) reduce heat losses and substantially lower heating bills. The use of thermal and sound insulating glazing units can be used to obtain further improvements.

- | Cosy warmth through high thermal insulation with 5-chamber profile
- | Overall depth 70 or 80 mm
- | High stability due to solid steel reinforcement
- | Standard security fittings for effective intruder protection
- | Sash lifters
- | Foolproof latch system
- | Low maintenance
- | Thermal glazing U<sub>g</sub> value 1,1 W/m<sup>2</sup>K
- | Striking visual appearance with high-quality, shiny and non-soiling surface
- | Sound insulation (optional)
- | Grey seal
- | Automatic ventilation option
- | Three different sash profiles
- | 10-year replacement guarantee on fittings

## BAVARIA Premium AL window – our flagship model



### BAVARIA Premium AL

Basic profile as BAVARIA Premium with the additional features:

- | Aluminium cover profile
- | Stylish design
- | Available in all colours and powder-coated finishes
- | Frame and casement also available in various colours



# The BAVARIA-EVO window



## BAVARIA-EVO – the window evolution.

BAVARIA-EVO windows are manufactured from RAU-FIPRO®. This is a high-tech composite fibre material that has only been used up to now in aircraft construction and in Formula 1 technology. The unique stability and durability of this material allows for the first time the manufacture of windows **WITHOUT additional steel reinforcement.**

- | **The first fully reinforced window profile**
- | **System overall depth 86 mm/6-chamber system**
- | **The most energy efficient profile in its class** for windows of passive house standard (e.g.  $U_w = 0.73 \text{ W/m}^2\text{K}$ ) up to low-energy house (e.g.  $U_w = 1.1 \text{ W/m}^2\text{K}$ )
- | **Optimal sound insulation without steel reinforcement** with previously unattained values (glass 50 dB =  $R_w$ , P 47 dB) with sound insulation class 5 – including optimal thermal insulation\*
- | **Burglar resistant up to resistance class 3.** Resistance class 2 without steel reinforcement – including optimal thermal insulation\* & \*\*
- | **Tried and tested, smooth surfaces,** less susceptible to dirt and easy to clean
- | **Large elements in a slim design** for optimal solar energy yields and modern architecture
- | **Complies with current and foreseeable energy-saving-standards** – adds value to your property

\* This values are related to German standards and tests. Please ask our local partner for specific details in your country!

\*\* Please see Page 11 for the available BAVARIA security standards.

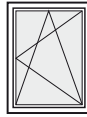
## As individual as your requirements

No matter what type of BAVARIA window system you choose – the diversity of designs and styles is almost limitless. The designs shown here are only a small example of the options available.

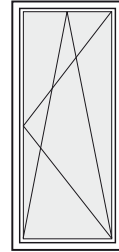
Balcony or patio doors are also available in diverse designs and styles.



## Examples of tilt and turn windows and doors



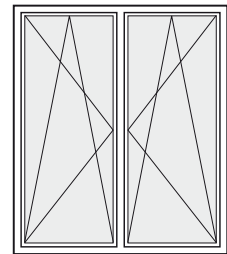
*Tilt and turn, right*



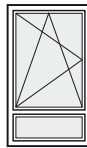
*Tilt and turn door, right*



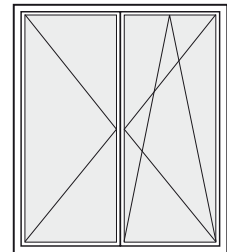
*Tilt and turn, left with fan light opener*



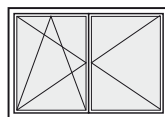
*Double tilt and turn/tilt and turn casement door with fixed mullion*



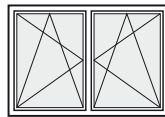
*Tilt and turn, left with fixed pane*



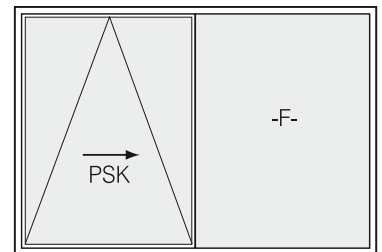
*Double turn/tilt and turn casement door with moving mullion*



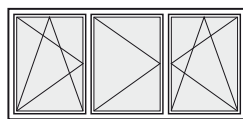
*Double tilt and turn/tilt and turn casement window with moving mullion*



*Double tilt and turn casement window with fixed mullion*



*Parallel slide and tilt patio door, left moving door, right fixed pane.*



*Triple tilt and turn/turn/tilt and turn casement window with fixed mullion*



## Cold or cosy

Old windows let in the cold and are draughty due to a lack of thermal insulation. Even well sealed windows can radiate cold at a distance of three metres. Reference is made here to the so-called "unpleasant zone". This cold radiation can make a room seem colder than it actually is – although a reduction in temperature does take place.

With the new generation of windows, one can stand as close as 50 cm to the window without feeling any cold or draught.

## Up to 80 % energy-saving

Buildings that are older than 20 years are considered to be outdated from an energy point of view. Measures that contribute to saving energy have become very important and are an integral part of new builds and are also a requirement in some cases.

Refurbishment and modernisation, in addition to visual aspects, means improved living comfort, e.g. by replacing draughty windows and doors. Sensible refurbishment and modernisation can reduce energy bills and increase the value of a property.

Heating bills can be reduced by up to 80% depending on the age and type of property by extensive refurbishment measures. The following are important for complete refurbishment and modernisation:

- | Well insulated windows and doors.
- | Complete insulation of outside walls, roof and cellar ceiling.
- | Modern heating system – using renewable energies if possible



# Saving energy

## Glossary of terms

### U value

The heat transmittance coefficient (U value) corresponds to the former k-value. It replaces the k-value as part of European standardisation. There are three different U values; these are defined as follows:

#### $U_w$

The "w" stands for "window". This value defines the U value for the complete window.

#### $U_g$

The "g" stands for "glazing". This value defines the U value for the glazing only.

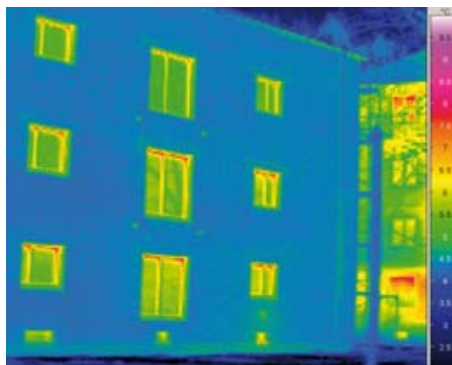
#### $U_f$

The "f" stands for "frame". This value defines the U value for the window frame.

The following applies in general:

- | The lower the U value, the higher the heat loss.
- | The smaller the U value, the better the insulation.
- | Comparisons should always be made based on the  $U_w$  value as this reflects the relevant properties of the window as a whole.

## Saving energy means reduced bills



Thermographic:  
Passivhaus Institut, Dienststadt/Architekturbüro Schulte Danep, Nürnberg

No other prices have risen as much for private households in recent years than those of energy for heating. Those who cannot or do not wish to use alternative heating concepts must look to home improvement measures. Windows and doors are the most important home improvement elements as they can contribute to increased heat loss compared to thick walls, depending on the particular type of building.

*High heat loss from windows.*



*Feeling safe in your own four walls is also a matter of security. BAVARIA vinyl windows offer intruder protection of a high standard.*



## Opportunity makes a thief

Simple security measures can make life difficult for thieves. These usually suffice to deter opportunists. Increased resistance in standard fittings ensures that windows cannot be opened by physical force alone.

Anyone wishing to protect themselves from uninvited guests must take the necessary precautions.

Additional security locking points, levering out protection and a lockable hand lever offer greater intruder protection.

In the design of BAVARIA windows, particular importance was attached to large dimensioned steel reinforcement. Owing to the overall depth of the profiles of up to 74 mm, high structural stability is provided and supported by screwing the locking parts into the steel.

## Standard fitting – S

- | Increased levering out protection
- | Standard fitting on BAVARIA windows
- | Corner connection pieces and striker plates with increased security (system security, type S-ES)

## Optional fitting – S1

S1 security class components offer basic protection against break-in attempts using physical force, e.g. kicking or battering with the body or shoulders (essentially acts of vandalism).

- | Fitting security similar to WK1 according to DIN V ENV 1627 ff and RAL-RG 607/13 (AhS).
- | All window corners are fitted with components for increased security (S-ES).
- | The lockable hand lever prevents operation of the lock.
- | The hand lever fastener is covered to prevent removal with a drill.

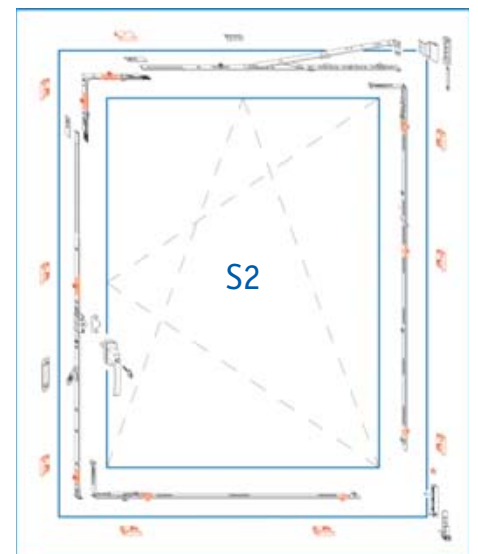
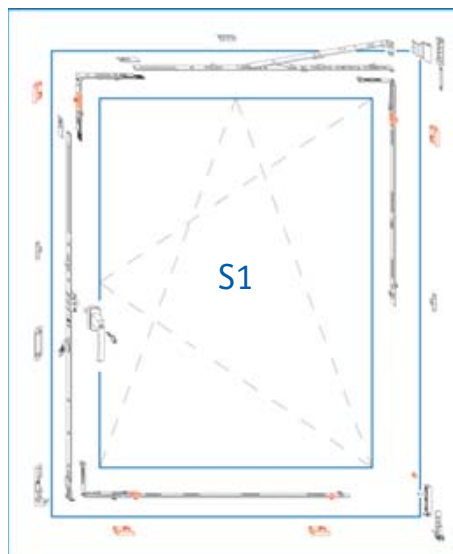
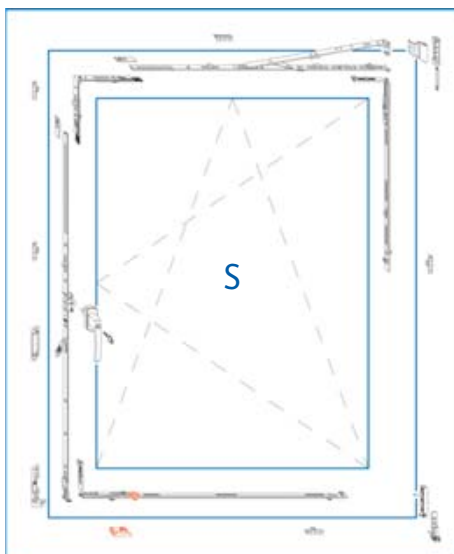
## Optional fitting – S2.

S2 security class components prevent intruders from attempting to break open closed and locked components using tools such as screwdrivers, pliers and wedges.

- | Fitting security similar to WK2 according to DIN V ENV 1627 ff and RAL-RG 607/13 (AhS).
- | All window corners are fitted with components for increased security (S-ES).
- | Additional horizontal mushroom bolt espagnolettes at the top and bottom of the window offer greater resistance against heavy-duty tools.



Security fitting and mushroom bolts.



# The fascination of colour

## Woodgrain to suit the style of your home



The latest range of woodgrain options are available as a classic styling element for modernisation and refurbishment of old buildings and blending in with landscapes in contemporary style.



Mahogany

Dark oak

Golden beech

Irish oak

Golden oak

Moor oak

Soft cherry

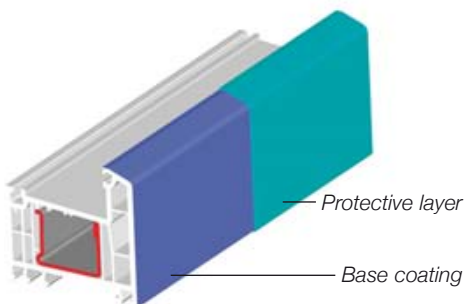
Walnut

## Individuality means showing your “true colours”

With BAVARIA vinyl windows, you can realise your own individual ideas in terms of colour and decor due to the extensive range available. Everything is possible - from classic, elegant white to modern, creative colours and rustic woodgrain.

For its coloured windows, BAVARIA uses acrylic-coated profiles. A coating is added to the PVC profile by means of a special technique. In addition to shades of yellow, red, green and blue there is also a range of natural woodgrains, e.g. in mahogany, oak or golden oak. Due to the fine grain effect added to the coating, a highly effective imitation of the structure of a real wood surface is obtained.

The multi-layered coating used is made of a (coloured) basic coating made of soft PVC with a protective layer of polyacrylate and is fused with an environment-friendly, solvent-free hot-melt adhesive to form a permanent, inseparable material bond.



The advantages of this process have resulted in its outstanding position in the market:

- | High level of scratch resistance
- | Colour-fast for years
- | No limitation of corner-breakage stability
- | Very high level of resistance to weathering



- | Can be coated on both sides, i.e. outside and inside

Coloured window profiles create a harmonious combination of façade and windows, setting colourful accents to suit individual tastes and lifestyles. Homes are transformed into attractive buildings, business premises are given an unmistakable look. Colour vinyl windows by BAVARIA offer plenty of scope for creativity and experimentation.

For the hot climate in Southern Africa we recommend white as your favorite colour. Although we do not expect any problems with the colour coating, our experiences in Southern Africa are limited and use of all colours is at your own risk without any warranty. Please contact our local partner for further details!

Brown grained no. 9631

Dark green no. 9973,  
similar to RAL 6009

Grey no. 9922,  
similar to RAL 7001

Moss green no. 4925,  
similar to RAL 6005

Anthracite grey no. 4443,  
similar to RAL 7016



# The fascination of colour

## Woodgrain to suit the style of your home



The latest range of woodgrain options are available as a classic styling element for modernisation and refurbishment of old buildings and blending in with landscapes in contemporary style.



Mahogany

Dark oak

Golden beech

Irish oak

Golden oak

Moor oak

Soft cherry

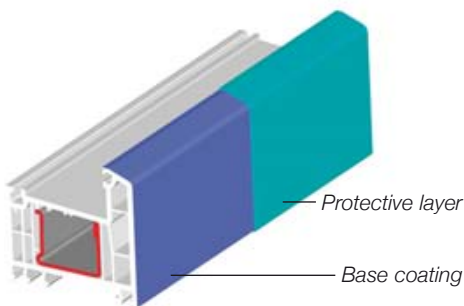
Walnut

## Individuality means showing your "true colours"

With BAVARIA vinyl windows, you can realise your own individual ideas in terms of colour and decor due to the extensive range available. Everything is possible - from classic, elegant white to modern, creative colours and rustic woodgrain.

For its coloured windows, BAVARIA uses acrylic-coated profiles. A coating is added to the PVC profile by means of a special technique. In addition to shades of yellow, red, green and blue there is also a range of natural woodgrains, e.g. in mahogany, oak or golden oak. Due to the fine grain effect added to the coating, a highly effective imitation of the structure of a real wood surface is obtained.

The multi-layered coating used is made of a (coloured) basic coating made of soft PVC with a protective layer of polyacrylate and is fused with an environment-friendly, solvent-free hot-melt adhesive to form a permanent, inseparable material bond.



The advantages of this process have resulted in its outstanding position in the market:

- | High level of scratch resistance
- | Colour-fast for years
- | No limitation of corner-breakage stability
- | Very high level of resistance to weathering



- | Can be coated on both sides, i.e. outside and inside

Coloured window profiles create a harmonious combination of façade and windows, setting colourful accents to suit individual tastes and lifestyles. Homes are transformed into attractive buildings, business premises are given an unmistakable look. Colour vinyl windows by BAVARIA offer plenty of scope for creativity and experimentation.

For the hot climate in Southern Africa we recommend white as your favorite colour. Although we do not expect any problems with the colour coating, our experiences in Southern Africa are limited and use of all colours is at your own risk without any warranty. Please contact our local partner for further details!

Brown grained no. 9631

Dark green no. 9973,  
similar to RAL 6009

Grey no. 9922,  
similar to RAL 7001

Moss green no. 4925,  
similar to RAL 6005

Anthracite grey no. 4443,  
similar to RAL 7016



# Useful extras: AirComfort and SGG BIOCLEAN®

## AirComfort: automatic room ventilation – invisible, noiseless, refittable.

Room dampness never used to be a problem because building insulation was permeable and provided automatic ventilation. Modern, energy-efficient construction makes buildings virtually airtight so this 'natural' ventilation is longer available. For this reason, it is imperative to consistently ventilate oneself so as to avoid the development of mildew. AirComfort automatically performs this important function. The maintenance-free technology guarantees excellent climatic indoor air conditions without technological complexity.

The advantages of AirComfort:

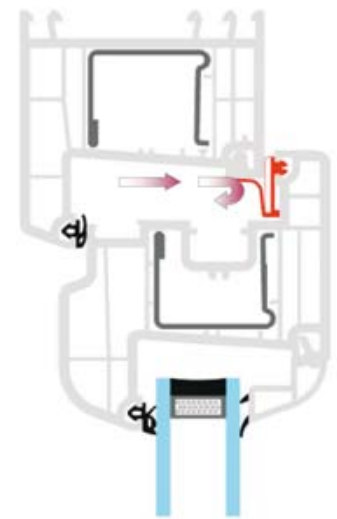
- | When the window is closed it is involved from both inside and outside.
- | The ventilation facility is at the top on the sash and is thus not directly visible to the user.
- | The air flow is vertical to the ceiling so as to avoid drafts.

| The design and material selection ensure that clattering noise and condensation are avoided.

| Mill cuts and bores are not necessary. For this reason, the system is easily retrofittable and dismountable, e.g. if a ventilation system is installed at a later stage.



Open ventilation position for normal air pressure.



Closed ventilation position for increasing air pressure.

## SGG BIOCLEAN®: Self-cleaning glass for naturally clean windows

SGG BIOCLEAN® glass is self-cleaning. This innovative glass cleans itself naturally.

SGG BIOCLEAN® is suitable for outside applications in residential and non-residential build-

ings, new builds or refurbishment and modernisation and can be used for both vertical and overhead glazing.

Ideal for:

- | Windows
- | Oriels
- | Conservatories
- | Roof windows



Conventional glass

SGG BIOCLEAN®



| Conventional glass leaves water and dirt marks (Fig. 1)

| With SGG BIOCLEAN®, a photocatalytic action takes place and the power of UV rays present in daylight trigger the decomposition of organic dirt and cause the surface of the glass to turn "hydrophilic" (Fig. 2).

| The decomposed residues and mineral dust are removed when water (rain) makes contact with the surface of the glass (Fig. 3).

Examples



## | Windows

vinyl for new builds and refurbishment and modernisation, planned and manufactured to suit individual requirements.

## | Front doors

Large selection of aluminium or vinyl doors.

## | Roller shutters

For installation and retrofitting including thermal roller shutters for individual requirements.

## | Sun protection

Awnings, roller blinds and shutters.

## | Insect protection

Roller blinds or special doors offering insect protection.

## | Conservatories

Bespoke designs.

| over 25 years of experience

| professional fitting

| in-house service centre

| doors and windows

made in Bavaria



BAVARIA-Fensterbau GmbH  
Head Office Landshut

**EXCELLENT**  
ALUMINIUM SYSTEMS

Excellent Aluminium Systems

38 Platinum Junction • Marconi Beam • 7441 • Milnerton • Cape Town  
Tel: 021 555 4250 • Fax: 086 547 6078 • Cell: 083 266 3120  
Email: [sales@excellentaluminium.co.za](mailto:sales@excellentaluminium.co.za) • Web: [www.excellentaluminium.co.za](http://www.excellentaluminium.co.za)  
German Showroom: Cnr Canterbury & Roeland Str • Gardens • Cape Town

**REHAU**  
QUALITY FENSTER  
DESIGN