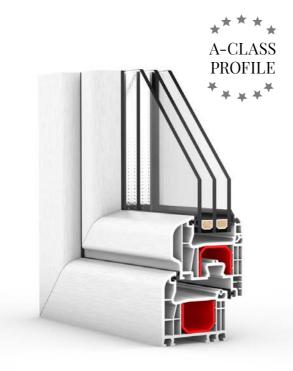
# Energy efficient and functional solutions for your home!







## 5 Cls

Uw= 0,94 W/(m<sup>2</sup>K)\*

**Profile** – the rounded profile line in A class determines the modern design of the window. The original, patented solution creates the unique interior and exterior character.

The windows made of high-quality 5-chamber profiles, exclusively of prime material, improve energy efficiency and allow to decrease heating bills.

**Fittings** – Maco Multi Matic KS with two anti-theft bolts as a standard increase the level of window safety.

**Handles** – high-quality aluminum handles, available in a wide color range, improve the window aesthetics and optimize the comfort of window usage.

**Hinges** – completely invisible hinges (as an optional equipment) hidden between the frame and the sash improve the window aesthetics and emphasize its modern design.

5

Uw= 0,94 W/(m<sup>2</sup>K)\*

**Frame** – steel galvanized frame or energy efficient Swisspacer Ultimate frame available in gray, black or dark brown ensures a perfect match with the window color.



## **Aesthetics**

window is a combination of innovativeness, functionality and energy efficiency with elegant design. They come in many shapes: rectangles, triangles, circles, trapezoids, arches, limited only by the Client's demands . The snow- white profile and wide color range give broad possibilities in interior design.

#### Safety

High-quality profiles equipped with special steel reinforcements in sashes and frames enhance stability and window statics, which, combined with Maco fittings with anti-theft hooks, ensures perfect anti-burglary protection. Additionally, the windows are equipped with a blockade against handle misplacement and a wing lift that facilitates sash closing and a micro-ventilation mechanism in a slot.

#### Durability

The big reinforcement chamber of the frame and sash is a guarantee of woodwork durability and resistance. An additional asset is the color stability which prevents windows from fading, keeping their original properties for ages, even in most extreme weather conditions.

#### **Energy efficiency**

The optimum profile structure and glass package equipped with a warm steel frame of thermal transmittance coefficient Ug=0,6 W/(m²K) is a guarantee of energy savings, optimum temperature in the room and high sunlight transmittance. Top-quality construction materials and EDPM seals improve the window tightness, protect against gusts of wind and increase rain-water tightness.

#### **Functionality**

The intelligent control systems ensure great functionality and the comfort of usage. Window control may occur with the use of a remote control, smartphone or a tablet, which gives full control and determines the system's high quality and its compatibility.



## **PVC Windows**

It has an innovative sealing system that guarantees great parameters in energy-efficiency. It is the world-first solution in such a system that applies a central gasket made of foamed EPDM. It also ensures outstanding parameters in air permeability, water tightness and resistance to wind load. It is a perfect solution for energy-efficient and passive buildings.

## Specification:

## **Profile**

7-chamber frame and sash profiles in A-class made exclusively of primary material, with installation depth 82 mm.

## Glazing

Applicability of using glass package 4/18/4/18/4 with thermal transmittance Ug = 0,5 W/(m<sup>2</sup>K).

## **Fittings**

MACO MULTI MATIC KS protected by Silber-Look coating in the standard, equipped with two anti-burglary bolts and sash lifter with handle missplacement blockage. Possibility to hide the hinges in the fitting notch and use RC2 anti-burglary solutions.

## Gaskets

The window has an innovative sealing system made of foamed EPDM, which guarantees great parameters in terms of energy efficiency. The EPDM sealing available in black and gray.

#### **Color range**

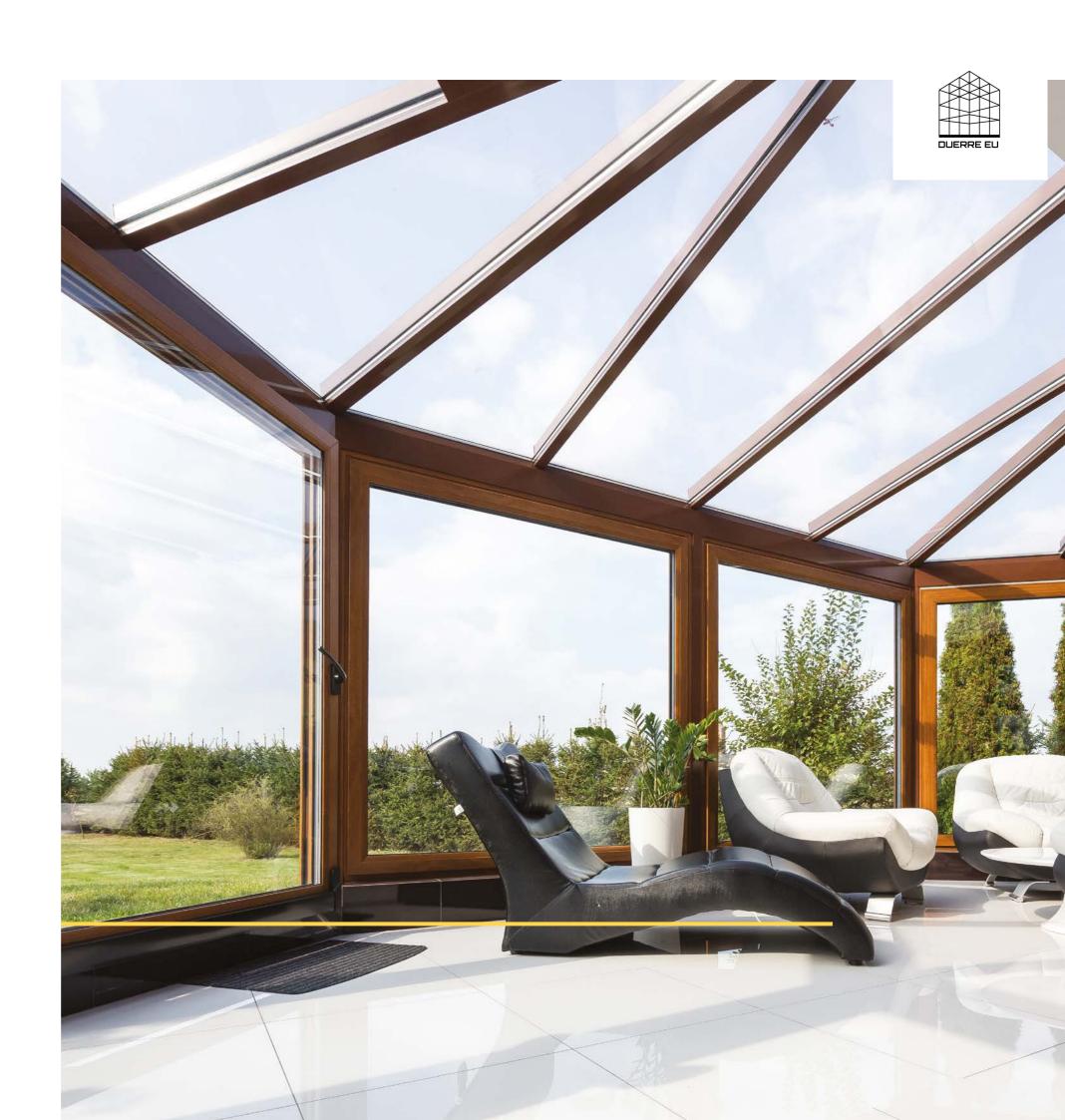
Wide color range in Renolit film colors that match numerous interior design styles.

#### Thermal transmittance

Uw= 0,79 W/(m<sup>2</sup>K)\* with two-chamber package filled with argon

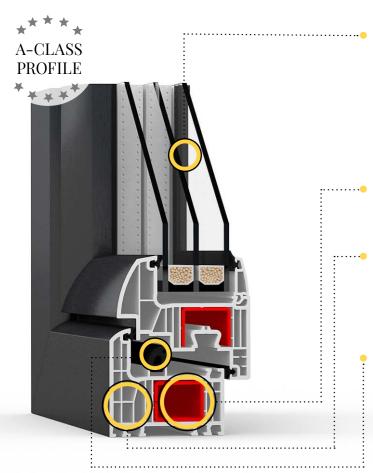
#### **Sound insulation**

37-46 dB



# Modern design, innovative technology and high energy efficiency in a window!





Application of glass with low-emission coatings of thermal transmittance coefficient that amounts for Ug=0,5 W/(m²K) ensures higher energy-efficiency.

Maco Multi Matic KS fittings as a standard are equipped with a wing lift with a blockade against handle misplacement that allows to close effortlessly even the heavy wings.

Big profile chamber with a steel reinforcement or optionally glass fiber reinforcement guarantee perfect resistance and statics.

Windows made of 7-chamber A-class profiles, for installation depth of 82 mm, ensure considerable energy savings. The optimum number and size of the chambers guarantee great parameters in thermal transmittance.

The window is equipped with a system of triple sealing: external, internal made of EPDM, and central made of foamed EPDM, which guarantees high energy efficiency. In addition, the window as a standard is equipped with a five-chamber window sill strip with an internal seal increasing the window tightness and its parameters in terms of thermal insulation.



## Main advantages of Energy system:

**Energy-efficiency**, thanks to the optimum profile structure, specially designed sealing system made of foamed EPDM and glass packages of low thermal transmittance coefficients.

Modern design ensured by the slender and rounded profile shape.

**High safety level** guaranteed by the application of two anti-theft hooks as a standard. The smart control systems with the use of a remote control, smartphone or a tablet, ensure great functionality, usage safety and they enable to integrate the solutions with alarm systems.

**Durable construction,** thanks to the stable profile with frame reinforcement - full steel (closed). In the case of full reinforcement, antiburglary bolts are screwed to the steel, in the case of the sash "C" shaped reinforcement.

**Rich colors** of systems enabling any interior arrangement; the offer includes rich colors of Renolit veneers.

**Great parameters of air permeability and water tightness,** thanks to the application of the triple sealing system.

**Perfect resistance to wind load,** thanks to the optimum reinforcement.

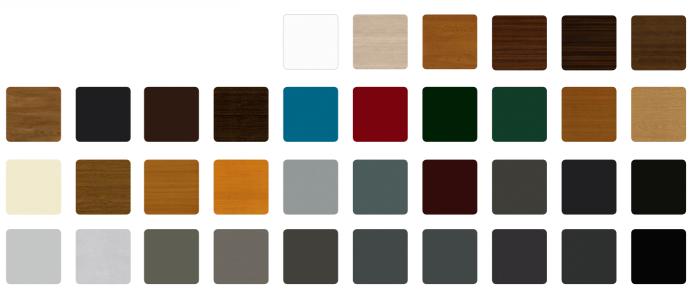
Modern design, innovative technology and high energy efficiency in window!





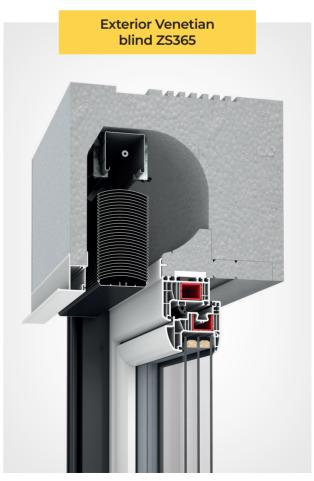
Energy Cls

## Rich colors of Renolit foil:









## The advantages of HS system:

**Modern design** offering the possibility to produce large-size glazing that guarantees maximum access to daylight.

**Great functionality and comfortable usage** thanks to the technological advancement of the profile and the modern fittings system.

**Lightness and tightness of the structure,** owing to the specially designed system of guide rails and velour EPDM sealing that ensures the perfect thermal parameters and prevents the sticking of the seals in low temperatures.

**Safe use** guaranteed thanks to the stable construction even with a leaf weight of up to 400 kg.

**The elegant and modern design,** as a result of high quality profile and the wide range of colours and accessories.

**Perfect solution for energy-efficient and passive** buildings due to the optimum structure of the A-class profile and high-quality sealing.

**Woodwork durability and long term easy usage** thanks to the high quality profiles, made exclusively of prime material.



## System specification:

Reinforcement made of high quality aluminum profiles with steel thermal breaks.

Special construction of the upper guide rail prevents the sash from prising.

7-chamber, A-class profile, made exclusively from primary material with wing depth of 82 mm.

As a standard – glass package 4/18/4/18/4 with the transmittance coefficient of U=0,5 W/(m<sup>2</sup>K).

The option to apply Swisspacer Ultimate warm frame that improves the system energy efficiency.

PVC threshold with aluminium reinforcement and cover of good thermal parameters.







Aluminum handles and knob-handles available in white, brown, silver and light brown colors. Possibility of using internal or double-sided patent insert.



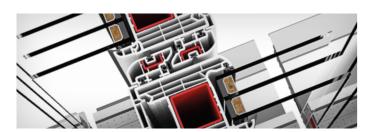
GU fittings guarantee light service.



As a standard, three locking hooks that improve safety. The possibility to install modern anti-burglary elements ensuring higher safety level.



PVC and aluminum threshold. Micro ventilation hook as a standard enables to unseal the door and guarantees optimum air exchange.



Internal velour sealing, external EPDM and brush seal.



**HS doors,** produced on the basis of proprietary technology of seven-chamber class A profiles, made exclusively of primary material, constitute a perfect solution for the trendy large- size terrace and balcony glazing.

The system is a perfect solution for energy-efficient and passive buildings due to great parameters regarding energy-efficiency. Iglo-HS doors ensure perfect access to natural light and facilitate the design of the interiors, maintaining the construction stability, functionality, and lightness. Sliding of the huge sashes does not require significant effort thanks to the tailor-made fittings and two independent guide rails.

Additionally, the system is equipped with special

velour seals, uncommon with other woodwork producers. This kind of sealing improves the system parameters regarding energy-efficiency and sound insulation, and it prevents the sticking of the seals in low temperatures.

The doors have a PVC and aluminum threshold that prevents buckling between the door and the floor, and it enables to align the threshold with the floor. The special threshold structure of PVC profile and reinforcing aluminium profile improves the thermal insulation and creates a barrier against thermal bridges.

The doors in lift and slide Iglo-HS system stand out for their inimitable design and elegance owing to the highquality profiles, wide colour range and elegant accessories. The unique style of the system is emphasised by the aluminium handles, hand-rails and knob-handles.
The combination of various models and diverse colours offers the opportunity to create individual style matching the Clients' needs and trends in interior design.

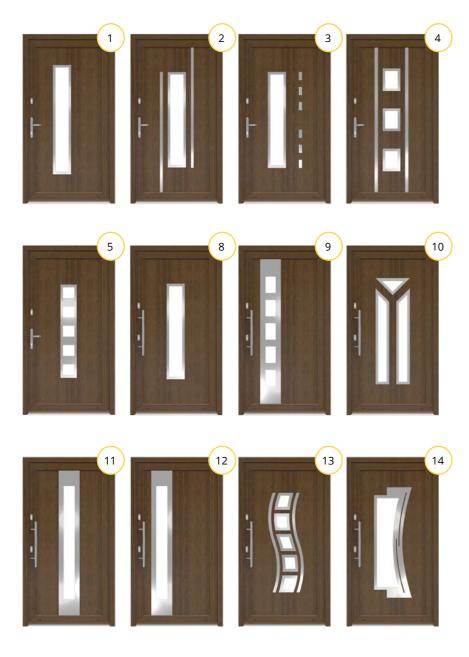
## Did you know that...

HS patio doors are equipped with special velour seals that are widespread in automotive industry. Drutex is the first producer in the industry to have applied velour seals in the system, which improves the parameters regarding energy-efficiency and sound insulation.

## Original, modern door panels.

Offers a wide range of PVC doors both in that stand out for modern design responding to current architectural trends. The company has developed its own , original door panel systems for PVC doors. The doors match perfectly the building architecture and style of the interior thanks to wide color range, various panels and modern fittings, as well as a number of extra accessories. It is easy to create a custom-made project.

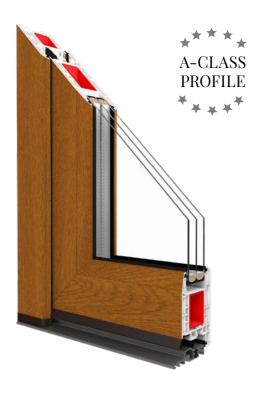
## **Examples of door panels available in offer:**





# Features of door systems





## Energy

The five-chamber A-class profile and the modern design mean that Energy entrance door is a synonym of high energy efficiency, beautiful design, aesthetics and perfect functionality. Great thermal insulation properties are the result of i.a. the application of high-quality construction materials as well as the specially designed aluminum threshold with a thermal break and an innovative sealing system. It is the world-first solution in such a system that applies a central gasket made of foamed EPDM\*. The doors stand out for high safety level thanks to the 3 -point automatic espagnolette from the renowned MACO company. They are also characterized by a high degree of durability, thanks to the use of WALA hinges, and a wide range of door panels makes it meet the requirements of Customers around the world.



5

5 entrance door in the three-chamber system is perfect for those who do not want to compromise when it comes to aesthetics or safety. The modern Iglo 5 doors are also a combination of beauty, innovative solutions and functionality. At the same time the big reinforcement chambers enable to apply a reinforcement that guarantees the proper resistance, and the 3-point automatic espagnolette increases safety level. Iglo 5 doors constitute an investment in aesthetics, since they may be equipped with modern door panels that, combined with the wide color range and extra accessories, allow everyone to find the perfect solution matching their expectations and imagination.

## **Additional options:**

#### Thresholds:

We offer the warm aluminum threshold equipped with a thermal break that protects the door against freezing and it reduces heat loss. Its low height guarantees perfect functionality.

#### **Handles:**

Our offer includes various colors and designs of handles, knob-handles and hand-rails. The wide choice allows to give elegant and individual character to the house entrance, matching Clients' taste.

#### Control:

There is an option of smart door control, opening and closing – with a fingerprint reader, with Bluetooth, a remote control or a tablet. The control systems are fully compatible with alarm systems at home and other automatic control.

\*patent application

## Modern design

The rounded, elegant profile lines and the possibility to apply both classic panels and solutions in modern styles. We offer a wide choice of hand-rails, handles, knob-handles and extra accessories. The wide color range of the doors, combined with the possibility to choose among many styles of panels, and the various extra options that may enhance the door design, give the possibility to customize the project.

#### **High functionality**

Steel reinforcement in the door and the high-quality components ensure usage comfort. Iglo Energy door is equipped with cutting-edge Z-TF MF-BO door locks from the renown MACO company that have extra multifunction latches and two steel bolts which ensure optimum and constant pressure all over the door height! After closing the sash is held at three points.

## Perfect energy efficiency

Steel reinforcement in the door and the high-quality components ensure usage comfort. Iglo Energy door is equipped with cutting-edge Z-TF MF-BO door locks from the renown MACO company that have extra multifunction latches and two steel bolts which ensure optimum and constant pressure all over the door height! After closing the sash is locked at three points.

## High safety level

As a standard we offer a three-point espagnolette with a system of triple lock. Safety is guaranteed by highquality fittings from the renowned MACO company and the hinges that protect the sash against removal. Use of a minimum of three WALA hinges on the wing.

#### **Optimum structure and stability**

Each model of door panels is manufactured of an HPL2 board/PUR foam/1mm aluminum sheet/PUR foam/ HPL2 board. The applications are made exclusively of stainless steel, and thanks to their double-sided use, the doors look great both on the outside and on the inside of the room. The panel thickness is 36 mm.

## Advantages of Iglo doors



# The advantages of aluminum woodwork:

## Modern design

Aluminum windows and doors stand out for elegance and modern design . The wide color range as well as a number of woodwork forms and shapes match any architectural style.

## **Durability and stability**

Aluminum window profiles are characterized by great durability. They can be used to create constructions of considerable sizes, equipped with large glazing, which gives the effect of modern and minimalistic projects.

## **Energy efficiency**

Perfect parameters of thermal transmittance reflect the energy efficiency qualities of aluminum windows and doors. Thanks to the high-quality aluminum profiles with specially designed thermal breaks aluminum products are a great solution also for energy efficient building

## **Functionality**

Aluminum windows and doors are easy to maintain, they do not require time-consuming treatment, and the technologically advanced structures based on stable aluminum profiles guarantee usage comfort, as well as great parameters regarding water tightness and resistance to wind load.





# Windows and doors

I IEBBE ELL

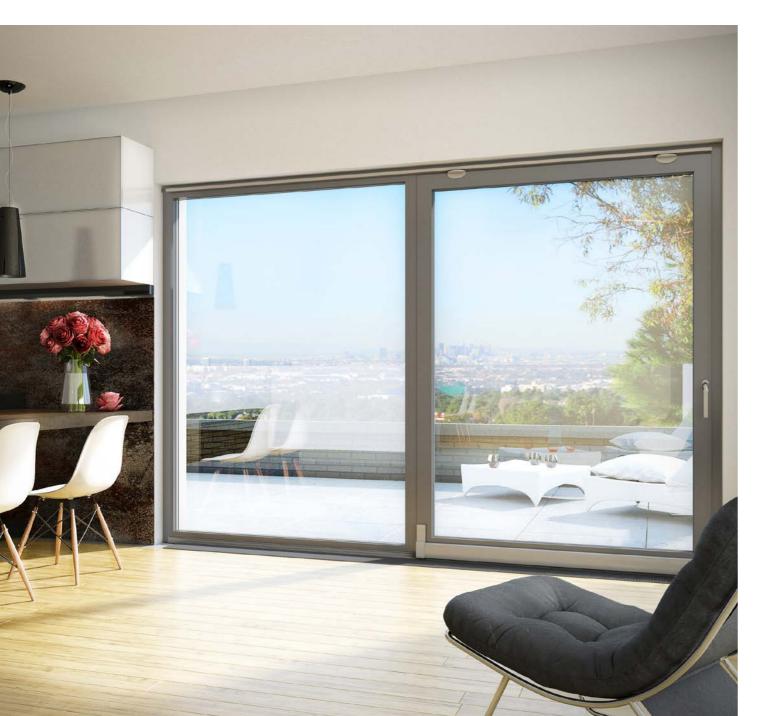
The modern aluminum windows and doors aim to respond to current architectural challenges thanks to the use of innovative technologies, various forms and shapes. The wide range of aluminum systems allows to configure functional and elegant structures, and to combine freely windows with doors, winter gardens or slide systems.

## 45, 70, 70 HI, SR50N, SR50N HI, 78 EI, 77 HS, 77 HS HI, 86 SI and WG60

systems are top-class aluminum systems for executing elements of architectural external and internal structures e.g. for various types of windows, doors, vestibules, showcases, facades, winter gardens and spatial structures.

The wide range of applications and rich variety of patterns and colors allow to match the aluminum products to any building style.

Aluminum windows and doors comply with top quality requirements, ensuring great parameters in energy efficiency, durability and structure stability. They constitute a perfect solution for large-size glazing, which ensures more daylight and higher comfort.







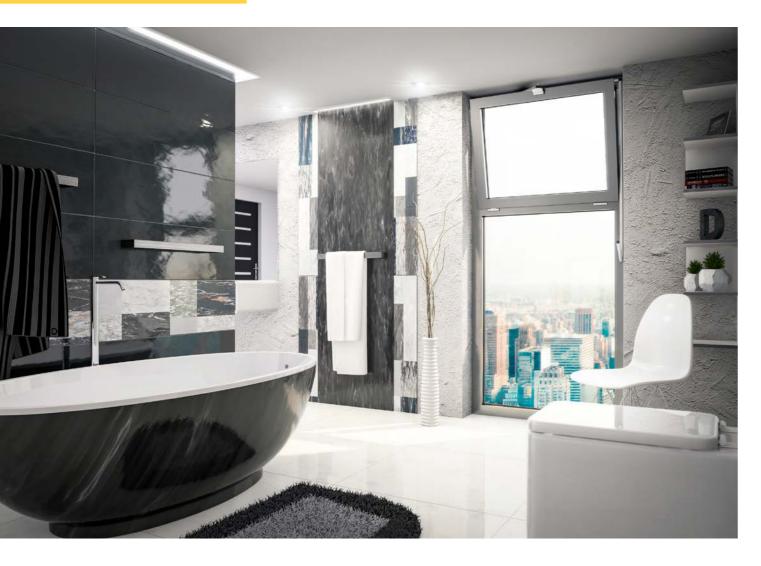
## 45 (cold aluminum)

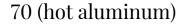
The modern aluminum system is used for executing elements of architectural external and internal structures that do not require thermal insulation. The stable aluminum profile of the system allows to obtain the effect of unique surface of the sash and the frame on the outside after closing the window, which improves its aesthetics. A significant advantage of 45 system is the possibility to bend profiles, i.a. frames and casements, which facilitates the execution of various arched structures. The system is compatible with other aluminum structures in offer and the wide RAL color range allows to obtain any arrangement matching the Client's preferences.

- high usage comfort
- minimum need for maintenance
- high resistance and durability of the woodwork
- long system lifetime

# Windows and doors







The system is a perfect solution for executing elements of architectural external and internal structures that require thermal and acoustic insulation. It features low heat transmittance coefficient thanks to the application of special thermal breaks. Tightness is also ensured by high-quality profiles and by the application of gaskets made of two component EPDM synthetic rubber: solid and cellular that guarantees aging resistance during long-lasting exploitation, as well as great thermal insulation. The high energy efficiency of the system enables to obtain large glass surface for more daylight in the room.

#### **Product features**

- large selection of colors from the RAL palette
- the possibility to obtain slender and resistant window and door structures
- very good thermal insulation







## 70 HI

The system is used both in individual construction, as well as aluminum facades. The window and door system structure with a thermal break is based on tried and tested, well-developed MB-70 systems. The system is characterized by significantly higher degree of thermal insulation that is the result of special insulation inserts inside the profiles and in the glazing space.

- high level of energy efficiency
- modern design
- high functionality and usage comfort
- great variety of colors

# Windows and doors







Fireproof door is a technically advanced fireproof system that features tightness and fire insulation. The system has the class of fire resistance from EI 15 to EI 60. The durable and solid system structure is guaranteed thanks to the stable aluminum profile, and the low heat transmittance coefficient is obtained by the application of i.a. special profile thermal breaks 34 mm wide.

## **Product features**

- good parameters of thermal insulation
- high acoustic insulation
- durable and solid systems structure







## 86 SI

A system with very good parameters in energy efficiency and structure resistance. Thermal insulation has been enhanced thanks to the application of an extra chamber in the thermal break in the system. The profiles have a three-chamber structure. Their shape allows to obtain slender and durable window and door structures. One of the system advantages is also high profile durability that allows to execute large-size and heavy structures. The wide color range offers great arrangement possibilities.

- enhanced thermal insulation of the system
- wide selection of colors
- modern design
- structure durability and resistance to weather conditions
- the possibility to implement two-side aligned door panel

# Safety and access control

Safe entrance doors is an investment in family peace and comfort. After all, the main and most important function of the door is to ensure safety. Therefore, Drutex doors as a standard are equipped with systems that ensure high safety level and constitute great burglary protection. They also guarantee functionality and usage comfort thanks to the smart systems of access control. The company offers cutting-edge systems of door opening and closing.



# Bluetooth & Code – unlocking the door with a code and a mobile phone

- possibility to connect with the reader with Bluetooth
- great solution for door remote control and access control
- possibility to connect through a smartphone application



## Fingerprint reader

- possibility to connect with the reader through a smartphone application
- modern, quick and easy home access for all the family
- modern reader design that corresponds to the door model



# Did you know that...

In the system of aluminum doors, among numerous types of aluminum panels, we offer the option to apply a panel with a glass application, which gives the door exceptional elegance and allows to achieve very high parameters in safety, energy efficiency and resistance to damage.



## Code keypad

- reliable and easy access control
- possibility to connect through a smartphone application



## Cards and pendants

- easy and quick door control
- high safety level thanks to smart access control
- attractive design matching door models
- possibility to connect through a smartphone application



## Automatic espagnolette

- allows to lock the door automatically in three points
- prevents the door from deforming
- guarantees constant contact pressure over the entire door height
- improves tightness and acoustic insulation
- the light and quiet locking thanks to the cranked latch fitted as a standard



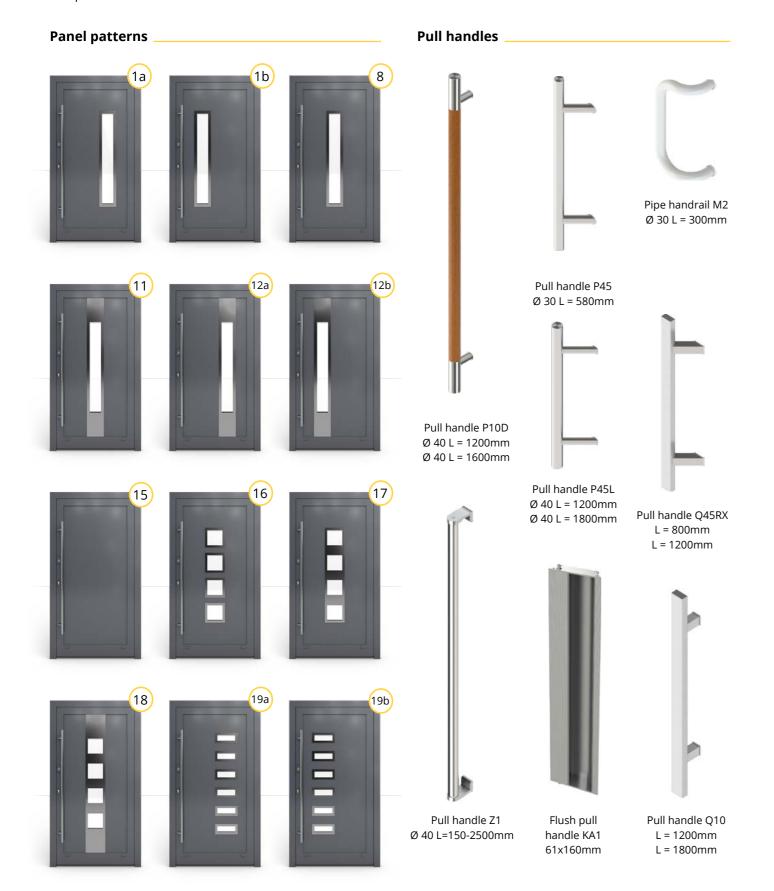
## Smart home

Offers smart solutions for home management. Modern technologies allow to control the door with innovative sys- tems, i.a. the phone or the tablet, which improves safety level and it gives us full control over the woodwork even when we are out.

# Types of panels and accessories

DUERRE EU

We offer various models of modern aluminum doors that are in line with current architectural trends and Clients requirements. A wide color range and selection of accessories allows to customize entrance door depending on tastes and preferences.



Offers a wide range of door closers, handrails and handles that match Clients' individual needs and improve comfort and the door quality of operation.

## **Door closers**



## Door handles and door knobs



## Hinges



# Terrace systems

The aluminum patio and terrace systems constitute a perfect solution for the trendy large-size glazing that gives the interior distinct character. The unique design ensures a lot of daylight in the room, maintaining the perfect parameters in energy efficiency.



## 86 Fold folding system

The aluminum system constitutes a perfect solution for building up balconies, terraces and winter gardens. It is made of resistant and rigid aluminum profiles. It enables to open the door outwards.

It allows to execute aesthetic and modern big glazing which also help to use the building space efficiently in various types of structures, also in facades. The MB-86 Fold folding system also ensures enhanced thermal insulation thanks to the application of an extra chamber in the thermal break.

- enhanced energy efficiency thanks to the application of an extra chamber in the thermal break
- very efficient use of the house or flat space
- innovative structure in line with current trends in architecture





Handles mounted to the sash.



Standard threshold



Low threshold with brushes

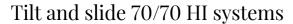


Flat threshold with brushes

# Terrace systems





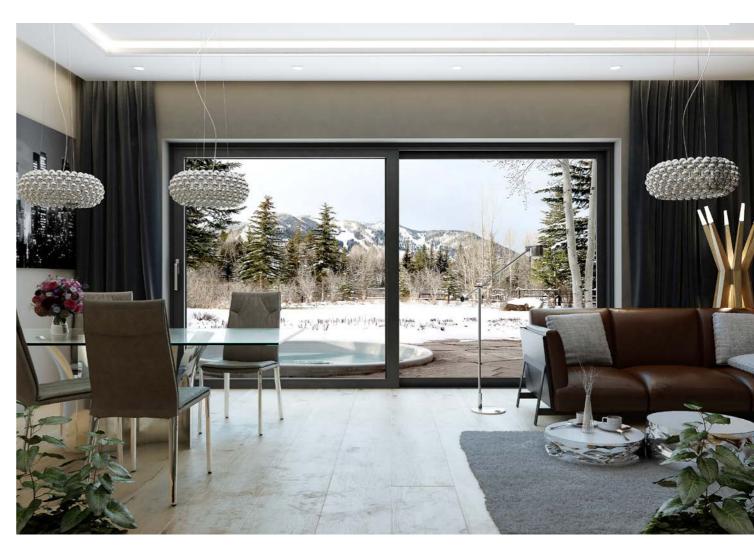


The aluminum tilt and slide doors ensure optimum daylight both in big and small rooms. The structures may be applied in individual building as well as in aluminum facades. The main advantage of such a solution is the ability to slide the sash on the inside of the room. Unlike the classic patio doors, the sash does not take up extra space when open. It is a great solution for creating modern interiors and large spaces. They allow to optically enlarge small rooms thanks to the high-quality structure.

#### **Product features**

- high-quality aluminum profiles that determine great system resistance
- usage comfort and smooth operation
- great energy efficiency
- modern and minimalist design







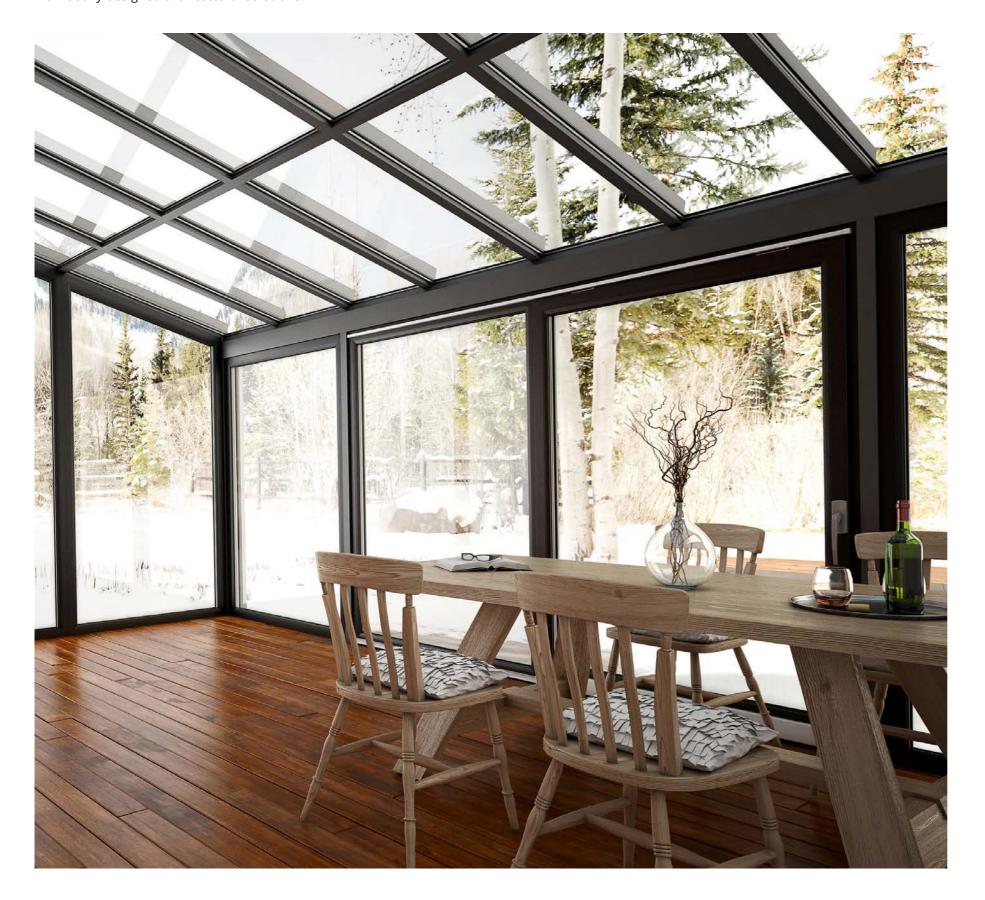
## Lift and slide 77 HS/77 HS HI systems

The system is a solution that offers a comfortable access to the balcony, terrace or the garden space, as well as a lot of daylight in the rooms. It works perfectly in single-family houses, as well as luxurious apartments and hotels. Usage comfort and high functionality are ensured by high-quality aluminum profiles, low threshold and the lift and slide fitting that facilitates sliding of heavy doors. The application of automatic drive controlled by a button or remote control determines the functionality and the technological advancement of the solution.

- wide range of colors and decors
- high energy efficiency thanks to the application of a thermal break
- modern and minimal structure design

# Winter gardens

The modern aluminum system enables to create winter gardens, hothouses and verandas that stand out for maximum access to daylight and high energy efficiency. The system may come as model structures and individually designed architectural solutions.





## WG 60 system

The main idea of the system is the possibility to build a warm roof based on modern aluminum profiles and full integration of the structure with the aluminum and PVC window and door systems.

High-quality structure profiles allow to shape even most sophisticated design geometry. The basic idea of winter gardens lies in their great parameters regarding safety, thermal insulation and ventilation, regardless of weather conditions.

The system stands out for freedom in choice of colors and glazing types, which enables to match the arrangement to Clients' expectations and architectural trends. The individually devised garden structure, made of aluminum resistant to adverse weather conditions, guarantees high stability and durability for years, and the modern and aesthetic structure with an integrated system for draining rain water determines the project functionality.

The system advantage is also the possibility to equip windows and doors in the winter garden with a smart control system, i.e. with a remote control, a tablet or a smartphone, which improves the usage comfort in the room.

Technical parameters	Features	
profile	aluminum profile with a thermal break	
glass	the possibility to apply glass with increased thermal or sound insulation, hardened, safe, anti-burglary, ornament, anti-sun glass	
frame spacer	as a standard steel galvanized frame	
seal	EPDM seal	
color range	RAL color range and wood-grain coating from Aluprof ColorCollection	

# Façade systems

The advantages of facade systems

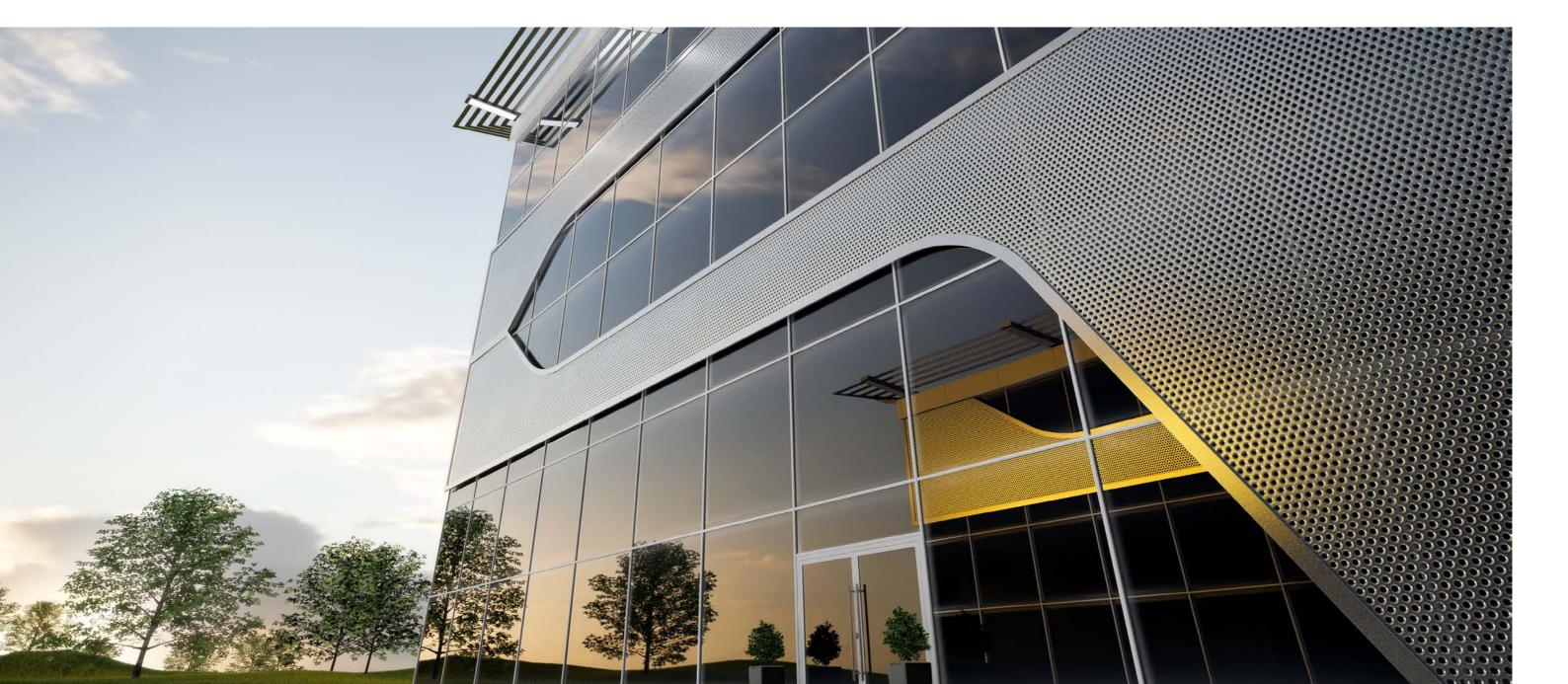
ns

**SR 50N** aluminum facades are great solutions for glass facades in office buildings, public, commercial and service buildings, in showrooms, hotels, residential buildings, sports and recreational facilities, banks, offices, production plants etc.

They are also used for a number of spatial structures and roof glazing that are intended to allow optimum daylight inside buildings and to create the proper climate and comfort for users. In line with current architectural trends, it enables to select mullion and transom profiles which flush with each other on the inside surface of the façade and to obtain various options of external appearance.

Facades stand out for perfect parameters in tightness, acoustic and thermal insulation. The system advantages lie in its great resistance and durability, which improves safety and the structure stability. The possibility to execute various shapes of façade structures due to high static parameters of the profiles, with a number of glazing options, including a so-called safe, anti-reflective glass, offers arrangement freedom that comply with European norms.

Technical parameters	Features	
profile	the width of the mullions and transoms up to z 50 mm, installation depth adjusted to the building construction load; thanks to the high static parameters of the profile there is a possibility to execute curtain walls in various shapes.	
glass	the possibility to apply glass with increased thermal or sound insulation, hardened, safe, anti-burglary, ornament, anti-sun glass	
frame spacer	as a standard steel galvanized frame	
color range	RAL color range and wood-grain coating from Aluprof ColorCollection	



# The advantages of Soft and Duo systems:

#### **Aesthetics**

Innovative design, extraordinary elegance, functionality and vast possibilities to select colors for the interior and exterior thanks to wide color range of aluminum and wood.

## Safety

Modern solutions, i.a. innovative Maco Multi Matic KS ferrules, guarantee enhanced burglary protection.

## **Perfect Quality**

The high quality components applied in both systems, i.a. the use of selected wood, guarantee perennial, reliable durability.

## **Construction stability**

Laminated profile for Softline and the solid wood and aluminum construction for Duoline ensure outstanding woodwork stability.

## **Energy efficiency**

Materials and solutions adopted in both systems, i.a. the innovative sealing system, guarantee great thermal insulation parameters:

- for Duo system 0,79 W/(m<sub>2</sub>\*K)\* level
- for Soft system 0,80 W/(m<sub>2</sub>\*K)\* level

## Durability

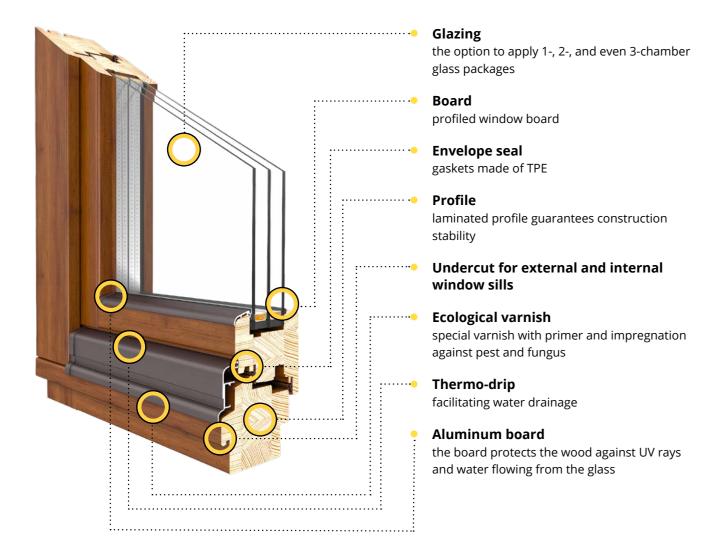
The applied profile, ecological varnish with primer and impregnation against pest and fungus, and aluminum board that protects the wood against UV rays and water flowing from the glass, ensure perennial woodwork durability and solidity.



## Soft wood system

Windows made in **Soft system**, of pine and meranti wood are an expression of classic beauty and elegance. We offer wood systems of 68 mm, 78 mm and 88 mm depth. The woodwork is made of solid, laminated wood, dried to the proper moisture, with the right density (minimum 450 kg/m³ of meranti wood). The bottom edges of the wings

are secured with aluminum drip caps, they are not only an elegant finish, but also excellent protection against external factors. The system of woodwork painting with the use of opaque, staining varnish, waterthinnable, ensures top-quality coating.

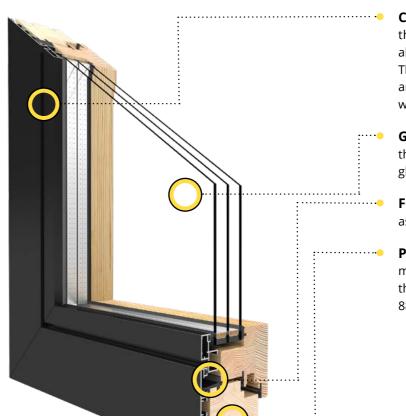




# Wood and aluminium Duo system

The Wood and aluminum **Duo system** is an expression of innovative solutions offering the perfect combination of aluminum and the aesthetics of wood. The system fulfills the strict requirements of energy efficient and passive buildings. Duo is characterized by the classic shape of aluminum edges, typical for modern constructions and the latest trends in architecture. The possibility to select pine or mahogany profile and a thickness of 68mm,

78mm or 88mm offer excellent opportunities to create various technical solutions. The external aluminum cover, resistant to weather conditions and the proper connecting system increase the window stability and improve static parameters as well as energy efficiency and sound insulation. The system offers a wide range of design regarding shapes and colors, which enables to integrate the window with the building façades.



#### Covers

the system is equipped with Mira Contour aluminum covers, resistant to weather conditions. The shape of the covers increases the profile rigidity and ensures attractive design, and in combination with wood it guarantees great thermal insulation.

#### Glazing

the option to apply 1-, 2-, and even 3-chamber glass packages.

#### **Ferrules**

as a standard - TPE and EPDM ferrules.

#### **Profile**

made of pine or meranti wood, laminated in three or four layers, with the 68 mm, 78 mm and 88 mm installation depth.

## Did you know that...

Duo system is the result of months of work of the company R&D department and it stands out for modern structure, durability and great technical parameters that comply with the requirements of energy-efficient and passive buildings.

## The advantages of roller shutters:

## **Uncompromising safety**

As a result of application of numerous solutions of blocking shutters raising and shutters control, the roller shutters improve the building safety level.

## **Perfect acoustic insulation**

Roller shutters guarantee reduction in the perceived noise, ensuring silence and comfort thanks to their stable structure and high-quality components used in the production.

## **Perfect thermal insulation**

The application of top production materials represents and investment in energy efficiency and in decreased energy consumption in the building, which significantly reduces heating costs.

Tests conducted at ITB have confirmed that window with Uw= 0,99 W/(m K) coefficient with drawn shutters had thermal transmittance coefficient at 0,75 W/(m<sup>2</sup>K) level\*.

## **Quality and aesthetics**

Beautiful style, innovative approach to design and roller shutters functionality constitute their key strengths. They guarantee elegance and comfort in operation for many years thanks to the modern design solutions and perfect manufacturing at all production stages.

## **Usage comfort**

We offer a possibility to control roller shutters with a remote control, a tablet or a smartphone, manually or with an electric engine, which allows to use the roller shutters with ease and comfort.



# The system of external PVC shutters

External PVC roller shutters is a system of shutters integrated with the window. It may be applied for buildings under construction or when exchanging windows. The wide color range of the boxes and guide rails made of PVC and of aluminum armors, as well as various roller drives and protection fulfill all Clients' expectations.

The system of external shutters enables a built-in internally and externally, so that the only visible parts are the roller guide, the aluminum armor and the bottom revision cover, which is an expression of modern construction and is in line with current trends in design.



We offer the possibility to integrate the roller shutters with various window systems, including the aluminum or wooden systems, thanks to the application of a special adapter.





## ROLLER SHUTTERS WITH STYROFOAM BOX

Thermal and sound insulation, as well as the possibility to obtain a higher class of burglary protection.

- The application of the roller shutters significantly improves sound insulation by creating an extra barrier against external noise. The box itself as a standard ensures sound-proofing at 45 Db
- The roller shutter system allows RC2 burglary resistance in windows to be obtained, and the possibility of connecting them with external alarm systems further increases the level of security.
- The construction and structure of the roller shutter facilitates plastering and façade treatment.
- It is characterized by a large curtain chamber diameter - 205 mm diameter (competing shutters have only approx. 180 mm), which allows you to make shutters that can be mounted on larger window openings.
- The product also allows you to adjust the depth of the box to the wall thickness. The offer includes boxes with dimensions of 260, 300, 365 and 420 mm.





## System specification

The reinforcement console in roller shut- ters is made of plastic (so called warm), unlike steel consoles offered by other producers, it significantly improves the system energy efficiency parameters and it allows to obtain the optimum structure rigidity

The shutter closing, made of aluminum profiles, enables to open it and it ensures additional reinforcement.

- The roller shutter adapter an original design of a lath that connects the roller shutter with the window equipped with EPDM seal. It guarantees optimum tightness and allows to obtain perfect parameters in thermal insulation and air permeability.
- Specially designed reinforcement ensures optimum
   system rigidity, as well as resistance to wind pressure and suction.
- 37 mm, 42 mm wide slats filled with thermal insulation foam are available in various color variants.
- **Depending on the installed window and the applied adapter** the boxes are 215 mm high for Iglo 5 and Iglo Energy systems, and 225 mm high for other Drutex systems.
- **The roller shutter was designed** in a way that the installation of the mosquito net is possible on the outside and on the inside of the roller shutter armor.
- **Access to the box** for maintenance purposes is possible after the opening of the bottom of front revision.
- The roller shutter equipped with electric drive with detection improves usage safety level.

# The system of adaptation aluminum roller shutters

The system of external aluminum roller shutters has been designed for already existing buildings or buildings under construction. The roller shutter is made of aluminum and it is available in various shades of RAL palette and wood-like colors. Its stable structure ensured by the application of high-quality materials and thoughtfully designed construction, the work of own research and development department, allows to match any architectural style. Thanks to high thermal insulation aluminum roller shutters constitute a great energy efficient barrier and they are suited for thermal insulation and passive constructions.

## Types of adaptation roller shutters



## **45° ROLLER SHUTTER**

- available in: 137, 165 and 180 mm (the box width and height)
- is characterized by the special cut-off box that removes the right angle



#### **OVAL ROLLER SHUTTER**

- available in: 139x144; 167x171; 182x188 mm (the box width and height)
- the oval shape matches perfectly the delicate construction elements



#### **RECESSED ROLLER SHUTTER**

- available in: 137, 165 or 180 mm (the box width and height)
- may be assembled in a number of ways thanks to the opening valve at the bottom of the box
- possibility to assemble it at the front of the box





## System specification

The box constitutes a decorative element and it matches the building façade thanks to the wide color range.

Access to the box for the 45° and oval roller shutter is at the front, and for the recessed roller shutter – at the bottom, which enables to build it in completely.

**The box and the guide** are available in rich colors of the entire RAL palette, which makes the blinds stand out aesthetics and modern design.

The armor is made of aluminum profiles, filled with polyurethane foam, is rolled inside the box fitted on the wall or in the window frame, which improves the system energy efficiency qualities.

**The end slat** is available in various colors in the RAL color range, which improves consistency and elegance of the structure.

 There is the possibility to install a mosquito net integrated with the roller shutter, which determines higher functionality and usage comfort.

# Modern design



Roller shutters more and more often are applied both in modern construction as well as classic structures. Their numerous advantages regarding safety, usage comfort and elegant design determine popularity of this solution. Thoughtfully designed structure of external roller shutters is the work of own research and development department and it ensures great system functionality.



Aluminum shutter slats filled with polyurethane foam are available in a wide range of colors that allows you to customize the appearance of the shutter to the specifics of the building. There is a possibility to apply end slats in the same color, which significantly improves aesthetic qualities and the look of the whole roller shutter. High quality and the stability of the slats guarantee perfect energy efficiency, durability and resistance to wind load. Additionally, the wide color range of the roller shutter slats determines its elegant finish and the solution's aesthetics.



## The armor color range 37 mm:

	01 silver	24 golden oak
	02 white	28 nut-brown
	03 grey	60 ivory
	08 dark brown	61 moss green
	09 brown	62 grey aluminun
	23 charcoal	63 metallic brown
A STATE OF THE PARTY OF THE PAR		





02 white 03 grey 08 dark brown 23 charcoal 60 ivory

