



WINDOWS AND DOORS
IN PASSIVE- AND ENERGY-SAVING HOUSES



EMPOL BIS S.A.
Since 1995

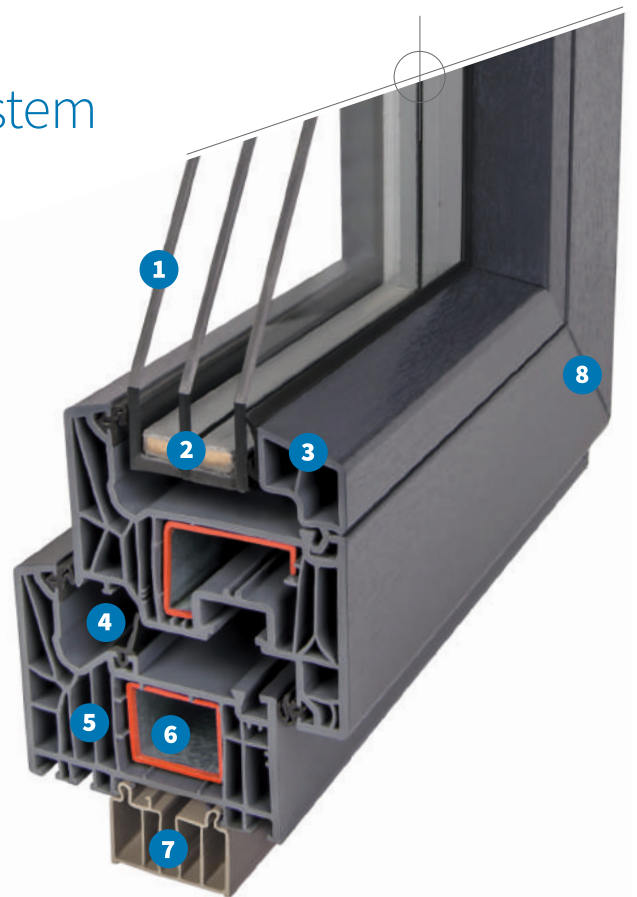
Competence in the field of
PVC and aluminium

UNIQUE PRODUCT *Living Strong*

Connection of the newest Schüco Living window system and Strong fittings

SCHÜCO LIVING WINDOW SYSTEM

1. Two-chambers glazing package system for passive and energy-saving houses.
2. Deep-set glazing package with a glass thickness up to 52 mm prevents thermal bridges and reduces the water condensation on the glass panes surfaces.
3. Visually attractive two-chamber glazing bead.
4. A middle-seal system with so called dry chamber was built by three sealing levels made of thermally weldable EPDM functional seals (applies for Living MD profile system). This allows to achieve excellent heat and sound insulation values.
5. 7-chamber profile system with basic depth of 82 mm and thermal insulation properties for Uf values as low as 1,0 W/(m²K).
6. Stainless steel reinforcements made of 1,5 – 2,5 mm thick cold bent profiles.
7. The under-sill profile allows the proper installation and additionally optimizes the thermal insulation.
8. A durable and visually attractive weld.



STRONG FITTING

Manufactured on the basis of Winkhaus ActivPilot fittings with increased protection against burglary attempts and enriched with the following additional components:

9. Further burglar-resistant security closure points, which also hinder levering out the window sash:
 - a) 3 anti-burglar bolts in each turn-tilt sash
 - b) 2 anti-burglar bolts in each turn sash
10. The fail safe device with strike plate for the dual function element (DFE) on each turn-tilt wing.
11. The simple adjustment of the contact pressure at the window is enabled by the system with mushroom-shaped octagonal locking bolts and steel strike plates on the frame.
12. Variable tilt device.
13. Unobtrusive mechanical locking in the turn window.



The Living MD profile system meets the requirements of the IFT Rosenheim Institute in the field of passive



DECORATIVE FOILS

The window frames can be covered by two-sided or one-sided foil (from outside/inside). High quality smooth or grained appearances, as well as wood decors are possible.

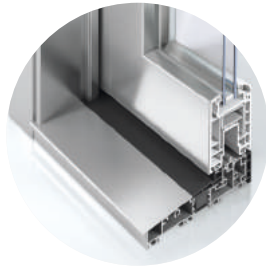
The differentiated facade- and interior design is easier with the wide selection of various foils' colours on both sides of the window.



AUTOMOTIVEFINISH

The surface coating windows is an innovative solution that gives the plastic windows an exclusive appearance of the aluminum systems. The best features of car paints were transferred to the production of windows and doors:

- wear resistance
- colourfastness
- resistance to chemicals and resistance against external circumstances
- attractive value for money



EXTERNAL ALUMINUM COVER CAP TopAlu

Attractive surface technology for plastic windows and doors, excellent alternative to aluminum joinery:

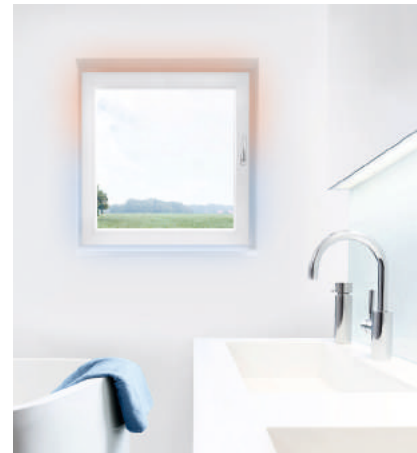
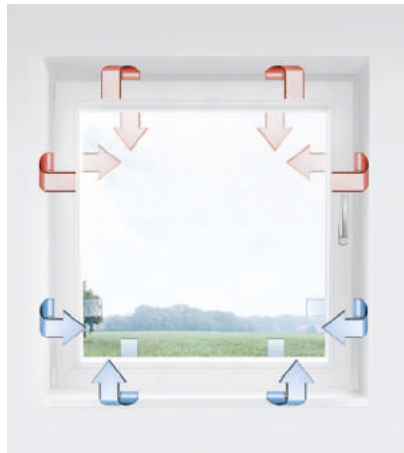
- resistance to environmental influences
- easy cleaning (as PVC windows)
- design option for mixed residential and commercial properties by optimizing the external appearance of windows and doors
- a large selection of different colored anodised or powder coated surfaces

Unique solutions

WINKHAUS ACTIVPILOT COMFORT PADK

Unique, innovative technology, which allows to place the sash in parallel position to the frame. Resulting from this 6 mm air gap ensures the exchange of the humid air (in the upper part), which makes the room ventilation much more efficient. This kind of ventilation mode corresponds to the burglary-resistant window and furthermore to the high Resistance class RC2 according to PN EN 1627-1630.

This is the unique solution on the market!



WINKHAUS ACTIVPILOT SELECT

Fully-concealed in the window turn-tilt fitting system, meets the required aesthetic demands. Special technical features, including weight-bearing capacity up to 150 kg, allow to apply windows' surfaces up to 3 m² per sash.

The sophisticated construction of the new Winkhaus fittings without visible bearing parts, fits excellent both modern and historical buildings.



SCHÜCO LIVING MD

SCHÜCO LIVING AS

SCHÜCO LIVING ensures excellent thermal insulation and sound insulation properties. Increased basic depth and specially configured fittings noticeable affect the comfort and the sense of security.

This highest standard, which combines the best quality components, optimizes the functionality and the product's service life.

The first weld-on gasket is integrated in the Schüco Living window system. Using elastic, weld-on material increases the sealing effect in the difficult corner area of the unit, whilst also allowing for a closed, visually appealing corner design without hard gasket corners. The durable, eco-friendly material keeps a tight seal throughout its entire service life.



Schüco Living MD

7-chamber profile system with 3 sealing levels made of weldable EPDM functional seals. The simple, narrow shape allows more light to enter the interior.

The profile core is available in following colours: grey, caramel and white.



Schüco Living Rondo

7-chamber profile system with 3 independent sealing levels. The slightly rounded edges together with higher sash basic depth of 90 mm present a nice, modern and elegant appearance.

Schüco Living AS

7-chamber profile system with 2 sealing levels made of weldable EPDM functional seals. The exceptional thermal insulation in the standard of energy-efficient buildings. The profile core is available in following colours: grey, caramel and white.



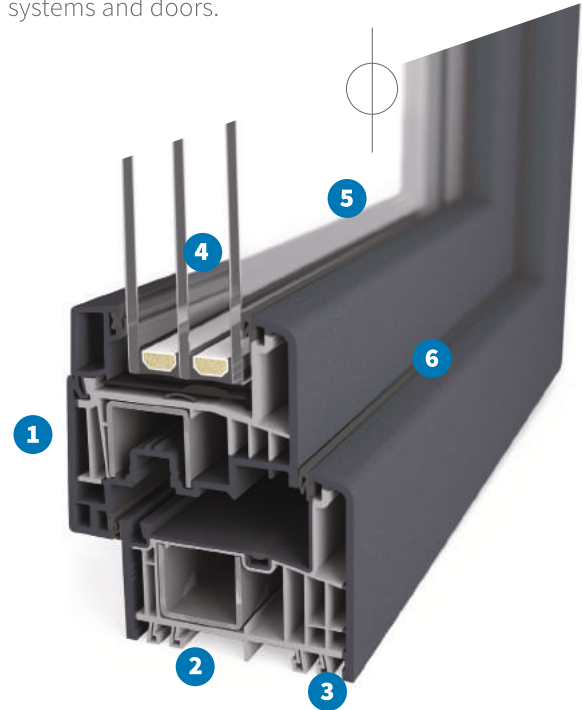
Technical information	Schüco Living MD	Schüco Living AS	Schüco CT 70 Rondo	Schüco CT 70 Classic	Gealan S9000	Gealan S8000
Number of chambers	7	7	5	5	6	6
Basic depth of the sash	82 mm	82 mm	70 mm	70 mm	82,5 mm	74 mm
Basic depth of the frame	82 mm	82 mm	78 mm	70 mm	82,5 mm	74 mm
Possible glazing thickness	24-52 mm	24-52 mm	6-40 mm	6-40 mm	26-52 mm	20-48 mm
Thermal insulation according to DIN EN 12412-2	$U_f=0,96$ W/m^2K	$U_f=1,0$ W/m^2K	$U_f=1,2-1,5$ W/m^2K	$U_f=1,2-1,5$ W/m^2K	$U_f=0,92$ W/m^2K	$U_f=1,1$ W/m^2K
Sound insulation according to DIN EN ISO 140-3 (maximum, depending on profile and glazing)	$R_{w,p}=47$ dB	$R_{w,p}=47$ dB	$R_{w,p}=46$ dB	$R_{w,p}=46$ dB	$R_{w,p}=40-44$ dB	$R_{w,p}=42-43$ dB
Burglar resistance according to DIN EN 1627	RC 2	RC 2	RC 2	RC 2	RC1-RC2	RC1-RC2

GEALAN S9000

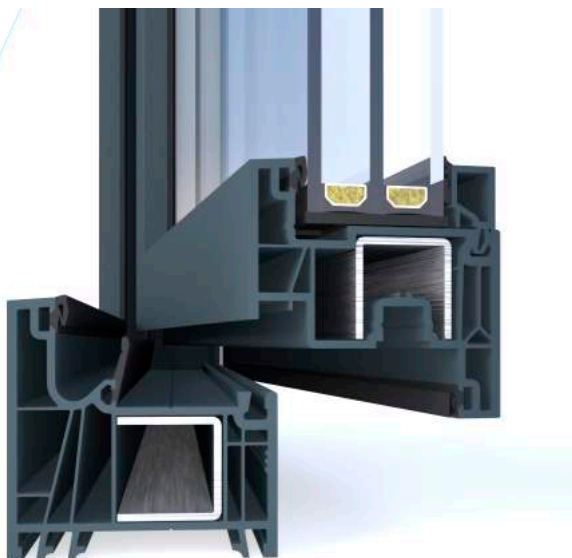
The **GEALAN S9000** is a versatile, state-of-the-art system for windows, doors, and lift-slide doors, with a choice of two or three sealing levels.

1. Deep edge cover. Deep edge cover thanks to an upstand height of 26 mm for enhanced heat insulation.
2. Perfectly fitting steel. Perfectly fitting steel forms for the perfect balance between statics and heat insulation.
3. Six chambers end to end. Six chambers end to end in the frame, sash and mullion for outstanding heat and sound insulation.
4. Suitable for triple functional glazing. Suitable for triple functional glazing with a maximum thickness of 52 mm.
5. STV®. Static dry glazing. GEALAN's one-of-a-kind bonding technology permits the smooth production of large-format window elements.
6. No spalling. Spalling or chipping of the coloured layer is permanently avoided due to the inseparable bond and hard surface.
7. Angular handle oriented towards architectural trends

The GEALAN group of companies is one of Europe's leading manufacturers of plastic profiles for window systems and doors.



GEALAN LINEAR®



The 74-mm technology, a further development in the 70-mm segment, thanks to the multichamber construction, provides more safety, sound insulation and thermal insulation. The versatility of the system is complemented by the straight-line design, thus following the minimalist trend of modern architecture.



STV®

STV® is the ground-breaking system for dry bonding glass and sash upstands. Compared with the conventional wet bonding method, it delivers decisive benefits without compromising on ease of fabrication. With STV® technology, window sashes up to 2.5 m. in the height can be glazed.



LIFT AND SLIDE SYSTEMS

SCHÜCO LIFT- AND -SLIDE DOORS LIVING- AND EASYSLIDE open up new open spaces to the terrace or conservatory, let a lot of light in the rooms and enlarge thus visually the living space. The practical threshold-free sliding doors work smooth and comfortable, insulate against noise inside and insulate outward against heat loss, therefore they become more and more popular in modern houses construction. The maximum sizes, dimensions and the achievable window glass surfaces are the biggest advantages of lift-and-slide doors.

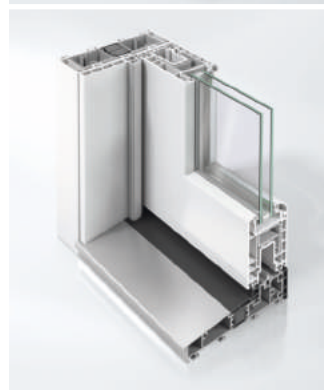
Specially manufactured rollers and guide tracks make it easy to open and close the door without effort, even with a sash weight up to 400 kg. They meet the highest standards of stability, sound insulation and burglar resistance as well.

Thanks to the integration into the Schüco color concept with the PVC foils, Schüco lift-and-slide systems impress with an almost unlimited variety of colors. Thanks to the complete system compatibility, windows and doors in the facade can be designed uniformly.



Schüco LivingSlide

Living lift-and-slide system from Schüco combines maximum installation efficiency with the highest standards of comfort and design. The steel reinforcements in the vent frame as closed rectangular tubes significantly increases the design's stability and allows large units with vent weights up to 400 kg to be constructed.



Schüco EasySlide

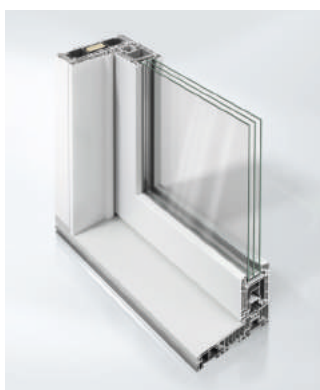
Flat threshold provides a high level of comfort and barrier-free home. Slim design and low view widths at maximum sash sizes ensure transparency and the highest possible incidence of light. We offer you a wide selection of colours, wood decors and external aluminum cover caps in all RAL colours.

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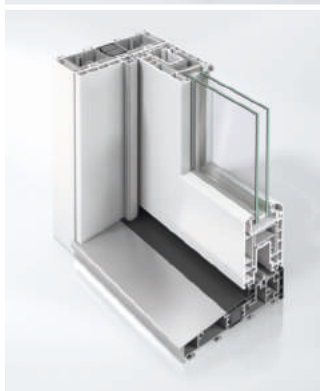
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SCHÜCO PASK

Beside balcony doors, sliding and lift-and-slide constructions, **PASK-PVC DOORS** can be produced as well (the optimal combination of sliding doors and turn-tilt windows with proven Schüco PASK fitting). For ventilation purposes the sash can be tilted or placed in parallel position to the frame (6 mm from the frame) without the need of sliding the sash. PASK doors can be manufactured on the basis of Corona CT 70, on the basis of Schüco Corona CT 70 and Schüco Living profile systems.

The undisputed advantages of PASK doors:

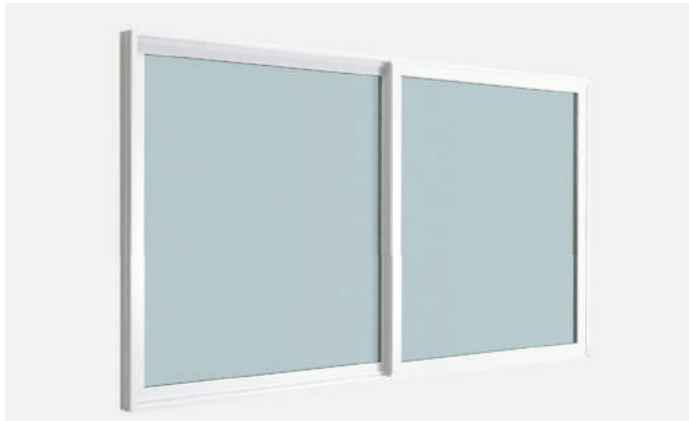
- space-saving opening system
- good stability, heat- and sound insulation
- tilted sliding sash secured against pushing out
- simplified operation (extra convenience)
- fittings suitable for 2-4 PASK sash elements
- modern design
- large selection of color and wood decors
- relatively low price

Technical information	Schüco LivingSlide	Schüco EasySlide	Schüco CT 70 PSK	Schüco Living PSK	Gealan SMOOVIO	Gealan S9000
Basic depth of the sash	194 mm	167 mm	70 mm	82 mm	74 mm	82,5 mm
Basic depth of the frame	82 mm	70 mm	70 mm	82 mm	74 mm	65 mm
Possible glazing thickness	16-52 mm	16-52 mm	4-40 mm	16-52 mm	20-48 mm	28-50 mm
Thermal insulation according to DIN EN 12412-2	U _f =1,3 W/m ² K	U _f =1,4 W/m ² K	U _f =1,4 W/m ² K	U _f =1,0 W/m ² K	U _f =1,4 W/m ² K	U _f =1,3 W/m ² K
Sound insulation according to DIN EN ISO 140-3 (maximum, depending on profile and glazing)	R _{w,p} =42 dB	R _{w,p} =43 dB	R _{w,p} =46 dB	R _{w,p} =47 dB	R _{w,p} =28-38 dB	R _{w,p} =28-38 dB
Burglar resistance according to DIN EN 1627	RC 2	RC 2	RC 2	RC 2	RC 2	RC 2



GEALAN S9000

Large door elements can be moved with ease with our technology. It does not matter whether the door is open or closed. Either way, the room is flooded with light. And the virtually threshold-free floor junction further offsets the separation between the interior and exterior.



Lift-slide doors with the proven GEALAN-acrylcolor® surface boast a durable and uniform surface quality. They offer huge design freedom for new builds and renovations.



GEALAN-SMOOVIO

The development objective for this system with rebate gaskets and an installation depth of 74 mm was to create a cost-effective profile with optimum use of materials, for easier and more efficient fabrication by window manufacturers. A relaxed glide and secure seal. A refined closing mechanism in the new GEALAN sliding system means this is no longer an issue.

- Thermal insulation $U_f=1,4 \text{ W}/(\text{m}^2\text{K})$
- Impermeable to driving rain in 9A class
- Effortless gliding

ALUMINIUM-SYSTEMS

Aluminum is a durable, modern material. It is defined as a “friend of architects”.

With its exceptional properties, aluminum systems stand out by a unique resistance of the constructions, which allows to produce elements in larger dimensions than in PVC systems. Even very large glazings are applied, so that the profiles do not reduce the valuable light area.

We offer aluminum constructions in 4 following systems:

- **SCHÜCO**
- **ALIPLAST**
- **ALUPROF**

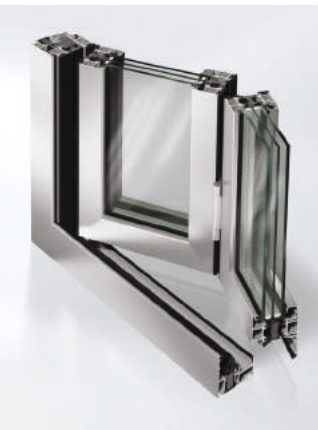
SCHÜCO is one of the market leading manufacturers of high quality windows, doors and facade systems made of aluminum, plastic and steel. Schüco windows and doors have high thermal insulation values, are easy-care and eco- friendly. Rich aluminum assortment is offered in a wide variety of colours. Aluminum windows and doors by Schüco technology system stand for:

- excellent stability
- durability
- high burglar resistance (RC 2)
- optimal sound and heat insulation
- various design options
- anodized or powder-coated surfaces
- functionality and living comfort
- timeless design



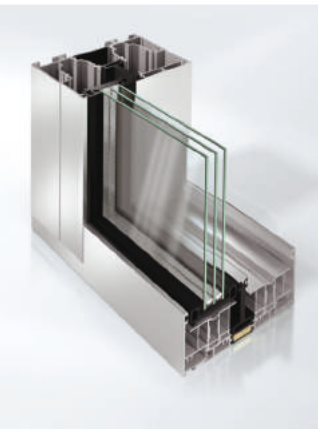
Schüco sliding and lift-and-slide systems, the highly insulated ASE 80.HI. HI (U_w of $<0,99$ W/m^2K) with perfect rain impermeability and first-class sound-proofing is available even with a sash size of 11 m² and 500 kg weight. Burglar resistance up to RC 2 class possible. Sliding and lift-and-slide construction ASS 50 with narrow visible width provide highest possible incidence of light with good thermal insulation. Even room-high sash can be controlled easy and safe thanks to completely concealed optional drive system Schüco e-slide just by pressing the button (including locking).

Technical information	AWS/ADS 90.SI+	AWS/ADS 75.SI+	AWS/ADS 70.HI	AWS/ADS 65	FWS 50.SI	ASS 80 FD.HI	ASS 77 PD.HI
Basic depth	90 mm	75 mm	70 mm	65 mm	6-255 mm	112 mm	77 mm
Min. visible width	99 mm	91 mm	91 mm	91 mm	50 mm	80 mm	37 mm
Thermal insulation according to DIN EN 12412-2	$U_f=0,7$ W/m^2K	$U_f=0,9$ W/m^2K	$U_f=1,5$ W/m^2K	$U_f=1,9$ W/m^2K	$U_f=0,7$ W/m^2K	$U_f=1,3$ W/m^2K	$U_f=1$ W/m^2K
Possible glazing thickness	68 mm	61 mm	62 mm	55 mm	86 mm	53 mm	60 mm
Opening type	inwards	inwards and outwards	inwards and outwards	inwards and outwards	inwards and outwards	inwards and outwards	inwards and outwards
Sound insulation according to DIN EN ISO 140-3 (maximum, depending on profile and glazing)	$R_{w,p}=47$ dB	$R_{w,p}=48$ dB	$R_{w,p}=48$ dB	$R_{w,p}=47$ dB	$R_{w,p}=48$ dB	$R_{w,p}=47$ dB	$R_{w,p}=42$ dB



Schüco Folding Sliding System ASS 80 FD.HI

With narrow face widths and a wide range of types which meet all the requirements of current thermal insulation standards, as well as outstanding weathertightness. Attractive opening types such as the 90° corner including a flat, thermally insulated threshold for barrier-free access offer a variety of design options for this system.



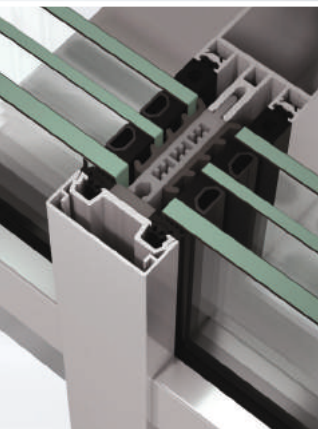
Schüco Sliding System ASS 77 PD.HI

An opening 90° corner which can be designed with two further moving vents or two fixed fields brings both architectural freedom and user comfort. A flat outer frame expands the application options for the sliding system, e.g. in renovations.



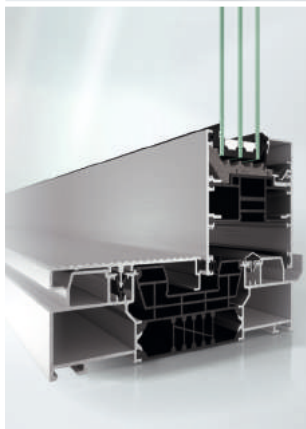
Schüco Window System AWS 75 PD.SI

Alongside energy efficiency, the seamless integration of form and function is nowadays a fundamental requirement when creating modern building envelopes. With the Schüco AWS 75 PD.SI (Panorama Design Super Insulation) window, Schüco now offers an opening unit that meets these architectural requirements perfectly, with minimal internal and external face widths and excellent thermal insulation.



Schüco Façade System FWS 50.SI

Based on pioneering isolator technology, the Schüco FWS 50.SI (Super Insulated) façade system offers highly thermally insulated solutions for designing diverse façades and skylights to passive house level, including optimised fabrication and installation processes.



Schüco Sliding and Lift-and-Slide System ASE 80.HI

Barrier-free, very easy to use and a slim-line appearance - the high-insulation Schüco ASE 80.HI (High Insulated) sliding and lift-and-slide system offers elegant design solutions for sustainable, user-oriented architecture to passive house level. This aluminium profile system captivates with the reduced DesignLine interlock section of the vents.

ALIPLAST is a Belgian producer of aluminum systems used in the construction of various buildings which is very successful among the consumers. With its unique properties as a durable and modern material, aluminum is especially recommended for Aliplast windows, doors and sliding systems.

Windows and doors systems, depending on the application, exist in two different types:

1/ warm (aluminum profiles with thermal insulation, used outdoors for windows and doors, wherever thermal insulation is required):

- **Star** [basic frame depth 90 mm, glazing up to 82 mm, heat transfer ratio $U_f \geq 0,78 \text{ W/m}^2\text{K}$, width of thermal insulation insert 45 mm]
- **Superial** [basic frame depth 75 mm, glazing up to 61 mm, $U_f \geq 1,9 \text{ W/m}^2\text{K}$]
- **Imperial** [basic frame depth 65 mm, glazing up to 51 mm, $U_f \geq 2,2 \text{ W/m}^2\text{K}$]



2/ cold (without thermal insulation; used indoors as inner doors and partition walls):

- **Econoline** [basic depth 51 mm, glazing up to 38 mm].

Sliding systems ensure a smooth passage from the living space to the outdoors. Thanks to big dimensions and large glass surfaces you get a feeling of freedom and can enjoy your garden all year round. High durability and strength allow to build sashes up to 3000 mm high and 400 kg weight (lifting-slide sash). Basically we offer 2 systems: **Ultraglide** und **VisoGlide**.

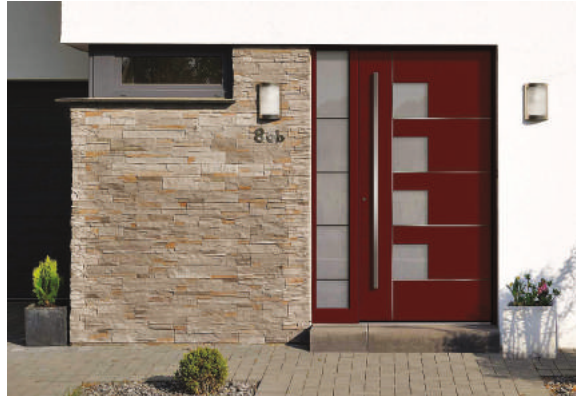


ALUPROF is one of the leading manufacturers of aluminum systems in Europe. With over 50 years of experience is also known in the United States. Aluprof manufactures its windows, doors and lift-and-slide doors in warm (**MB-60, -70, -86, MB-77HS HI**) and cold (**MB-45**) systems. To ensure the excellent insulation values, special thermal inserts are used in the "HI" profiles. The manufactured constructions meet all European standards and customer requirements for product quality, durability and safety.



ENTRANCE DOORS

INNOVATIVE The entrance door series Modern is perfect for those who move with the times. Clear lines, innovative materials and fresh details provide a modern look according to your taste. Add the finishing touches to your new building or make your house fit for the future - with very modern entrance door trends.



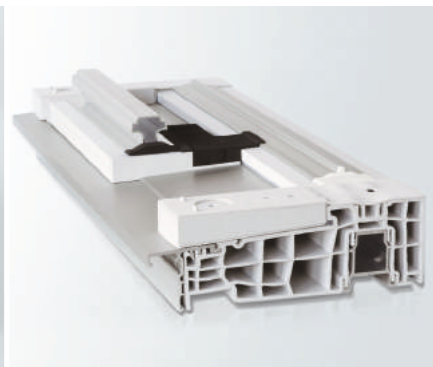
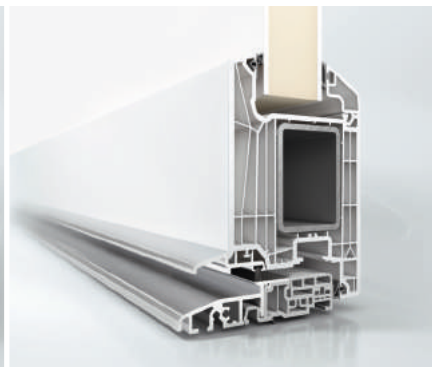
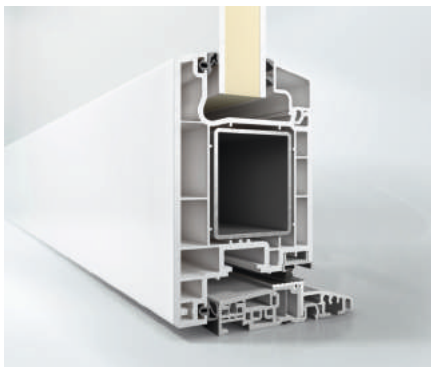
EFFECTIVE Completely new surfaces, visionary shapes as well as exquisite materials make unique entrance doors possible - discover the ceramic surfaces made from natural raw materials, the Colani design or the genuine wood surface in old wood look.

STYLISH As a lover of traditional designs and familiar materials, you will surely find your personal favourite in the classic entrance door series. Harmonious proportions, playful swings and handcrafted glass combine to create a stylish entrance door that welcomes your visitors in an inviting way.

THRESHOLDS

Front door and French balconies thresholds. We offer door thresholds with excellent heat insulation and the highest water tightness

- SCHÜCO CT70
- SCHÜCO LIVING
- GEALAN



EXTERNAL ROLLER SHUTTERS

External shutters protect against overheating of rooms in the summer, heat loss in the winter and lowering the noise level. In addition, they can constitute protection against burglary. They ensure privacy and significantly affect the sense of security in your home.

In our offer there are three different kinds: top-mounted roller shutters, front-mounted roller shutters and also flush-mounted front roller shutters.



EXTERNAL BLINDS

Aluminum external blinds are perfect sun protection systems for your home. Lightweight, powder-coated, chrome-oxide-free slat profiles, available in numerous variants and RAL colors, can be set manually or electrically at any angle, allow different degrees of shading, provide the desired room atmosphere and protect against strange insights. The external blinds increase the living comfort and add architectural accents to every facade.



GARAGE DOORS

Garage door, usually installed on the front facade, affects the look and feel as well as usability of the building. Before the right garage system is chosen, the room size, typical gate features and installing options are to be considered. The rolling system is a space-saving solution by the fact that the garage door drive is inserted into the box above the gate. The maximum width is 4.5 m, while the maximum width of sectional garage doors is 6 m.



WINTER GARDENS

Actually, the winter garden should be called “the four seasons garden“, as this light-flooded room always offers great living comfort.

Main advantages of building a winter garden:

- latest system solutions (Schilling, Schüco, Winkhaus)
- functionality (additional living space)
- saving of energy (intelligent buffer zone)
- resistance to weather and rust
- emotional closeness to the nature
- aesthetic, elegant house enlargement



Our offer includes the following solutions:

- complete aluminum systems, so-called warm profiles with high quality thermal insulation
- cold aluminum systems (without thermal insulation)
- combined PVC-ALU constructions

INTERNAL WALL SYSTEMS

Partition systems and internal wall systems by Aluprof are especially recommended wherever noise control and high sound insulation are required. Office partitions with different panels as well as with single, laminated or special hardened window panes fit the dynamic requirements of every office.

MB-45 OFFICE - a lightweight, stable, glass office partition system (the door is an accented element) fully compatible with the basic window and door system (MB-45). The characteristic feature is the use of hardened window panes as supporting elements. The partitions can be made of various panels, window panes and full glass doors (swing doors).



The double-glazed partition system **MB-80 OFFICE** with wall width of 80 mm allows the use of various fillings (window panes, furniture panels and plasterboards), blinds in the space between the panes, as well as various office equipment elements. Depending on the filling used, the walls can be integrated with electrical equipment (e.g. sockets, wires). With the MB-80 OFFICE system the maximum height of 5.5 m and an excellent acoustic attenuation value of even 50 dB can be achieved.



MB-78EI is a bars-free, transparent fire protection partition system with 4 mm wide joint made of special swelling material and non-flammable silicone in three color variants (black, gray or white). Thanks to transparent modules, interiors are optically enlarged. The system meets all the requirements of fire resistance classes EI30 and EI60.



EMPOL window factory was founded in 1995 and is still a family business. The factory is located in Źródła (55-330 Miękinia), just 8 km from the borders of Wrocław.

We work together with the european market leaders (among others: Schüco, Winkhaus, Pilkington, Aluprof, Aliplast), which affects long-term customer trust.

Through many years of experience and constant development EMPOL became the market leader in Lower Silesia. Realization of even most demanding orders is possible thanks to English- and German-speaking customer service, educated, highly qualified teams, technical possibilities, innovative solutions and top-quality products.

We are looking forward to your contact and will gladly answer your questions.



Our business partners:

SCHÜCO

GEALAN

WINKHAUS

aliplast
aluminium systems

RODENBERG
GESICHTER EINER TÜR

PILKINGTON



The description of the EMPOL BIS S.A. products in this product sheet is for information purposes only and does not constitute an offer within the meaning of Kodeks Cywilny (Civil Code).

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