

Quality. Innovation. Reliability.



**ALUMINUM** FRAMES

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#### **THERMOPLASTIKI**

#### The triptych of success: Quality. Innovation. Reliability.

The company was established in **1972**, starting its dynamic journey in the Greek market with the creation of a production unit for uPVC products and applications.

Today, having already come a long **50-year successful journey**, THERMOPLASTIKI is at the top of the Greek manufacturing industries of Fiber Glass Reinforced, uPVC and aluminum frames, with two factories & 8 production units in Amygdaleonas and Polystylo, Kavala.

Through continuous research and modernization of its machinery and premises, it has significantly broadened its production range, by adding new products and applications.

Our philosophy is the creation of frames that will provide you safety, protection and high energy efficiency. The innovative design and wide choice of styles and colors allows us to offer you a wide range of specialized solutions, always driven by functionality and aesthetic quality.



#### **All-in-One Solutions**

- Innovative Fiber Glass Reinforced Frames
- uPVC Frames
- Aluminum Frames
- uPVC and Aluminum Shutters
- Roller Shutters
- Insect Screens
- Sun Plus & Low e Energy glass panes
- Interior Doors and Security Doors
- Thermal insulating solutions from extruded polystyrene, novablok & novablok
- Thermal insulating solutions from expanded polystyrene, feliblok & feliblok plus

The compliance with the strictest production and safety standards certifies the top quality of all of the products manufactured by the Company and is in line with its social-environmental responsibility.



The biggest manufacturer of windows & doors in Greece.

POLYSTYLO FACTORY - KAVALA

## GUARANTIES & CERTIFICATES

#### **Authenticity Label**

A product, manufactured by Thermoplastiki, is also synonymous with all the characteristics and the policy of the company. Thus, a frame, coming from our production lines, is also characterized by the top quality of materials and construction. After all, quality is one of the top and, at the same time, non-negotiable characteristics of Thermoplastiki.

Our goal is to deliver to the final consumer a product worthy of our philosophy. As direct proof that a product is a result of the production process of Thermoplastiki, already since December 2017 the company has been placing an iridescent authenticity label on its frames.

#### **Immediate Delivery**

Value-added products and services, commitment to quality, the continuous investments and innovations, allow us to build trust and integrity driven relationships.

At Thermoplastiki, we work with you consistently. We study each project in detail and respond immediately and quickly, aiming at serving each customer in the best way possible.

The company completes the projects consistently both in terms of schedules and quality specifications.





#### **Guaranties**

In order to exceed the expectations of its customers, both with its products and with the services provided, the frames come with a written Guarantee of Good Operation.

10-year Guaranty for Fiber Glass Reinforced & uPVC Frames in White

10-year Guaranty for Glass Panes

5-year Guaranty for Fiber Glass Reinforced & uPVC Colored Frames

5-year Guaranty for Roller Shutters

#### **Certified Quality**

A product manufactured by Thermolastiki, is synonymous with the long-term know how and quality. Thermoplastiki has been certified, since the beginning of 2000, with the Quality Management System, in accordance with the EN ISO 9001: 2015 standards by the Greek Standardization Organization (ELOT). With the Health and Safety at Work Management System, in accordance with the EN ISO 45001:2018 standards by ELOT and with the Environmental Management System in accordance with the EN ISO 14001:2015 by ELOT.In addition, the company's compliance with the EU health and safety requirements has been certified since early 2008, by adding the CE sign on all our products.

Regarding the universal quality assurance of our services and the excellent service we provide, a fully organized network of experienced partners, expanding throughout Greece, but also in major European cities, undertakes the elaboration of technical-economic studies, places our products, while providing comprehensive after-sale service, always under the supervision and the requirements determined by Thermoplastiki.





## Frame Energy Identity Label

In order to fully inform and ensure each customer about the certified properties of an integrated frame, the company places the self-adhesive Energy Identity Label, which includes an extensive set of information about the properties of the respective frame exclusively, according to the respective standards of each category.

Specifically, the products manufactured by the company are standardized and identified in accordance with the standards EN 14351–1:2006, EN ISO 10077–1 and EN ISO 10077–2 of ELOT, as detailed in the Technical Specifications of Frames and bear an Energy Identity Label and a Characterization Label of the product.

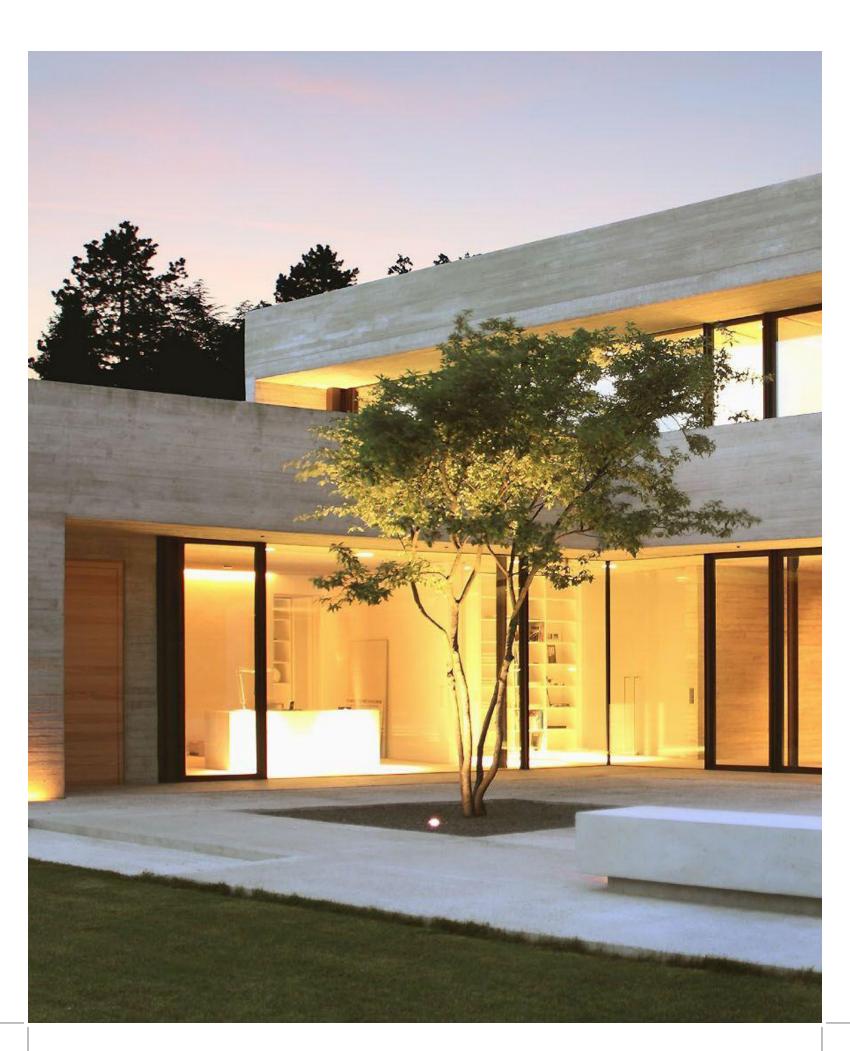
The average amount of the products most commonly marketed should be classified as class E - C. The best products most commonly marketed are classified in class A, while the windows of the "Passive House" are classified in class A+ and can reach class A++.

Energy Class	A++	A+	А	В	С	D	Е	F	G
Max U-value	0,8	0,9	1,1	1,3	1,5	1,7	1,9	2,1	2,3

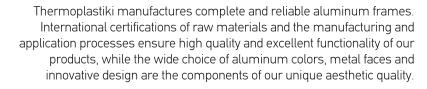
The characteristics indicated are:

- 1. U Window (Uw) thermal transmittance in W/m²k
- 2. Resistance to wind pressure
- 3. Water resistance
- 4. Sound insulation or sound reduction
- 5. Air permeability

At the same time, the indication of the CE European Safety and Quality Certificate is also placed, along with the contact details of Thermoplastiki as a manufacturer, and the relevant Declaration of Performance, in accordance with EU Regulation 305/11, as well as the harmonized quality standard. The validity of the label is identified by the Order Number and the individual Serial Number.



#### **ALUMINUM FRAMES**



Our wide range of types and applied aluminum frame styles helps you find the perfect solution to meet your own needs.



## USEFUL INFORMATION

"Whatever branded aluminum system you choose does not mean that the final product you will deliver and install will be of equal quality.

> The quality of the frame depends on the manufacturer and Thermoplastiki guarantees the perfect result."

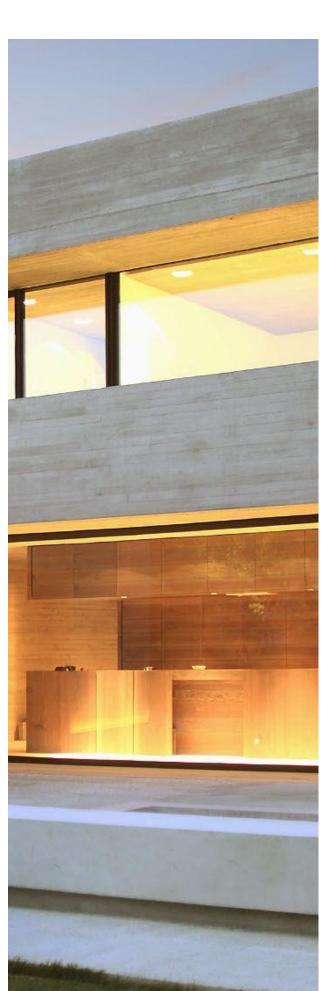
#### THERMAL TRANSMITTANCE OF ALUMINUM FRAMES

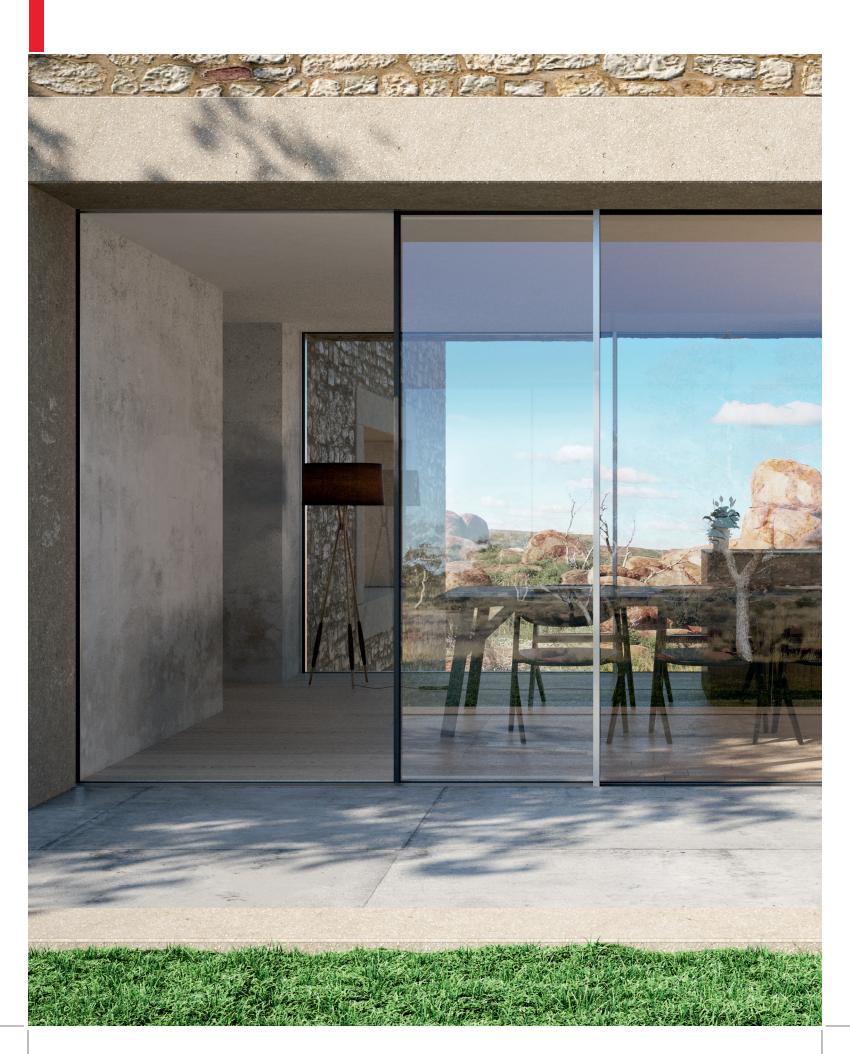
Although aluminum, unlike uPVC, is a good conductor of heat, due to the addition of special polyamides and foam materials inside, high levels of thermal insulation can be achieved.

Thermoplastiki, with a focus on quality, manufactures aluminum frames of high energy standards which, where applicable, are certified for use in Passive Buildings as well.

#### **COLOUR VARIETY**

The aluminum frames are painted in the color and get the texture you wish. If top aesthetic quality and durability are what you desire most, then choose a color from the **Ultra Resistant Paints or Anodizing** category with a 2 or 5 year guarantee respectively.





# ARCHITECTURAL EXCELLENCE WITH MINIMAL FRAMES



Aiming at the stylish, modern and functional home, Thermoplastiki creates and implements integrated solutions of Architectural "Minimal" Systems. It manufactures frames with high standards of functionality and innovative design that cover particularly large surfaces and minimize the visible aluminum frame.

## **USEFUL** INFORMATION

The latest technology aluminum frames manufactured by Thermoplastiki with automated processes, combine high thermal insulation with particularly thin profiles.

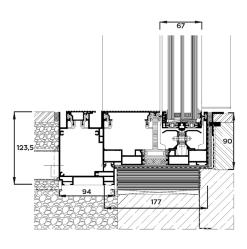
Thus, you enjoy an unlimited view, natural light and the interior and exterior of the residence are unified.

### Schüco ASE 67 PD

The sliding frame ASE 67 PD (Panorama Design) with zero face width uniquely combines minimal architecture with thermal insulation. It can be used for large-scale openings, offering maximum transparency and an inexhaustible flow of natural light. The design is characterized by the minimal visible aluminum frame at the interlocking point, while both the guide rail and the system casement are enclosed around the building's structural elements. Together with the integrated drainage system (water basin), it provides the maximum possible waterproofing.

The Architectural frame is specially designed to provide flexible solutions that meet the highest requirements of comfort, design, thermal insulation and safety.

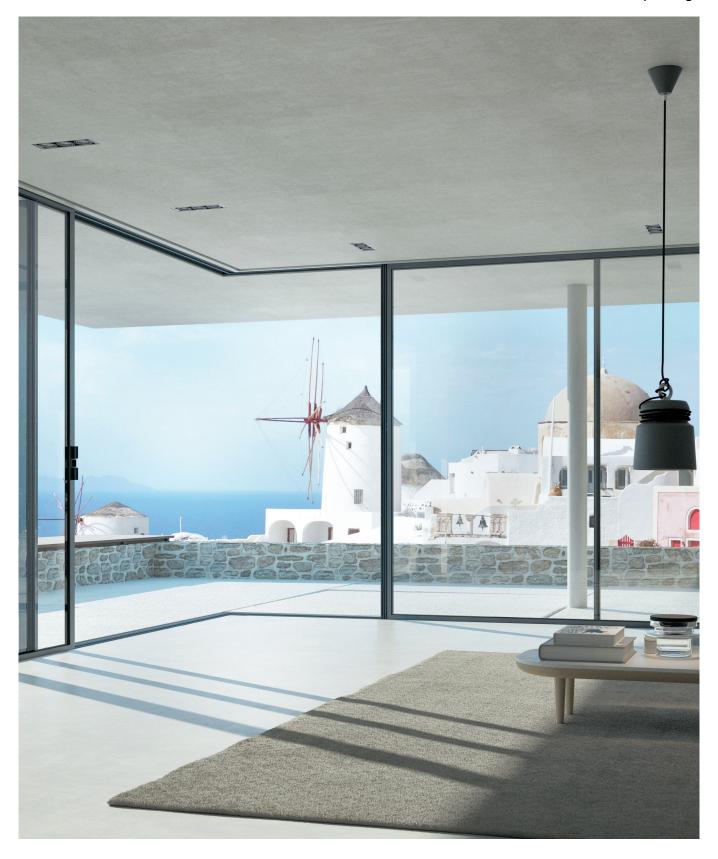
- Possibility of Triple Glass Pane (up to 49 mm) and Double Glass Pane (up to 36 mm)
- High energy efficiency with the use of special bilaminar polyamides
- Application of SCHUCO mechanism with the possibility of up to 400kg/sash
- Option of 90° open angle
- New design solution, without a handle, with fully integrated closing and locking technology
- Innovative guide rail system, easy to remove. Rollers can be replaced and maintained without removing the sash





High Energy Efficiency
Uw = 1,00 W/m²K

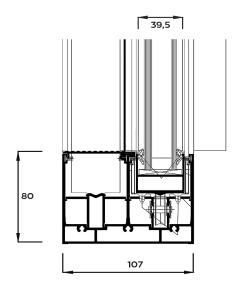
Sliding with dimension: 4360mm x 3000mm, Ug = 0,6 W/m<sup>2</sup>K and  $\Psi$ g = 0,04 W/mK



### Schüco ASS 39 PD.NI

Sliding French window frame with zero face width. A flexible option with many configuration possibilities, such as double or triple guide rail, as well as the possibility of connection with an open angle of 90°. With an innovative connection system of the frame, the shaping of the angle is carried out exclusively by the moving parts of the frame, with absolute stability, visually offering a clean image of unparalleled aesthetics, free from the presence of third connection materials.

- Double Glass Pane (up to 32mm)
- Application of SCHUCO mechanism with the possibility of up to 300kg/sash
- Option of 90° open angle





High Energy Efficiency
Uw = 2,19 W/m<sup>2</sup>K

Sliding with dimension: 4370mm x 3000mm, Ug = 1,0 W/m $^2$ K and  $\Psi$ g = 0,04 W/mK

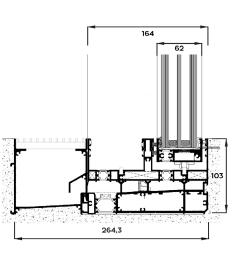


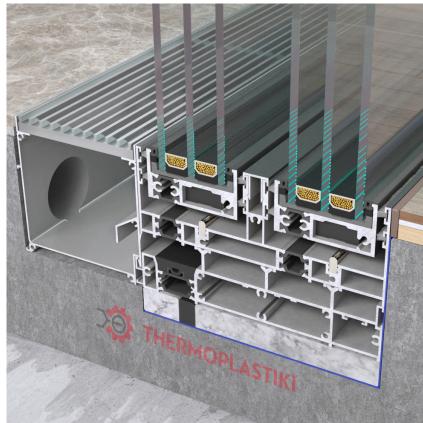
### **Alumil S650 PHOS**

The sliding thermally insulated frame SUPREME S650 PHOS with zero face width, is the ideal choice for covering demanding openings by minimizing the visible aluminum frame.

Following the trends of transparent architecture, through the large glass surfaces, it enhances natural lighting while offering high functionality, excellent thermal insulation performance and minimal design.

- The profiles are fully integrated into the masonry
- Possibility of Triple Glass Pane (up to 46 mm) and Double Glass Pane (up to 36 mm)
- Possibility of multi sash constructions
- High energy efficiency with the use of special bilaminar polyamides
- Maximum manual sash rolling up to 300kg
- Option of 90° open angle
- Use of stainless steel rollers for easy rolling and maximum functionality with high corrosion resistance
- By using a third guide rail, it is possible to apply a minimal insect screen, in large dimensions
- Thermoplastiki for even better visibility, offers the "best view" screen fabric



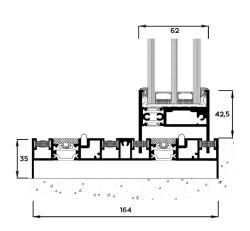


High Energy Efficiency
Uw = 0,95 W/m<sup>2</sup>K

Sliding with dimension:  $4370 \text{mm} \times 3000 \text{mm}$ ,  $\text{Ug} = 0,6 \text{ W/m}^2 \text{K}$  and Ug = 0,04 W/mK



#### **FLAT RAIL**





High Energy Efficiency

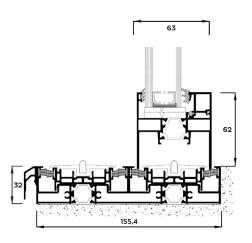
 $Uw = 0.98 W/m^2K$ 

Sliding with dimension: 4373mm x 3000mm, Ug = 0,6 W/m²K and Yg = 0,04 W/mK

### **Alumil M630 PHOS**

The SMARTIA M630 PHOS sliding system offers unique elegance to every modern residence, as it combines minimal aesthetics with high thermal insulation. All aluminum profiles are enclosed in the masonry providing an unlimited view with a sense of comfort, high functionality and safety.

- Double glass pane (32mm)
- High energy efficiency with the use of special bilaminar polyamides
- Easy rolling and maximum functionality with the use of stainless steel rollers
- Maximum weight of sliding sash up to 250kg
- Insect screen integration possible by use of a triple guide rail
- Possibility of 90° corner frame





High Energy Efficiency
Uw = 1,52 W/m<sup>2</sup>K

Sliding with dimension:  $3000 \text{mm} \times 2200 \text{mm}$ ,  $\text{Ug} = 1,0 \text{ W/m}^2 \text{K}$  and Ug = 0,04 W/mK



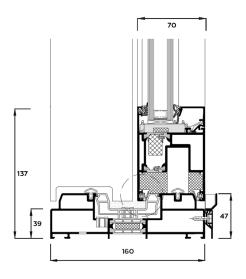
#### **ALUMINUM SLIDING - LIFT & SLIDE**

### Schüco ASS 70.HI

#### Lift & Slide

It is a highly thermally insulated rising sliding frame that provides sealing, excellent sound reduction and safety. Almost silent and easy to use, the ASS 70.HI with a total face width of 137mm, has many configuration possibilities, such as the double or triple guide rail and the INOX rail.

- Double or triple glass pane option (up to 48 mm)
- Expanded thermal insulation zone with high quality insulating materials and gaskets
- Application of retractable mechanism 300 kg (Possibility for up to 400 kg)
- Double Triple guide rail





High Energy Efficiency
Uw = 1,40 W/m²K

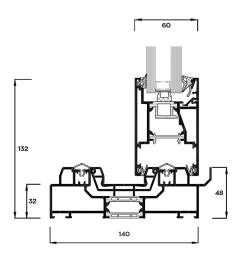
Lift & Slide with dimension: 3000mm x 2200mm, Ug = 0,6 W/m²K and Yg = 0,04 W/mK

### Schüco ASE 60

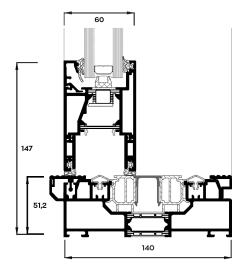
#### Lift & Slide

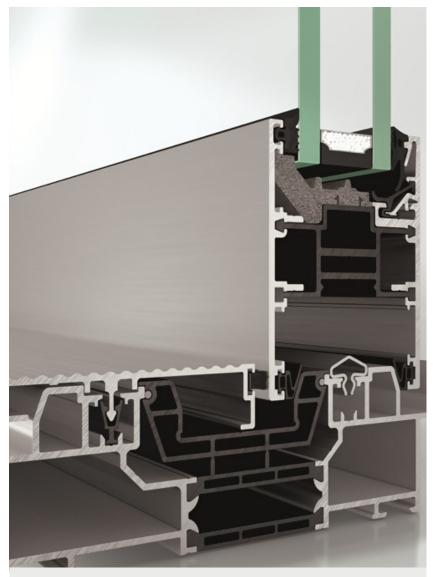
With a high-quality design, excellent functionality and optimized thermal insulation zones, it is a special choice, able to meet even the most demanding design. With a total face width of 132mm in the normal guide rail and 95.8mm in the flat guide rail, it has many configuration possibilities, such as using double or triple guide rail and INOX rail.

- Double or Triple Glass Pane option (up to 40 mm)
- Expanded thermal insulation zone with high quality insulating materials and gaskets
- Possibility to design a narrow intermediate hook of 40 mm
- Possibility of manufacturing a sliding frame in double and triple guide rail
- Maximum weight of sliding sash up to 350kg



#### **FLAT RAIL**





High Energy Efficiency

 $Uw = 1,50 W/m^2K$ 

Lift & Slide with dimension: 3000mm x 2200mm,

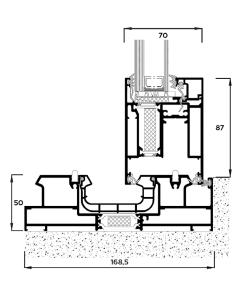
 $Ug = 1,0 \text{ W/m}^2\text{K}$  and  $\Psi g = 0,04 \text{ W/m}\text{K}$ 

### Alumil S700

#### Lift & Slide

With a total face width of 137mm, it offers high functionality, easy rolling and is ideal for covering large openings. The ultimate combination of high energy efficiency, safety and modern appearance.

- Double or triple glass pane option (up to 50mm)
- High energy efficiency with the use of special bilaminar polyamides
- Application of retractable mechanism with the possibility of up to 400kg/sash
- Roll on low guide rail for easy access - special construction required for rainwater drainage





High Energy Efficiency
Uw = 1,30 W/m<sup>2</sup>K

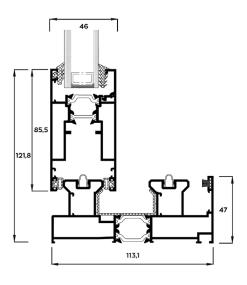
Lift & Slide with dimension: 3000mm x 2200mm, Ug = 0,6 W/m²K and Yg = 0,04 W/mK

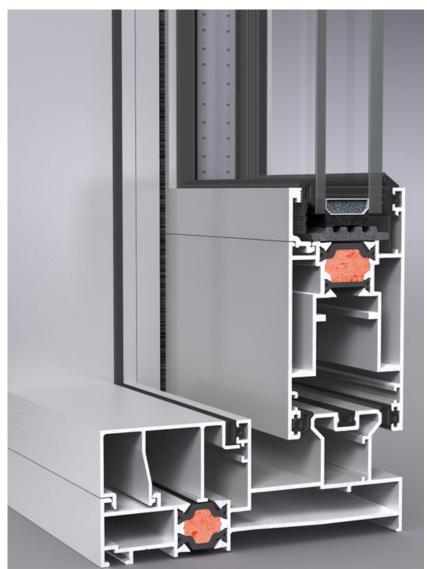
### ELVIAL S46.SI2 (6700i2)

#### Lift & Slide

With a total face width of 121 mm, it offers high functionality due to easy rolling, while it is ideal for covering large openings. It combines thermal insulation and sealing with high aesthetics.

- Double glass pane (24mm or 27mm)
- High thermal insulation performance thanks to the use of 18-24mm glass-reinforced polyamide
- Application of a retractable (150kg) or a simple sliding (up to 80kg) mechanism
- Smooth rolling using Inox guide rail





High Energy Efficiency

 $Uw = 1,81 W/m^2 K$ 

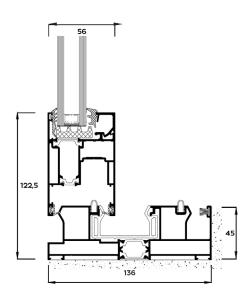
Lift & Slide with dimension: 3000mm x 2200mm, Ug = 1,0 W/m²K and Yg = 0,11 W/mK

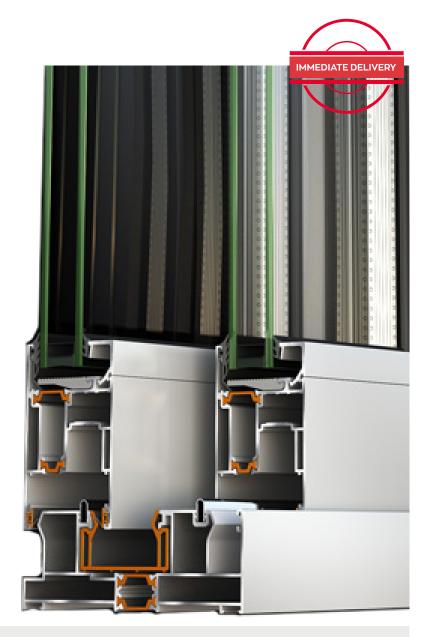
### Alumil S560

#### LIft & Slide

With a total face width of 122.5mm, it offers high functionality, easy rolling and is ideal for covering large openings. The ultimate combination of high energy efficiency, safety and modern appearance.

- Double or triple glass pane option (up to 43mm)
- High energy efficiency with the use of special bilaminar polyamides
- Application of retractable mechanism with the possibility of up to 300kg/sash

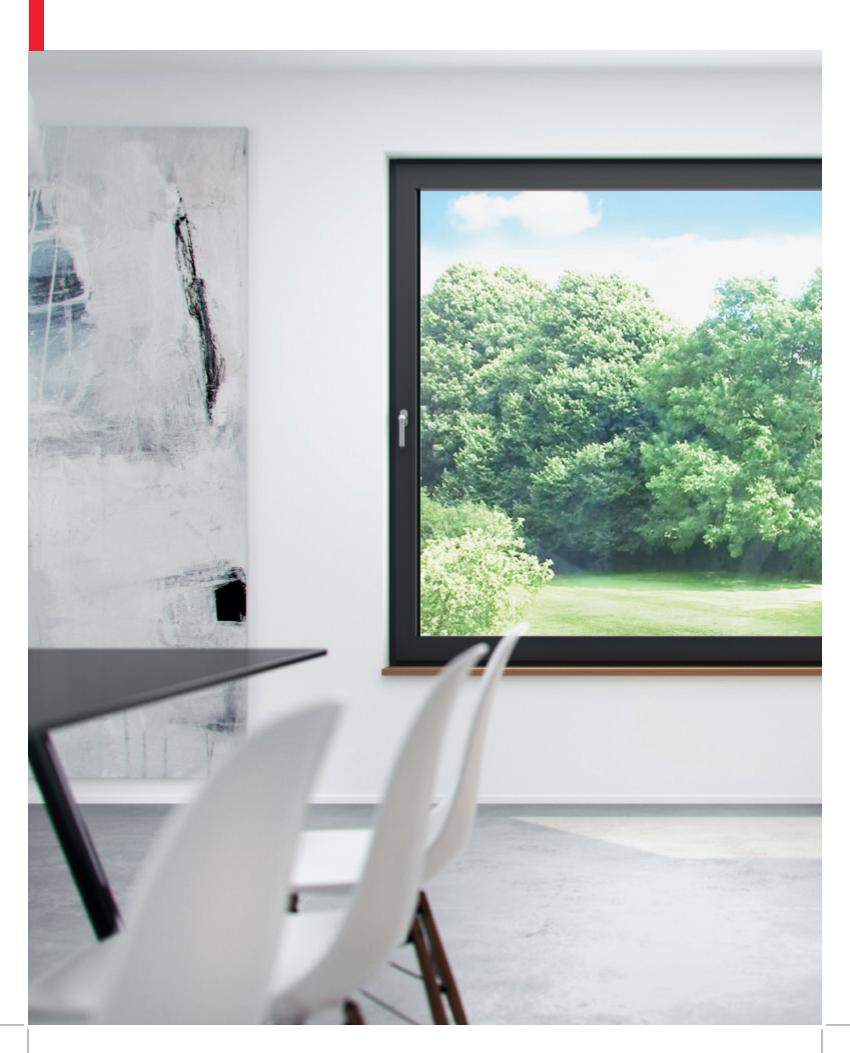




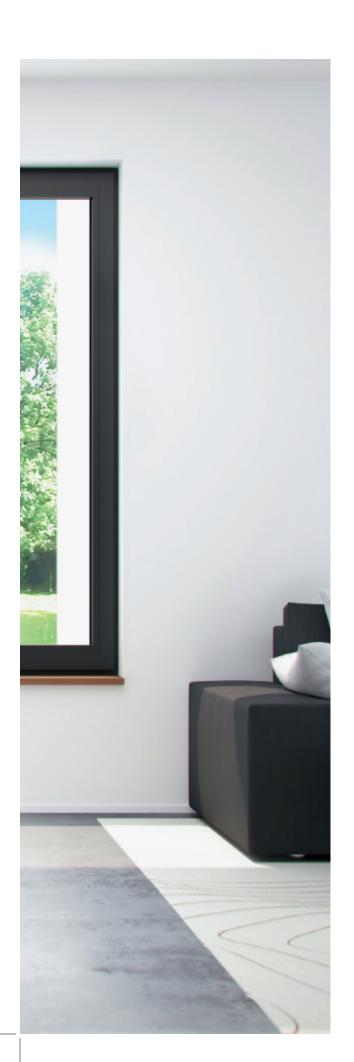
High Energy Efficiency
Uw = 1,50 W/m<sup>2</sup>K

LIft & Slide with dimension: 3000mm x 2200mm, Ug = 1,0 W/m²K and Yg = 0,11 W/mK





### **TILT & TURN**

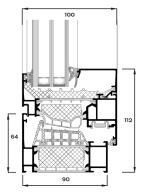


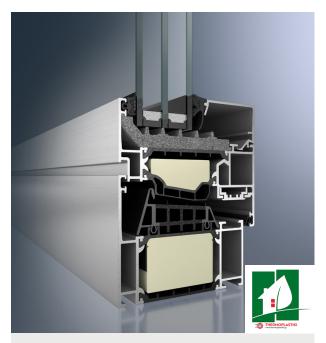
#### **ALUMINUM TILT & TURN**

### Schüco AWS 90.SI

The energy profile of the tilt-and-turn frame is complemented by top sealing, high resistance to wind pressure, wind permeability and water permeability, while it is an excellent option to upgrade to a Passive House standard.

- Total Face Width 112mm
- Possibility of double or triple glass pane (up to 68 mm)
- Expanded thermal insulation zone with reinforced thermal breaks and foam
- Application of hidden Schüco SimplySmart mechanism





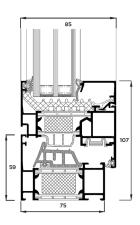
High Energy Efficiency
Uw = 0,95 W/m²K

Single-sash TT with dimensions 900mm x 1200mm,  $Ug = 0.6 W/m^2 K$  and Ug = 0.04 W/m K

### Schüco AWS 75.SI

With a thermal insulation zone, capable of offering excellent results, the thermal break French window frame has excellent sealing properties, both against wind and moisture, as well as high strength and durability.

- Total Face Width 107mm
- Possibility of double or triple glass pane (up to 61 mm)
- Expanded thermal insulation zone with reinforced thermal breaks and foam
- Application of hidden Schüco SimplySmart mechanism up to 250kg





High Energy Efficiency

#### $Uw = 1,02 W/m^2K$

Single-sash TT with dimensions 900mm x 1200mm, Ug = 0,6 W/m $^2$ K and  $^2$ G = 0,04 W/mK

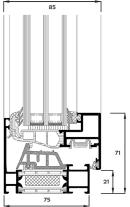
### Schüco AWS 75.BS.HI

#### Minimal Design

Architectural system with a very low profile height and excellent thermal insulation performance.

It has additional chambers in the central seal.

- Total Face Width 71mm
- Double or triple glass pane option (up to 61 mm)
- Extended thermal insulation zone with thermal breaks and chambers with foam
- Application of Schüco Simply Smart hidden mechanism
- There is no visible glazing bead





High Energy Efficiency

#### $Uw = 1,18 W/m^2K$

Single-sash TT with dimensions 900mm x 1200mm,  $Ug = 0.6 W/m^2K$  and Ug = 0.04 W/mK

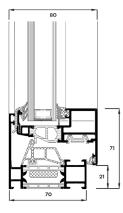
### Schüco AWS 70.BS.HI

#### Minimal Design

Architectural frame with cross-section depth of 70mm.

The extended thermal insulation zone, with the specially designed thermal break chambers containing foam material, offer high energy savings, preventing losses. It is complemented by top sealing performance, with high resistance to wind pressure, wind and water permeability.

- Total face width 71mm
- Double glass pane (up to 39mm)
- Extended thermal insulation zone with thermal breaks and chambers with foam
- Application of Schüco Simply Smart hidden mechanism
- There is no visible glazing bead





High Energy Efficiency

#### $Uw = 1,64 W/m^2 K$

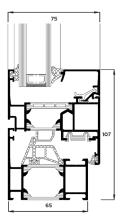
Single-sash TT with dimensions 900mm x 1200mm, Ug = 1,0 W/m²K and  $\Psi g$  = 0,11 W/mK

#### **ALUMINUM TILT & TURN**

### Schüco AWS 65

Rigid aluminum construction with high resistance to wind pressure, wind permeability and water permeability.

- Total Face Width 107mm
- Double or triple glass pane option (up to 55mm)
- Application of Schüco Simply Smart hidden mechanism





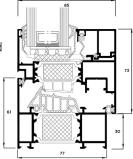
High Energy Efficiency **Uw = 1,35 W/m²K** 

Single-sash TT with dimensions 900mm x 1200mm, Ug = 0,6 W/m $^2$ K and  $^2$ G = 0,04 W/mK

### **Alumil S77**

The SUPREME S77 system is the innovative and advanced tilt-and-turn thermally insulated French window frame, which is ideal for robust constructions with strict specifications and maximum safety. Due to the particularly high thermal insulation performance it provides, it can be used for Passive House level energy efficiency.

- Total face width 103mm
- Double or triple glass pane option (up to 68 mm)
- Thermal insulation with 40 mm wide polyamides, energy bar and foam insulating material
- Low threshold construction option
- Three-layer sealing with EPDM rubber and double-extrusion main rubber
- Application of mechanism up to 130kg





High Energy Efficiency

 $Uw = 1,1 W/m^2K$ 

Single-sash TT with dimensions 900mm x 1200mm,  $Ug = 0.6 W/m^2K$  and Ug = 0.04 W/mK

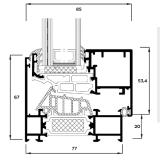
### **Alumil S77 PHOS**

#### Minimal Design

The minimal tilt & turn SUPREME S77 PHOS also gives the possibility of implementing constructions with a hidden sash. A key advantage of the frame is the maximization of natural lighting combined with the minimization of the visible aluminum frame.

With high coefficients of thermal insulation, waterproofing and soundproofing, it becomes an ideal choice for the implementation of rigid constructions, resistant to time and use.

- Total face width 73.4mm
- Double glass pane 30 mm and possibility of triple glass pane 45 mm
- Thermal insulation with polyamides 40 mm wide, Energy bar and foaming insulating material
- Application of mechanism up to 130kg per sash





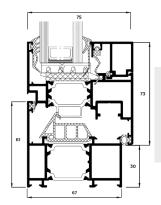
High Energy Efficiency
Uw = 1,50 W/m²K

Single-sash TT with dimensions 900mm x 1200mm, Ug = 1,0 W/m²K and  $\Psi$ g = 0,11 W/mK

#### **ALUMIL S67**

Excellent energy efficiency, maximum safety and sealing. It is complemented by insulating bars and double-extrusion foam rubbers, while combining the elegant aesthetics and manufacturing flexibility of aluminum frames.

- Total Face Width 103mm
- Double glass pane (up to 39mm)
- Extended thermal insulation zone with double extrusion foam rubbers
- Application of mechanism up to 130kg per sash





High Energy Efficiency

 $Uw = 1,76 W/m^2K$ 

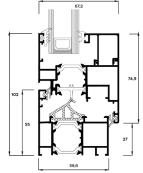
Single-sash TT with dimensions 900mm x 1200mm, Ug = 1,0 W/m²K and  $\Psi$ g = 0,11 W/mK

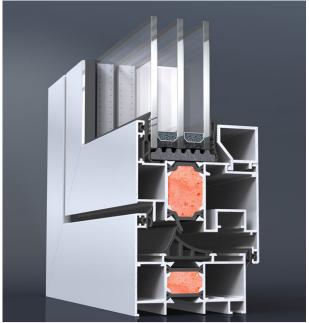
#### **ALUMINUM TILT & TURN**

### ELVIAL W59.SI2 (4600i2)

Thanks to the advanced thermal break foam core in the frame section, the desired thermal insulation performance is achieved, while heat transmission is prevented.

- Total Face Width 102mm
- Double glass pane (up to 34 mm) Triple glass pane (up to 40 mm)
- Glass-reinforced polyamide rods 24 mm
- Application of mechanism with weight strength up to 130 kg
- Low threshold construction option





High Energy Efficiency
Uw = 1,76W/m²K

Single-sash TT with dimensions 900mm x 1200mm, Ug = 1,0 W/m²K and  $\Psi g$  = 0,11 W/mK

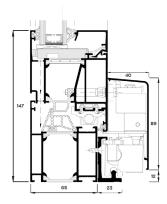
#### **ALUMINUM TILT & SLIDE**

### Schüco AWS 65 PASK

#### (Tilt & Slide)

Tilt & Slide window frame with high thermal insulation performance. Absolute practicality, sealing and soundproofing with the combination of sliding opening and tilting.

- Total face width 147mm
- Option of triple glass pane (up to 55 mm in the casement and 45 mm in the sash
- High Energy Efficiency
- Application of SCHÜCO mechanism up to 250 kg





High Energy Efficiency
Uw = 1,0 W/m²K

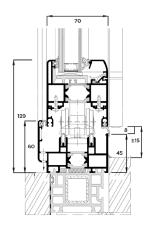
Tilt & Slide with dimensions 3000mm x 2200mm, Ug = 0,6 W/m²K and Ψg = 0,04 W/mK

### Schüco ASS 70 FD

### (Folding)

The special construction of the folding mechanism allows the easy movement of the sashed adding the ultimate functionality to the other features of thermal insulation, sealing, soundproofing and anti-burglary protection. Rolling is almost silent and safe thanks to the guide rail up and down.

- Total face width 129mm without formwork
- Possibility of triple glass pane (up to 45 mm)
- Application of SCHÜCO folding mechanism 100 kg/sash
- Low threshold construction option
- Option of 90° open angle





High Energy Efficiency

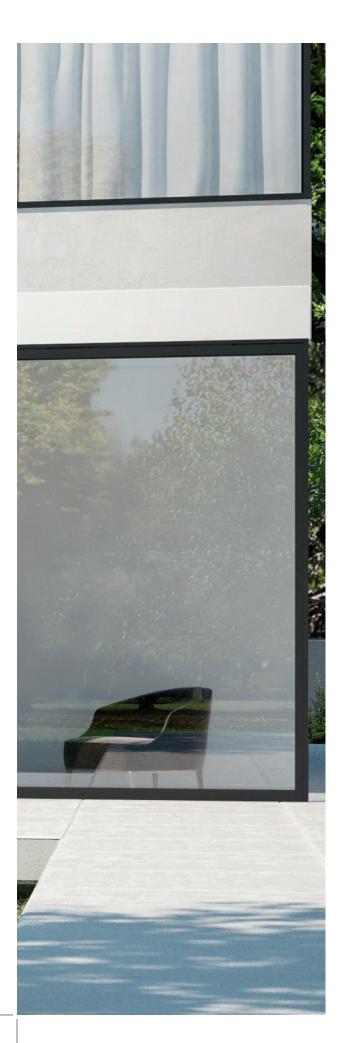
#### $Uw = 1,80 W/m^2K$

Folding structure with three sashes and dimensions 3000mm x 2200mm,

 $Ug = 1,0 W/m^2K$ and  $\Psi g = 0,11 W/mK$ 



# ALUMINUM RESIDENTIAL DOORS



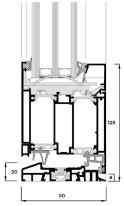
#### **ALUMINUM RESIDENTIAL DOORS**

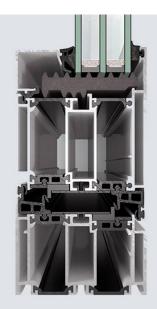
### Schüco AD UP 90

Main entrance with 90mm profile depth and high thermal insulation performance of double split thermal break and zero depth difference (coplanar).

The unique safety specifications are complemented by the excellent sealing performance and the strong anti-burglary application. It has great robustness due to the combination of 5 chambers.

- Total face width 125 mm
- Triple glass pane option (up to 68mm)
- Double split thermal break
- SCHÜCO five-point inox lock mechanism
- Choice of visible or hidden hinges with the possibility of opening up to 100°
- Possibility of adding a coplanar panel
- Sash weight up to 200kg





High Energy Efficiency

#### $Ud = 1,02 W/m^2 K$

Glazed residential door with dimensions 1000mm x 2200mm & Ug = 0,6 W/m<sup>2</sup>K

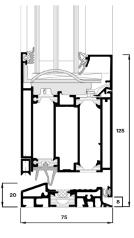
#### $Ud = 1,45 W/m^2 K$

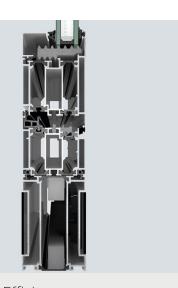
Residential door with panel and dimensions 1000mm x 2200mm & Up = 1,23 W/m²K

### Schüco AD UP 75

Main entrance with 75mm depth of casement and sash profile. It has excellent functionality and combines all the advantages of thermal insulation, waterproofing, soundproofing and safety. It has great robustness due to the combination of 5 chambers.

- Total Face Width 125mm
- Triple glass pane option (up to 53mm)
- Double split thermal break
- SCHÜCO five-point inox lock mechanism
- Choice of visible or hidden hinges with the possibility of opening up to 100°
- Possibility of adding a coplanar panel
- Sash weight up to 200kg





High Energy Efficiency

#### $Ud = 1,15 W/m^2 K$

Glazed residential door with dimensions 1000mm  $\times$  2200mm & Ug = 0,6  $\text{W/m}^2\text{K}$ 

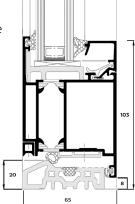
#### $Ud = 1,58 W/m^2 K$

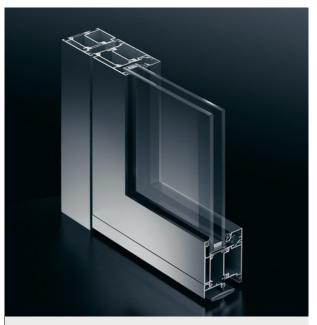
Residential door with panel and dimensions  $1000 \text{mm} \times 2200 \text{mm} \& \text{Up} = 1,23 \text{ W/m}^2\text{K}$ 

## Schüco ADS 65 HD

Main entrance with profile depth of 65mm. It bears the key features of thermal insulation, sealing, soundproofing and anti-burglary protection.

- Total Face Width 103mm
- Triple glass pane option (up to 55mm)
- Double split thermal break
- SCHÜCO five-point inox lock mechanism
- Choice of visible or hidden hinges with the possibility of 100° or 180° opening
- Sash weight up to 200kg





High Energy Efficiency

#### $Ud = 1,62 W/m^2 K$

Glazed residential door with dimensions  $1000 \text{mm} \times 2200 \text{mm} \& \text{Ug} = 0.6 \text{ W/m}^2\text{K}$ 

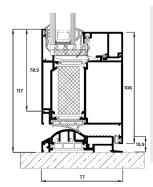
#### $Ud = 2,09 W/m^2 K$

Residential door with panel and dimensions 1000mm x 2200mm & Up = 1,23 W/m²K

## **Alumil SD77**

The SUPREME SD77 series is a modern solution for entrance doors with high specifications and focus on security. Single level profiles provide uniformity, enhancing the innovative design and architectural aesthetics of the range.

- Total Face Width 117mm
- Triple glass option (up to 59mm)
- High thermal insulation performance thanks to the application of polyamides (44mm) and foam insulating material
- Expandable thermal break
- Choice of visible or hidden hinges with the possibility of 100° or 180° opening
- Possibility of adding a single level panel
- Sash weight up to 160kg





High Energy Efficiency

#### $Ud = 1,05 W/m^2 K$

Glazed residential door with dimensions 1000mm x 2200mm & Ug = 0,6 W/m²K

#### $Ud = 1,64 W/m^2 K$

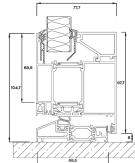
Residential door with panel and dimensions 1000mm x 2200mm & Up = 1,23 W/m²K

#### **ALUMINUM RESIDENTIAL DOORS**

## **ELVIAL D77 HI.U**

The three-level thermal break main entrance frame ELVIAL D77 HI2.U is a renewed solution, which changes the data in its category. It has all the advantages of thermal insulation with the foam core i2, sealing and design solutions, combining them with advanced safety and functionality applications.

- Total Face Width 104.7mm
- Triple glass pane option (up to 60 mm)
- High thermal insulation performance thanks to the use of 18-24mm glass-reinforced 24mm polyamide bars
- Choice of visible or hidden hinges with the possibility of opening up by 100° or 180°
- Possibility of adding a coplanar panel
- Sash weight up to 200kg





High Energy Efficiency

 $Ud = 1,14 W/m^2 K$ 

Glazed residential door with dimensions 1000mm x 2200mm & Ug = 0,6 W/m²K

 $Ud = 1,60 W/m^2 K$ 

Residential door with panel and dimensions 1000mm x 2200mm & Up = 1,23 W/m²K

## **PIVOT**

These are Pivot aluminum axial doors with excellent manufacturing quality and international certificates and measurements.

They stand out for their superior aesthetics and mechanical resistance.

They are coplanar and provide comfort of passage.

- Maximum dimensions: 2000 x 3000mm
- Minimum dimensions: 1400 x 2200mm
- High thermal insulation performance thanks to the application of foam insulation material
- Selection of keys as well as operation via bluetooth, fingerprint (Fingerscan) or keyboard
- Option of additional locks for greater security
- Wide selection of aluminum panels





#### **ALUMINUM FRAMES**

# COLOUR RANGE FOR WOOD ALUMINUM FRAMES

This includes only an indicative presentation of the available color chart.

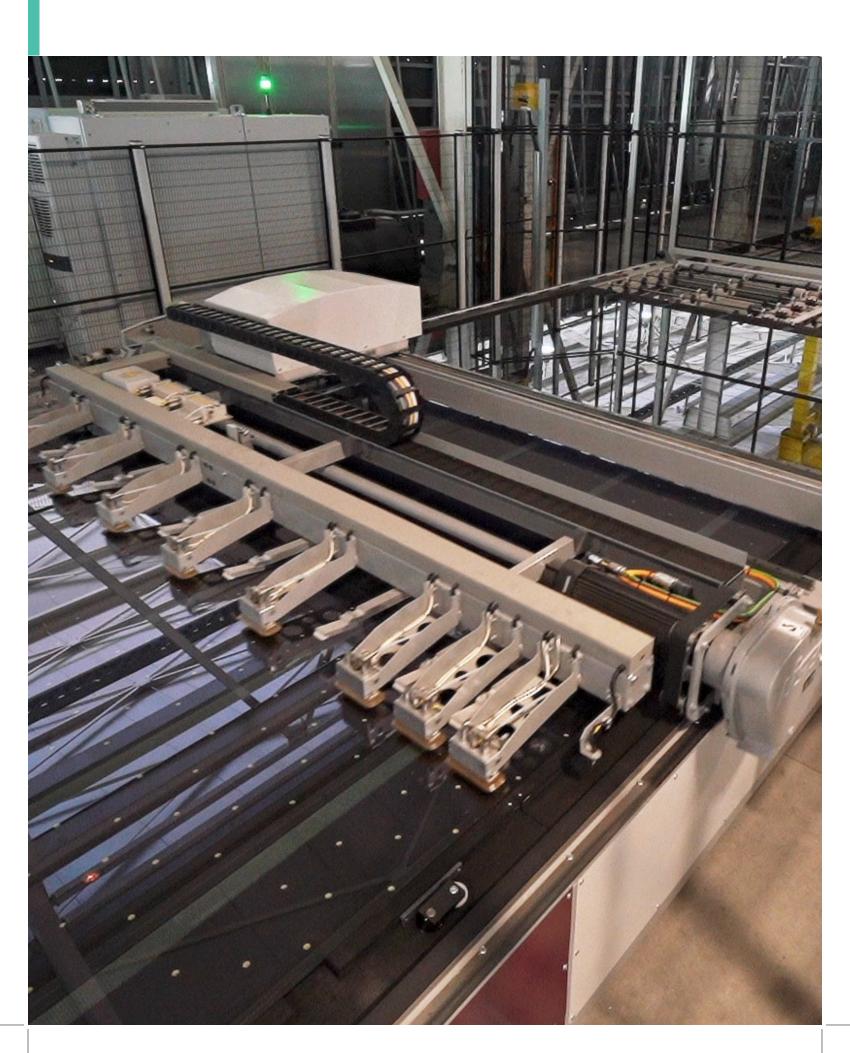


Some color variations are possible due to printout.

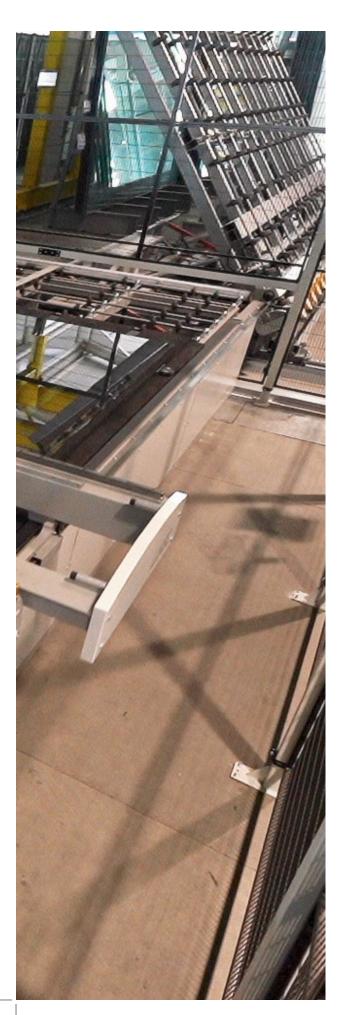
# COLOUR RANGE INTERPON BY AKZONOBEL ALUMINUM FRAMES

This includes only an indicative presentation of the available color chart.





## **GLASS PANES**



Thermoplastiki ensures the complete coverage of the needs of each space, accompanying its frames with high-quality glass panes. From the selection of the top energy properties of solar more glass panes, to the specialized functionality of specialist and triplex glass panes, our aim is to offer comprehensive functionality, which will upgrade both the space and the quality of life in it.

Manufactured in Greece by Thermoplastiki.

# USEFUL INFORMATION

# GLASS PANES AND SOUNDPROOFING OF RESIDENCE

Glass panes occupy the largest area of a frame. By choosing triplex double or triple glass panes with a sound-insulating membrane, you will enjoy the desired tranquility in your space.

#### **ARGON GAS**

The energy glass panes manufactured by Thermoplastiki always include the automated addition of Argon gas (90%), inside the spacer of the double or triple glass pane.

#### TRIPLE GLASS PANE

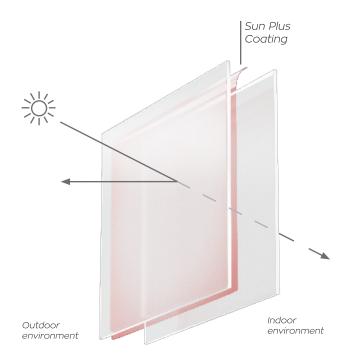
If you choose a triple glass pane, combine it with 2 energy glass panes (inside and outside) and with Thermix thermal spacer for the optimum thermal insulation effect.

## **GLASS PANES**

# Top Performing Energy Glass Panes.

Glass panes occupy the largest area of a frame. In practice, this means that they largely determine the overall energy efficiency of the frame, as well as the soundproofing effect.

We seek the best final result by taking care of the integrated coverage of the needs of any space. All the frames we manufacture exclusively come with glass panes produced in the company's state-of-the-art, privately-owned unit in Amygdaleonas, Kavala.



# TL Light Permeability [%] Solar Coefficient g Thermal Insulation Coefficient U [W/m²K] SUN PLUS 70 0,37 1,0

DGU Double Glass Pane: 4mm - 15mm Argon 90% - 5mm Sun Plus

## Sun Plus

Top comfort in summer & thermal insulation in winter

1 Visual Comfort

High light permeability and neutrality in appearance, while reflecting infrared radiation helping to save energy and reduce CO2 emissions.

Top thermal insulating features

Three times the insulation of a typical double glass pane.

Energy and cost savings

Low consumption and reduction of heating, cooling and CO2 emissions costs.

Sun Plus glass panes are designed for **double or triple glazing** and perfectly accompany any frame (Fiber Glass Reinforced, uPVC or Aluminum) manufactured by Thermoplastiki.

Sun Plus coating is always applied in position no. 2 of the double or triple glass pane.

#### Low e

#### Maximum energy efficiency & light

Low-e glass panes are designed for **double or triple glazing** and perfectly accompany any frame (Fiber Glass Reinforced, uPVC or Aluminum) manufactured by Thermoplastiki.

With low-emission glass panes, we achieve **reduction of energy consumption** and, consequently, **reduction of heating costs**, combined with the creation of comfortable living conditions during the winter months, thanks to the **use of sunlight**.

# Excellent Energy Efficiency and Economy

It combines the highest level of energy efficiency while significantly reducing energy consumption, heating costs and, consequently, CO2 emissions.

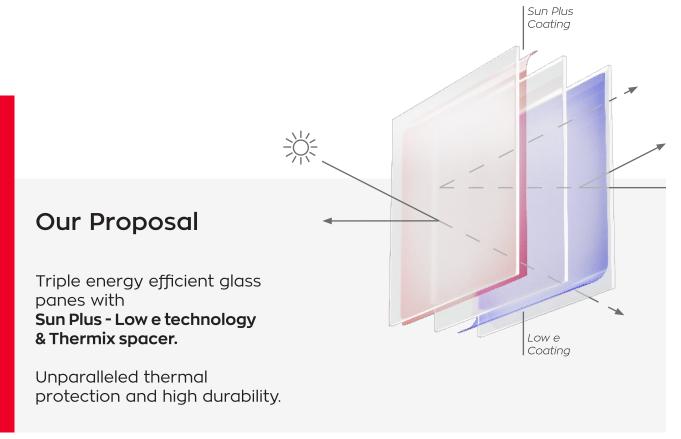
#### 2 Unique Aesthetics

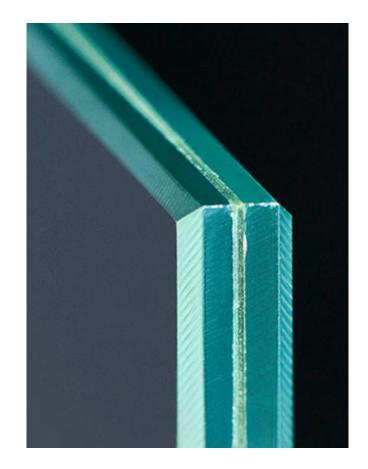
Low-e coating has a completely neutral aesthetic. Color performance during transmission and reflection is particularly high.

Composition (mm)	Gas filling	Value Ug W/(m²K)	Light transmission (%)	g value (%)	Light reflection (%)
5/15/*4	Argon > 90 %	1,1	81	64	12
4*/16/5/15/*4	Argon > 90 %	0,6	73	53	16
5/15/5/15/*4	Argon > 90 %	0,9	74	59	16

Values are calculated in accordance with EN410-2011 and EN673-2011 standards.

\* Coating position





## Triplex glass panes

The enhanced protection and security proposal of Thermoplastiki

### Soundproof structure

Triplex security is not limited to material threats only. Soundproofing is also guaranteed with this option. The excellent reflective property of the membrane creates a shield and blocks sound waves, to provide a peaceful interior, free from any external disturbance.

#### **Break-proof structure**

Internal film layers secure the glass structure even in case it breaks. The broken glass pane stays in place without breaking into fragments, to prevent from any injuries and to ensure protection against burglary, even when broken.

#### **Bulletproof structure**

Manufactured under extremely high pressure and temperature, bullet-proof triplex glass panes provide excellent protection in case of increased need for security. The amount of layers and PVB membranes determine the security level of the glass pane.

#### Wind-resistance structure

The durability of triplex glass panes can protect your space from high-speed gusts of wind, reducing the bending strength of the glass pane. In this way, the large dimensions of the frames pose no restriction anymore.

## The Argon gas

Thermoplastiki, in addition to the advanced glass panes that manufactures in its integrated and state-of-the-art production unit, provides all energy glass panes with the automated addition of Argon gas (90%), within the spacer of the double or triple glass pane. Argon gas is an innovative solution in the thermal insulation industry, improving the double Sun Plus energy-efficient glass pane thermal transmittance properties by 25%.

# The Thermix Warm Edge Spacer

To improve the Uw factor to the maximum, the company uses Thermix warm edge spacers, practically reducing the energy cost of the building and upgrading the indoor climate. The convection coefficient  $\Psi g$  is 0.040 W/mK.

Thermix spacer prevents or limits the phenomenon of liquefaction inside the space.



## **Specialized Glass Panes**

Ideal solutions for any type of construction.

#### **Tempered Glass Panes**

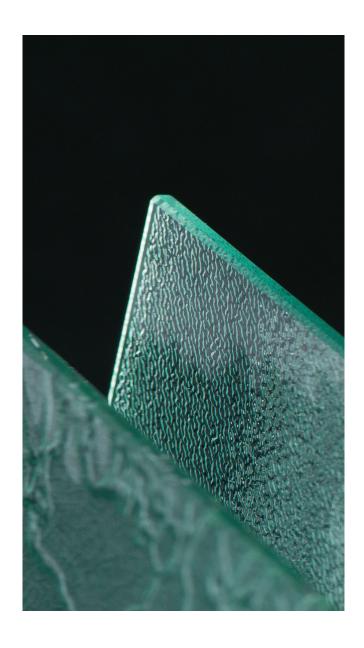
Tempered glass panes are produced by thermal processes where the hardening of their structure is achieved. First, they are baked in a special oven and then they are cooled in order to achieve the desired result. In addition, energy coating (Sun Plus - Low-e) can be applied to tempered glass panes, double or triple. In case of breakage they crumble, preventing possible injuries. They are the best choice for Architectural Frames.

#### Stop Sol

Reflective stop sol glass panes are ideal for cases where you want the privacy of the interior, as they prevent visibility from the outdoor environment. They also reflect a significant part of sunlight, thus blocking harmful radiation.

# Graded Light Transmittance Glass Panes

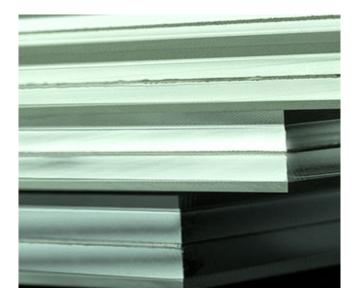
Graded light transmittance glass panes consist of specially-treated matte glass strips, which allow just a portion of sunlight to enter, offering limited visibility with a blurring effect. This application is ideal for both internal and external applications. They are the best choice for Architectural Frames.



# Glass panes that prevent burglars and ensure security

The composition of Triplex (Laminated) glass panes is based on the inner membrane. In case of breakage, the glass pane stays in place without breaking into fragments. This prevents both violation by would-be intruders and possible injuries. Triplex glass panes can be combined with the Sun Plus energy coating, as well as with the soundproofing membrane, as an investment in the quality of the indoor environment.





# Triplex (Laminated) or Tempered Glass Panes?

Both of these types of glass panes offer security, while in case of breakage they ensure the prevention of injuries. If the main concern is the security of your place, then triplex glass panes are recommended due to their structure. For particularly large dimensions (Architectural Frames), tempered glass panes are recommended. Due to their processing, they have higher tensile strength and resistance to wind pressure, while no doubling of thickness is required compared to triplex glass panes. This results in a significant reduction in kilograms per square meter.

#### What does Solar Factor mean?

The solar factor is the indicator that measures the percentage of solar energy that penetrates the glass pane of a frame to the interior, in relation to the total incident solar radiation. The lower its value, the higher the sun protection offered by the frame.

The solar factor of Thermoplastiki's double Sun Plus glass panes is 0.39 (39%), while that of triple glass panes is 0.36 (36%).

# MODERN SHADING SOLUTIONS

# Variety of typologies to combine harmoniously with any frame.

The prime objective of the solutions we offer is visual comfort, shading and the overall protection of your space not only against any potential intruder.

With the use of top-quality mechanisms and accessories as well as certified raw materials and manufacturing processes, the final products are characterized by ergonomics, aesthetics, functionality and durability.



#### **Advanced Roller Shutters**

#### **Useful Information**

#### The Perforated Roller Shutter Slat

Straight or curved, it offers high aesthetics, unlimited color choices and natural ventilation of the space. Moreover, the straight perforated roller shutter slat ( $\Delta25$  and  $\Delta30$ ) is almost silent when moving.

#### The "Smart" Roller Shutters

For easy roller shutter management even remotely via smartphone, choose an electric motor in combination with the TAHOMA automation system, to create personalized scenarios that will simplify your everyday life.

# Superjacent or External Roller Shutter Boxes

When the opening is small in height, then it is recommended to use an external box for a larger passage in height compared to the superjacent box. It also offers better insulation results. If you are particularly interested in the aesthetics of the building and do not want visible roller shutter boxes, then the choice of a thermal insulated superjacent roller shutter is recommended.

# Maximum Roller Shutter Dimensions

By use of the T16, roller shutters of up to 2m width are manufactured. By use of the T19, roller shutters of up to 2.5m width are manufactured. If the opening is up to 4.5m wide, choose the T77 slat, which is also ideal for garage doors. All three of these slats contain polyurethane for extra insulation and economy.

#### Thermal Insulated Roller Shutters

For maximum thermal insulation, choose either a uPVC thermal insulation roller shutter box with insulating material (Expanded Polystyrene feliblok or Graphite Expanded Polystyrene feliblok plus) or an aluminum thermal insulation box with a uPVC tip and insulation.

\*Combine it with a roller shutter slat made of polyurethane.



#### **OXIMO** io Motor

Combine your roller shutter with a wireless or wired torque-controlled motor and an automatic obstacle detector. For the wireless OXIMO io motors, select additional automations and create the ideal conditions and desired operation scenarios, such as:

#### - SITUO 5 io Pure 5 Channel Controller

Possibility of central control of your electric motors, as well as your io devices.

Easily & quickly give bulk or individual orders.

#### - Temperature Sensor

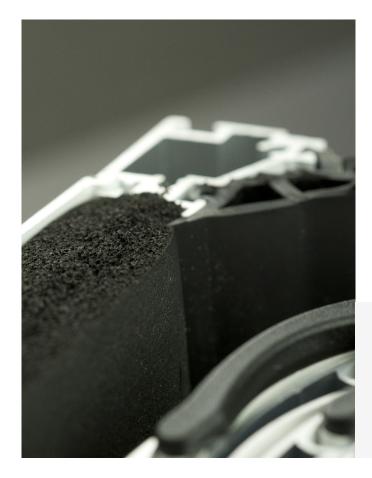
Installed inside or outside the home, it monitors temperature levels and automatically runs the scenarios you have programmed in TaHoma.

#### - SUNIS II io Brightness Sensor

Installed outdoors in a wireless manner, it monitors the brightness levels and automatically runs the scenarios you have programmed in TaHoma.



#### **SHADING**



From creating the ideal shading conditions to ensuring the safety of the garage entrance, it all depends on selecting and installing the proper roller shutters.

Thermoplastiki chooses certified raw materials with a view to creating ideal proposals for interior shading, energy efficiency and protection against adverse weather conditions.

The **high quality** manufacturing ensures the protection of your space and at the same time guarantees the **functionality** and **durability** of the final product.

## Roller shutter boxes

Roller shutter boxes with high thermal insulation properties.

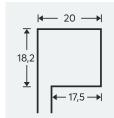
One of the most important parts in the installation of a roller shutter is the box in which it is rolled up. The box often proves to be detrimental to the life span of a roller shutter as well as a cause of reduced energy efficiency, due to its lack of thermal insulation properties. That's why all the superjacent roller shutter boxes manufactured by the company are thermally insulated.

But even if this is not the case, most of the time it simply looks like an awkward extension protruding out of the framing. At Thermoplastiki, we meticulously consider to even the slightest functional or aesthetic detail.

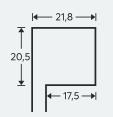
With us you can satisfy all your wishes and needs, by choosing your roller shutter box from a wide variety of types and materials, ensuring it blends into your space.



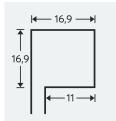
#### SUPERJACENT THERMALLY INSULATED uPVC BOXES



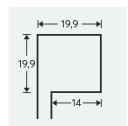
THERMAL INSULATION uPVC SUPERJACENT BOX 18.5 WITH FELIBLOK



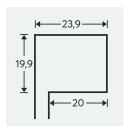
THERMAL INSULATION uPVC SUPERJACENT BOX (KÖMMERLING) 20.5X21.8



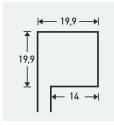
THERMAL INSULATION UPVC SUPERJACENT BOX T16.9



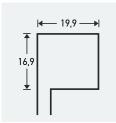
THERMAL INSULATION UPVC SUPERJACENT BOX T19.9 WITH FELIBLOK PLUS



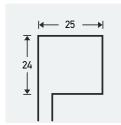
THERMAL INSULATION uPVC SUPERJACENT BOX T19.9X23.9 WITH FELIBLOK PLUS



THERMAL INSULATION BASIC uPVC SUPERJACENT BOX T19.9

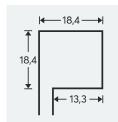


THERMAL INSULATION SU-PERJACENT BOX T16.9X19.9 WITH FELIBLOK PLUS

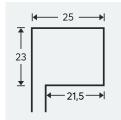


THERMAL INSULATION SUPERJACENT BOX (KÖMMERLING) 24X25 WITH FELIBLOK PLUS

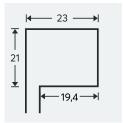
#### SUPERJACENT THERMALLY INSULATED ALUMINUM BOXES



THERMAL INSULATION SUPERJACENT ALUMINUM BOX 180X200

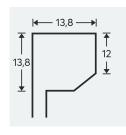


THERMAL INSULATION SUPERJACENT ALUMINUM BOX 230X250

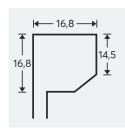


THERMAL INSULATION SUPERJACENT ALUMINUM BOX 210X230

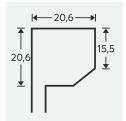
#### **EXTERNAL ALUMINUM BOXES**



EXTERNAL ALUMINUM BOX T13.8

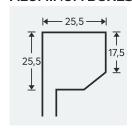


EXTERNAL ALUMINUM BOX T16.8

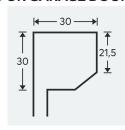


EXTERNAL ALUMINUM BOX T20.6

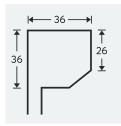
#### ALUMINUM BOXES FOR GARAGE DOORS



GARAGE DOOR ALUMINUM BOX T25.5



GARAGE DOOR ALUMINUM BOX T30



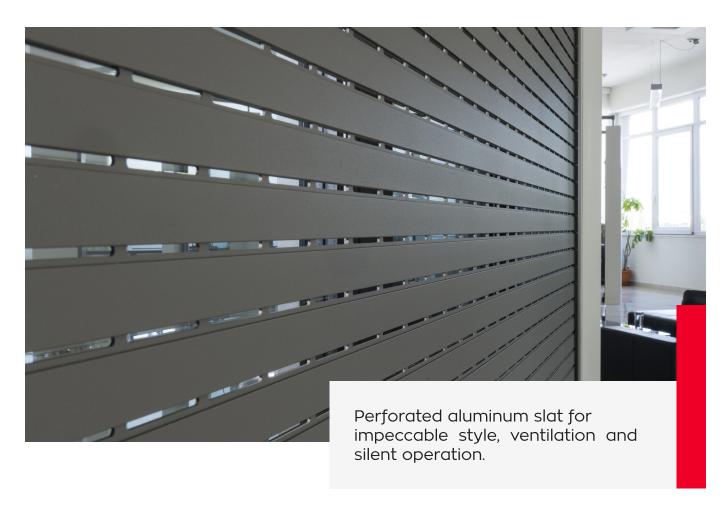
GARAGE DOOR ALUMINUM BOX T36

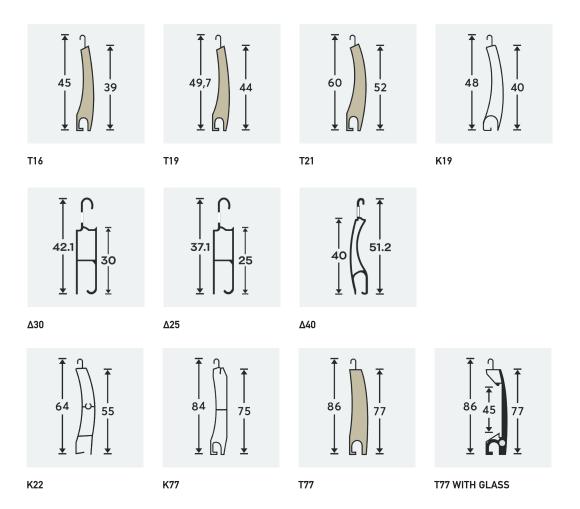
### **Roller Shutter Slats**

The most robust roller shutter slat in the market.

Each roller shutter application has its own use. Therefore, what determines the individual properties of each roller is the material from which it is manufactured.

The slats are hinged together to form the foldings and, by extension, the roller shutter itself. The material they are made of, as a whole, can provide additional properties, offering better thermal insulation, better burglar resistance or more resistance to wind gusts.





### **Modern Shutters**

Perfectly combined with the new frames colors of Thermoplastiki.

Thermoplastiki manufactures a wide variety of shutters of every type, with a view to satisfying all needs and architectural applications, thus improving the appearance and functionality of newly constructed or existing buildings.

You can choose between shutters made of aluminum, but also of uPVC, opening, sliding recessed, externally sliding, 1-, 2-, 3- or 4-sash. Always respecting the needs, style and aesthetics of the area where they are installed.

#### They are ideal for:

- Effective control of lighting, protection against the sun.
- Incomparable protection against extreme weather conditions.



## Aluminum Shutters





Movable louver option



Ideal for large openings



Top life span



Selectable hinge



Sliding option



\* Sliding shutters are made only of aluminum in single or double sash structures.

# COLOR RANGE OF ALUMINUM SHUTTERS

The aluminum shutters provided by Thermoplastiki, in addition to excellent functionality and aesthetics, are manufactured in unlimited color options, including, but not limited to the following:

Some color variations are possible due to printout.

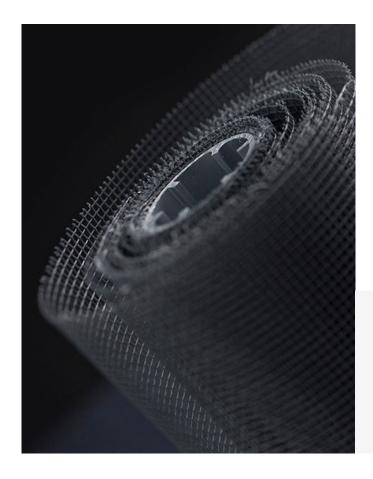
#### **WOOD COLOR RANGE**



#### INTERPON COLOR RANGE BY AKZONOBEL



# MODERN INSECT SCREENS



Each screen manufactured by the company adds functionality and aesthetics to your space, keeping away dust and insects. The variety of applications is not limited to the typology and mechanism, but also includes color and material.

It is made of **fiber glass stiff net** and comes with a **hydrophobic coating** for easy cleaning.

Thermoplastiki chooses black screen cloth, highly resistant to UV radiation, high temperatures and time, while offering better visibility.

Thermoplastiki offers a wide variety of insect screen systems, providing applications and solutions for covering any type of opening.

#### Available Typologies of Insect Screens:



HEAVY DUTY SLIDING



OPENING



PLEATED WITH CORD



PLEATED WITH SPECIAL TRACK CHAIN



VERTICAL MOVEMENT



FIXED FRAME



FRAME-SLIDING



REMOVABLE



MOTORIZED

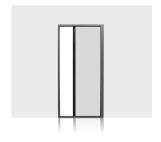
### **Centor Insect Screens**

#### **S2 Insect Screen**

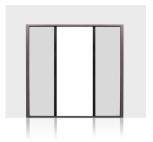
Ideal for smaller openings up to 4m wide.

Simple to use with Centor load balancing technology (Smooth Scrolling, One-Finger Operation).

Compact design – installable inside or outside the opening.



SINGLE-SASH (COVERS THE ENTIRE OPENING)



**DOUBLE-SASH** (TWO SCREENS THAT MEET IN THE MIDDLE OF THE OPENING)

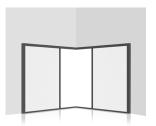
#### Insect screen and Blind S4

Ideal for larger openings, can be manufactured for a length of up to 10m.

Simple to use with Centor load balancing technology, (Smooth Scrolling, One-Finger Operation).

Compact design — installable inside or outside the opening. The insect screen and the blind are fully recessed in the frame on all sides.

The S4 screen is the **only** screen solution for folding/sliding, three-sash and corner frames.



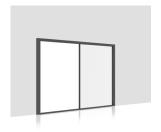
**NO CORNER** (TWO SCREENS THAT MEET AT 90-DEGREE OPENING)



**NO CORNER** (TWO BLINDS THAT MEET AT 90-DEGREE OPENING)



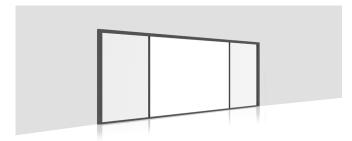
Design Award Red Dot: Best of the Best



**SINGLE** (COVERS THE ENTIRE OPENING)



**COMBINATION**OF TWO TYPES OF FABRIC



**DOUBLE** (TWO SCREENS THAT MEET AT 90-DEGREE OPENING)



# AUTOMATION SOLUTIONS

Thermoplastiki takes a step forward combining smart frames and mechanisms with **automation systems** under the multinational company **Somfy** trademark, thus upgrading both your place's energy status and the quality of your everyday life.

With just your mobile phone or your tablet, you have access to any point, roller shutters, windows, doors and all other connected smart devices of your home, anytime from anywhere. Create your own profile and enjoy the everyday life the suits your lifestyle.



#### **Smart Home**

#### Tahoma Automation System

One system only, complete coverage at home. Manage the roller shutters, lighting, sockets and space heating with just a few clicks and create the ideal scenarios for you and your family.

#### Smart WiFi Wireless Thermostat

It takes into account the temperature and humidity in the room. Its installation is easy and fast, while it also optimizes the heating function.

#### Remote control io ON/OFF Socket

Discreet socket for wireless lighting control either from the remote control or from your smartphone.

## Remote Access Management

#### **Smart Lock**

A small and smart upgrade to your front door lock will make your life safer and more carefree. With Smart Lock, you can unlock or lock your place remotely.

You can choose the desired access method:

- via the app from your smartphone
- via a special key chain
- via a bracelet
- via a card

Its design is innovative and it is equipped with an AES 256 encryption and a safety cylinder with resistance to corrosion and interference. Perfect for Airbnb short-term rentals.

Configure your place's **functionality** and maximize **security** and **energy saving** with the use of advanced automation systems.

# SUSTAINABILITY AND CIRCULAR ECONOMY



Our mission is to protect and **care for people and the environment**, pioneering the manufacture and production of quality products.

Incorporating the principles of the Circular Economy and policies oriented towards enhancing sustainable development into our strategy, we create value-based, durable and usable solutions, minimizing waste generation, while promoting recycling and committing to sustainable business

## **Recycling Actions**



#### uPVC & Aluminum

Collection and recycling of scrap through licensed partners. Both materials are 100% recyclable, with a long life span.



#### Thermal Insulation Products

The company produces environmentally friendly thermal insulation products that are 100% recyclable at the end of their use and have a positive footprint.



#### Recycling of Containers

Production units are equipped with carton and nylon packaging compression presses, that enable their collection and recycling.



#### Blue Bins

We have incorporated the principles of Sustainable Development into the daily lives of our employees, constantly promoting the recycling of stationery and batteries.



#### Hybrid cars

We recognize our responsibility towards society and the environment and invest in hybrid company cars.

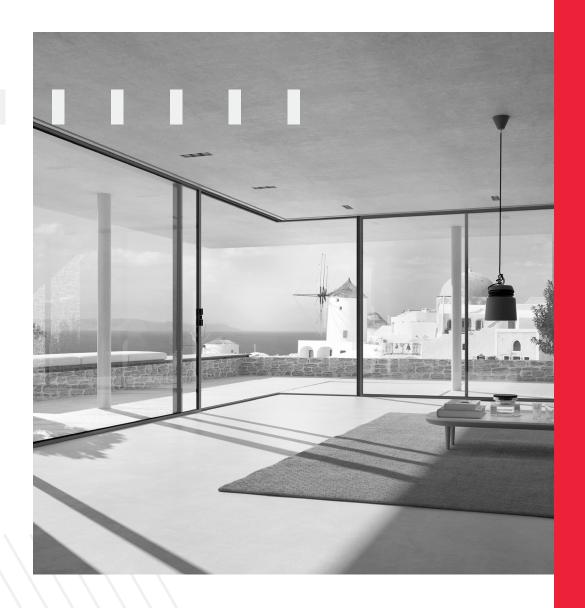


#### Glass panes Recycling

The company collects and sends for recycling the fragments produced during the manufacture of glass panes.



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