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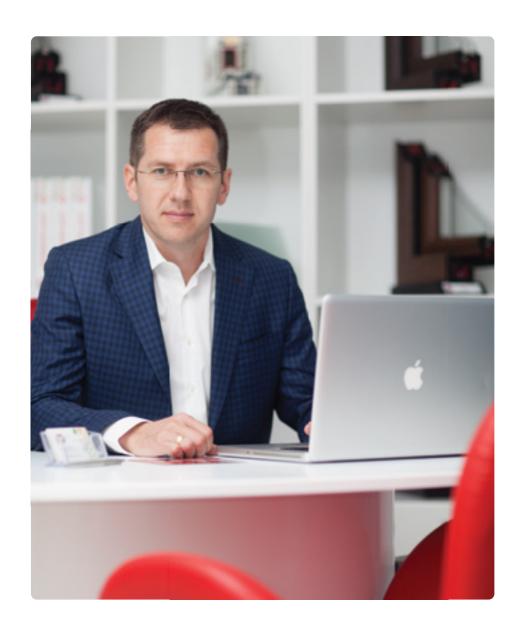
## Introduction

#### **QUALITY vs. QUANTITY**

- We have been involved since **1991** in production (plastic, ironworks, wood, etc.)
- Since **2000**, in double glazed windows PVC and Aluminum
- **4 factory sheds** with a surface of 6,000 square meters
- Investments of over **EUR 4,000,000 in machinery**
- One of the leading manufacturers of PVC double glazed windows in Romania
- 130 employees experienced in sales, manufacturing and installation
- **B2C** Department with integrated direct sales (sales, installation, service)
- **B2B** Department indirect sales to authorized partners
- **Export Department Belgium, Italy and France** Indirect sales through authorized partners
- Production output 300 units / day 10,000 sqm / month

"Built upon the values of a family business, **TERMOPLAST** aim is to produce remarkable glazed windows, distinguished by its uniqueness, the highest technical and aesthetic level. Our guiding principles that make us different. We are your partners during all the period you use our products. We are interested in **your return investment** and its correct depreciation. The strategy we approached from the very beginning is that of a natural and organic increase of our brand. We have always aimed to offer a top product, ranking us as way of working at the opposite of other companies where the automation for serial production often leads to a predictable outcome and questionable satisfaction of customer's expectations."

**Manager TRP**Cătălin Neculai



## What Recommends Us?



#### **Dedication**

We get fully involved, we show empathy and interest in your needs. We share the same values - love for family and home.



#### **Diversity**

We offer professional solutions for multiple PVC and aluminum windows and a variety of glasses and accessories to cope with different needs.



#### Respect

We give due importance to you and your desires. Our respect translates into innovative and tailored products.



#### **Development**

We put first permanent research and innovation. We want to be the confirmation of a well-taken decision.



#### **Protection**

We know how important is to protect your family. We create products that do not fail in protecting the home of those who trust us.



#### **Experience**

People are undoubtedly the most important resource of our company. Investments in training our staff in each department are and continue to be a priority in our coordination programme.

From the very beginning, TERMOPLAST has chosen to work with leading vendors worldwide able to provide both quality and innovative and diversified solutions. Thus, our windows are made from **REHAU** PVC profiles - Germany, one of the leading window profiles manufacturers. The aluminum glazing produced with profiles from **CORTIZO** - Spain impresses with reliable solutions, and by the most beautiful colors and shades. TRP brand is the synonymous of a safe house. Multiple hardware solutions from **MACO** - Austria and **ROTO** - Germany guarantee complete security for our clients. The glass we use in our production process of the insulating glass comes from the well-known international producer **Saint - Gobain** - France. The handles were specially designed and come from the number 1 world's handle manufacturer **Hoppe** - Italy. A quality product means quality material.















**TERMOPLAST** has implemented so far a proper technical product. We are among the few producers working exclusively according to the product catalog.

We closely follow the **quality indicators** imposed by **REHAU** for PVC profiles and CORIZO for Aluminum, the best processing method, the reinforcing systems, the closing systems of **ROTO** and **MACO**, thus making sure that we produce at the highest level.

TERMOPLAST's production center includes, besides Logistics and Information Center:

- PVC profiles processing plant (completely automated lines to avoid human error and much faster production times)
- Aluminum glazing production center
- Insulating glass production factory
- Foiling center for PVC profiles
- Arches manufacturing center

All these units are fully equipped and automated according to EU's regulations!



## Introduction

The entire production unit is connected to the main server, thus avoiding human errors related to cutting, gluing, machining limits. **TERMOPLAST** is one of the few manufacturers in this sector where human resource is mainly used for details and installation of accessories.

**TERMOPLAST** is the only producer of PVC glazing with REHAU profiles in Romania and one of the few in **Europe** that **uses the latest technology for welding PVC profiles.** 

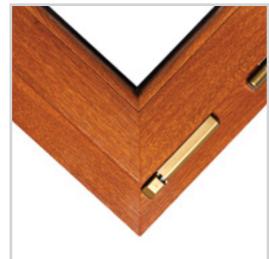
#### **Invisible welding**

The new technology for more beautiful and stronger windows! Traditional technology inevitably generates a seam weld that even after being cleaned and retouched, affects the aesthetics of the window. The excess material left behind is visible to the naked eye from an average distance.

#### What's the difference?

It is the first and only technology in the world through which the excess material does not combine at the outer part of the profile, but is directed by milling inside the profile. This excludes the deburring process (cleaning the surplus after welding). There are many advantages of the new technology – **more beautiful windows**, high resistance due to larger contact surface, extra protection against wind and noise (the excess of material combines inside of the profile, not outside, thus the corner seals preserve their shape and elasticity).











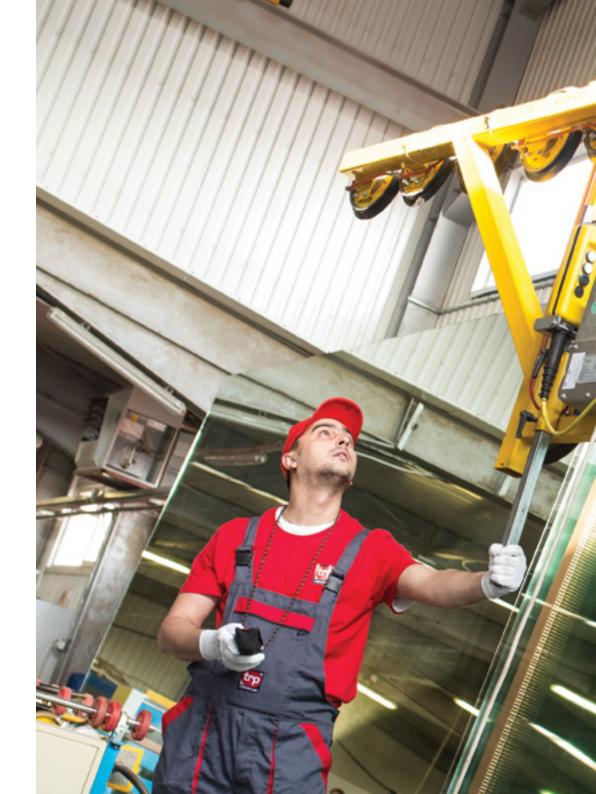
## Glass

#### Higher manufacturing process of insulating glass

- Fully automated technology flow
- **Computer-aided** production systems of the insulating glass
- Advanced technology of the **automatic washing** line with sensors included
- Continual and bending distance stick, customizable
- Argon-compressed environment

#### **TERMOPLAST** recommendations

- Using at least a **Low-E** glass in configuration of insulating glass package configurations
- Argon gas insertion for a **better thermal insulation up to 55%**
- For large glass surfaces, the use of safety glass **Connex**, both for **protection against accidents (especially children)** and for a very good sound insulation
- Using the continual stick without angle brackets (TRP standard)
- Choosing an insulating package with a pre-butoxide distance stick, argoncompressed, without filling valves
- Using warm-edge distance stick
- Choosing an insulating package with **three sheets of glass, thickness of minimum 40 mm,** with high-efficient thermal coefficients
- Using sheets of glass with larger thicknesses **(6,8,10 mm)** to strengthen the insulating glass





## TRP 60 Window









#### Quality at the best prices!

With its smooth surface and classic design, the **TRP 60** window gives an aesthetically pleasing appearance to each house. Two rows of seals prevent penetration of current, dust and water, maintaining a pleasant climate in the house. Maintaining the highest quality level in execution, these windows are an economical alternative for your home insulation.

Long life, stable quality and facile maintenance.



## TRP 70 Window





**Premium** Equipment

**Exclusive** Equipment

**40** Renovation Frame

**60** Renovation Frame

**64** Frame

**68** Frame



2/3





















#### **Economic system for building projects!**

A quality window must fulfill multiple requirements t the same time: **resistance**, **thermal and sound insulation**, **burglary protection and design**. Therefore, TRP recommends the proper reinforcement of profiles according to REHAU catalog, hardware equipment with minimum 6 burglary blockers and Secustik handle, triple glazing with warm-edge stick and use of laminated glass.

For heights exceeding 1.3 m, color profiles must be reinforced with upper reinforcement systems.



## TRP 80 Window





**Premium** Equipment

**Exclusive** Equipment

**80** Frame

























#### A system specifically designed for residential projects!

Certified exceptional design combined with stability (resistance) make this series (window) an exclusive choice! The **TRP 80** window is the favorite choice of our customers in terms of glazed windows - Class A the case depth 80, round window frame, triplex package - a necessary ingredient for long-lasting glazed windows.



## TRP SYNEGO Window





**Premium** Equipment

**Exclusive** Equipment

72 **Frame** 

82 Frame

























Design

#### An added value for your home!

TRP Synego is an innovative windows and doors systems with 6-7 insulating chambers, providing a thermal coefficient up to **0.96 w/m2k**, with a minimalist design that brings efficient lighting to your room. The new TRP Synego window is equipped as a standard with square wing, 3 sealing gaskets and triple stained glass, therefore meeting the most exigent requirements.

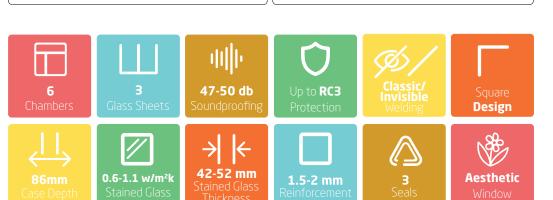


## TRP GENEO Window





## 72 Frame 86 Frame



#### Innovative windows - perfect energy balance!

Optional GENEO PHZ – Certified System for Passive Houses

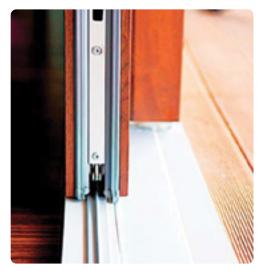
The innovative GENEO windows are made of RAU – FIPRO, a composite material reinforced with glass fibers that eliminates the need of reinforcement! Thus, we can achieve **the best performance for residential spaces in terms of energy** – (e.g. **Uw = 1.1 W/ m2k**) up to **passive houses** (e.g. **Uw = 0.73 W/ m2k**).



## **Restored** Sliding System

The ideal solution for people looking for a **mobile glass wall**, perfectly insulated.







#### Special design, more light, easily functionality!

Beside the fact that it allows much light in your rooms, the glass wall adds value to your house, bringing that comfortable feeling event to our most demanding customers.

Sash constructive depth: **86 mm**Case constructive depth: **203 mm**Weights of the sash up to **400 kg!** 

Maximum case length: 10 m (white), respectively 6.8 m (color)

Efficient partial airing, invisible from outside - sashes remain fully closed with the same degree of safety as in fully closed position.

#### Optimized thermal insulation

Steel reinforcement thermal insulation and thermomodules: **Uf = 0.8 - 1.3 W/ m2k** (depending on the required reinforcement and insulating glass package used, maximum 52 mm). Threshold - integrated comfort of aluminum, embedded in the floor, allowing easy passage without any obstacle. Extremely durable, the mix of material with insulating properties prevents cooldown the floors, even at outer temperatures of -15° Celsius.





#### **Economical solution for sliding doors**

Although they are large, high and heavy, these systems can easily swing and slide sideways. The sash is swinging, then sliding sideways, thus saving space. In order to close the window, the sash will be put again in the swing position, respectively its closing position.

## The swinging-sliding systems does not use the space within for opening.

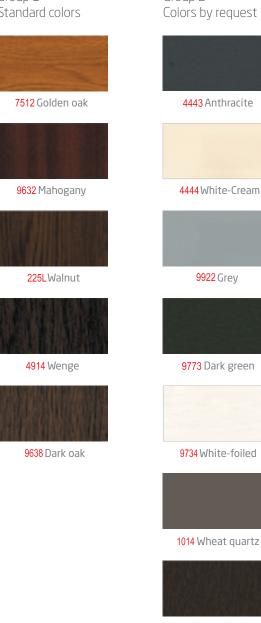
From normal sliding profiles on horizontal cases. Weights of the sash up to 200 kg. Running gear, easy to handle, quiet and durable. Comfort, due to the installation of the hardware system at a large distance to the case.

Optional: Outside handle



## **PVC Colors**

Group 1 Standard colors 7512 Golden oak 9632 Mahogany 225LWalnut 4914 Wenge





9631 Dark brown

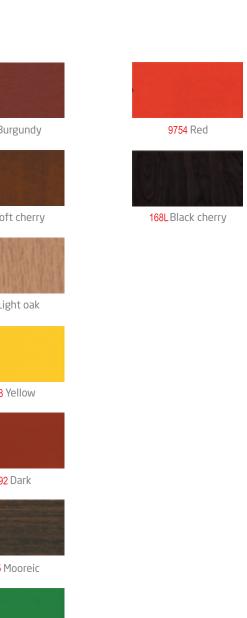


930L Anthracite

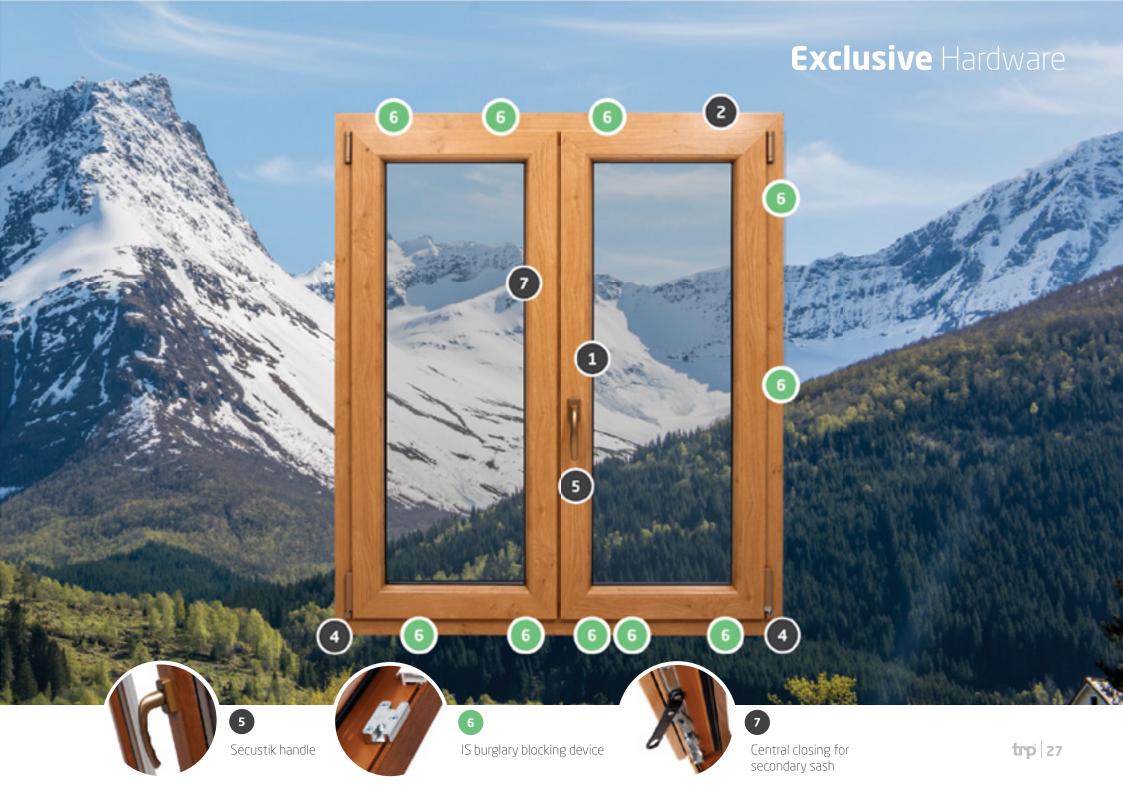


7275 Oregon

9649 Green







# **Hardware**

The hardware systems with concealed hinges provide your home added **elegance and design**. The widow maximum opening angle is of **100°**. The safety and protective features are preserved also for the indoor doors. Concealed hinges 28 | trp

## **Concealed Hinges**



## Doors - Types of Clising

Classic **EQUIPMENT:** 4 Burglary closing type and interlocking mechanism. Driving of the closing points is actuated by lifting the handle. DRIVING MECHANISM: **BENEFITS: Economical Solution Basic Safety EQUIPMENT:** 4 Burglary closing type and interlocking mechanism. DRIVING MECHANISM: Driving of the closing points is actuated by lifting the handle. **BENEFITS: Basic Solution Safety and Sealing EQUIPMENT:** 3 Closing mechanisms, 2 burglary closing systems. DRIVING MECHANISM: Driving of the closing points is actuated by key. Automate sealing without the need of blocking/blocking. **BENEFITS**: **Premium Safety Bolt + Hook** 2 Bolt closing systems, 2 hooking and interlocking mechanism **EQUIPMENT:** closing systems. DRIVING MECHANISM: Driving of the closing points is actuated by key. BENEFITS: Maximum safety in protecting your home



## **Doors**

**E** Automatic

EQUIPMENT: 3 Bolt closing systems, 2 hooking and interlocking mechanism closing systems.

DRIVING MECHANISM: The closing points are actuated automatically, magnetically, when closing the door.

Optional, it can be equipped with smart opening systems (fingerprint, card, keyboard, etc.).

BENEFITS: Automate sealing without the need of blocking/blocking.

Maximum safety in protecting your home

**TYPES OF CYLINDER:** 

Classical Cylinder 9

Button Cylinder 10

Fingerprint Cylinder (maximum protection)

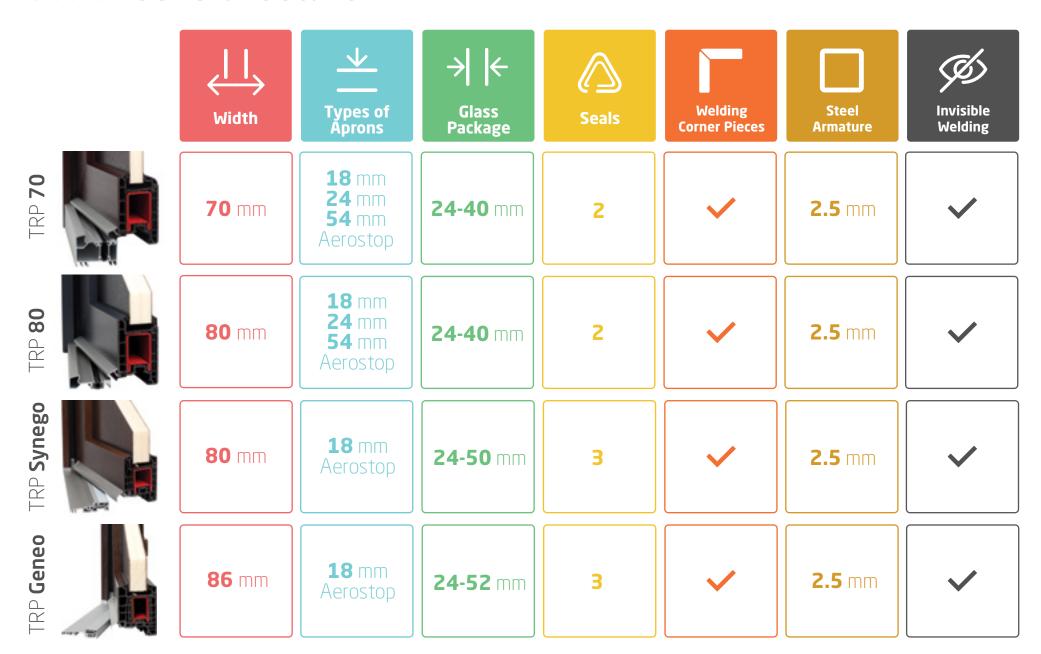
\*

#### Special armature for doors of pre-mounted 2.5 mm - A door that will last in time!

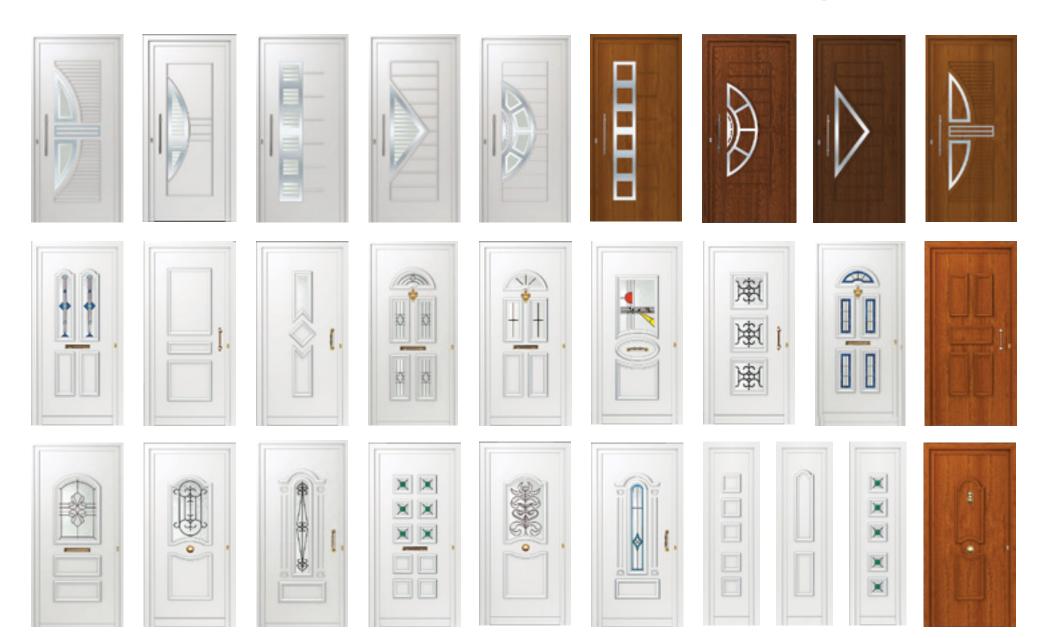
Armature for the outer door has to be rectangular or closed, and processing are carried out on special machines, thus preserving the resistance properties. In order to avoid PVC doors deformation, TRP recommends that the armature be not U-shaped or sectioned.



## Doors – **General details**



## **Special Panels**



## **Doors**



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## **Door Models**



Selene - Panel





Orion - Panel



Corona



Corona - Panel



Asuka



Zeya





Echo



Gamma



Identification of the optimal glass package makes that the hardware you are going to purchase to meet your highest expectations, both technically and aesthetically.

#### What the insulating glass package is?

The insulating glass package is the result of sealing of two or three glass sheets, separated by a distance stick with different thickness, with small perforations within, where the silica was first introduced (silica granules that absorb moisture between the glass sheets).

#### What provides the package its heat efficiency?

UA reduced heat transfer is primarily given by **the number of sheets of glass. The packages with 3 sheets of glass provide a better insulation than those with two sheets. The total width of the glass package is another important issue, as the experts recommend a minimum distance between the sheets of glass of 16 mm. Therefore, a total package of 24 mm will be recommended for the two sheets of glass package and of minimum 40 mm for the three sheets of glass package. The larger the total wideness of the glass package, the higher the insulating capacity.** 

In order to achieve the desired energy efficiency, **the distance stick** is **bended** (no connectors are used for corner joinery). The role of the distance stick is to separate the sheets of glass, as well as to ensure a reduced level of humidity through the silica within it. The most usual distance stick is that of aluminum and it can have different sizes, color and models. The use of the distance stick **Thermix®** "**Warm-edge"** made up of plastic with steel insertions provides a reduction of the heat transfer by up to 18%, contributing in obtaining a pleasant aesthetic appearance, being available in 6 standard colors and helping in avoiding condensation in a window.

The inert gas is introduced after the primary butylation of the distance stick, pressing the glazed window in argon for 6 seconds. The air within the glazed window will be up to 90% replaced in this technological process by **argon**, an inert gas that will improve the heat transfer of the glass package by up to 55% and will eliminate the risk of condense between the sheets of glass. Make sure that the glass you have purchased Has a continual distance stick, butylated and without filling valves, the final butylation of the glazed window package with a durable two-component at the highest thermal efficiency.



## **Glass**



### Insulating glass package with two glass sheets



## **Glass Packages**

### Insulating glass package with three glass sheets



<sup>\*</sup>Thermal coefficient in case of using the warn-edge distance stick.



## Glass

# How is the burglary protection of the insulating glass package ensured?

#### **Connex glass or laminated glass**

It is the perfect solution for your hardware when your priority is **to protect your family against accidental injury.** Ensures a high level of burglary and noise protection. The connex glass is made up of 2 glasses of equal thickness (3 mm or 4 mm), with a PVB film between them (polyvinyl butyryl) and it is used when you want to increase the resistance between doors, windows or large stained glass and **superior acoustics insulation.** 

Your children are safe! In case the glass is broken, the pieces remain attached by the PVB film!

The breaking interval in case of laminated glass is **26 times longer** than using a ordinary glass within the glazed package.

#### **Secured glass**

It is recommended wherever there are **risks of accidental breaking**. During the fabrication technological process, glass undergoes a special heat treatment, so that it is **6 times more resistant to temperature variations, strong wind and hitting**, than normal glass of the same thickness. In case of breakage, glass breaks into small not-cutting pieces, **thus protecting bystanders against accidents.** 



## **Glass Packages**



#### Which are the solutions to avoid condensation?

The use of the distance stick **Thermix®** warm-edge made up of plastic with steel insertions provides a **reduction of the heat transfer by up to 18%**, contributing in obtaining a pleasant aesthetic appearance, **(6 standard colors)** and helping in avoiding condensation, thus obtaining warm edges of the windows.

The introduction of the argon gas improves the heat transfer of the glass package by up to 55% thus eliminates the risk of having condensation between the glass sheets.

#### What provides the window its soundproofing?

**0 db** is the threshold of hearing under which the human ear does not hear anything. In a common urban space, an optimum acoustic comfort is reached at a **30 dB difference between outside noise and the noise inside the house.** If you live in an area exposed to noise pollution, we recommend you a glazing package of at least **35 db** so you can enjoy your home in peace.

If we want to enjoy the wonderful scenery and we want to have **larger windows**, but we also need sound insulation, the stained glass surface must be divided into several sections to effectively block the outside noises.

The best acoustic performance are obtained when we choose glass packages with minimum 3 glass sheets, of different thicknesses, of which at least one is laminated.

### Accessories



#### Inner window bars

- Decorative elements inside the windows package
- Sizes 8, 18 or 26 mm
- Colors (8 mm): white, gold
- Colors (18 mm, 26 mm): white, color standard, non-standard colors



#### **Outer window bars**

- Decorative elements glued on glass surface
- Sizes 26 or 35 mm and 26 mm or 28 mm
- Colors: white, color standard, nonstandard colors



#### **Integrated blinds**

Integrated blinds not only look spectacular, but they are high quality products that prove high reliability in time. As the blind is integrated inside the insulating glass, it does not get marked and does not deteriorate over the years.

Once sealed inside the glass windows, the blind remains at the initial stage of operation for a long time because it cannot be affected by external environmental factors.

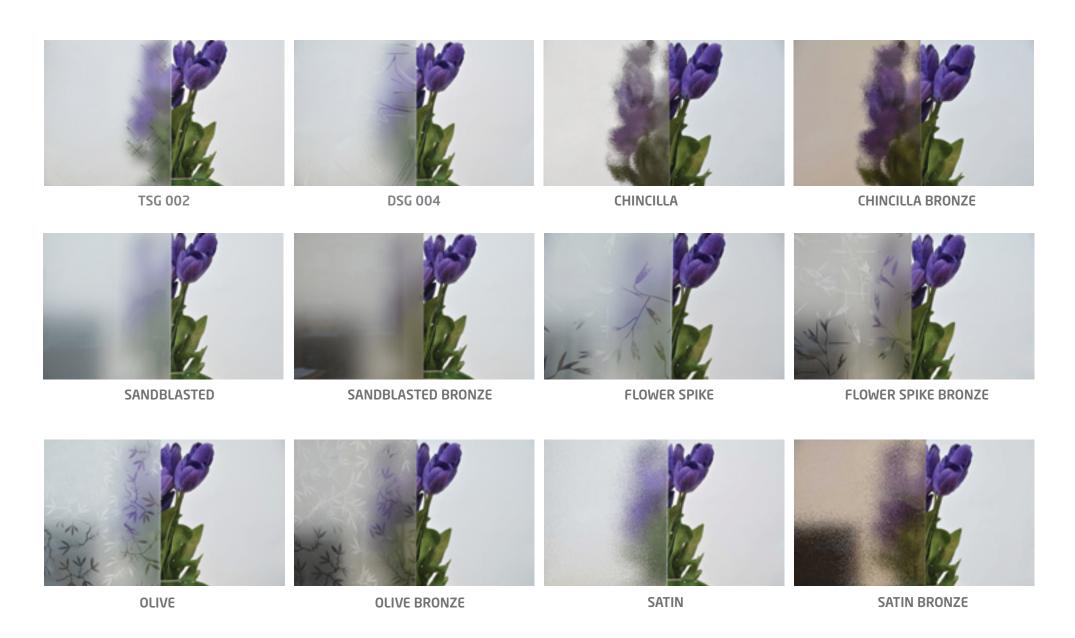


#### Hygroreglable grids

The set of hygroreglable bands actuate the shutter opening to adjust ventilation depending on humidity levels in the room.

- Sound proofing up to 42 db(A) together with the necessary accessories.
- Obliquely directed airflow for the comfort of inhabitants.
- Slim profile adapted for most types of windows.
- Easy installation.
- Easy maintenance: it does not require any adjustment, yearly dusting.

## **Types of Ornamental Glass**



## **Accessories**

#### **Nets Systems**

#### Protection against insects, dust and noise

#### **Nets hinge**

They are mounted with the hinges on the window frame or the balcony door. The net is opened outward, and during the winter it can be removed easily.

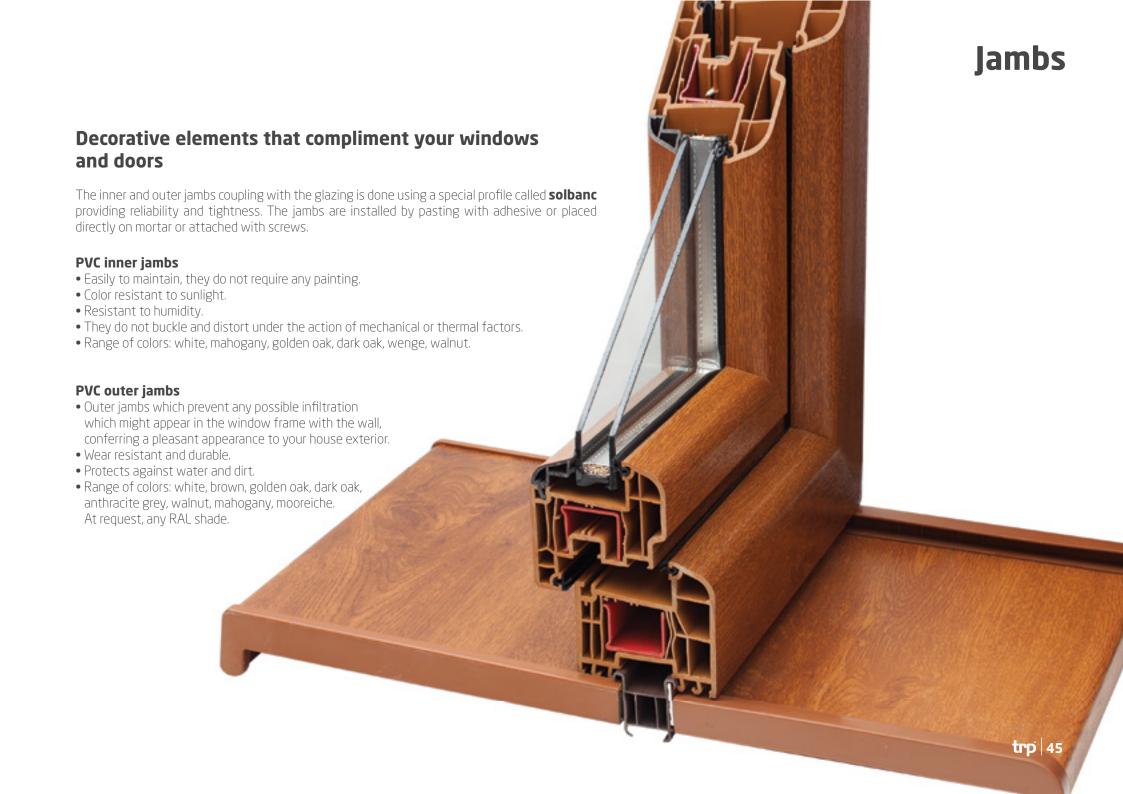
#### **Insect rolls**

The operation is facilitated by springs, raising and lowering is easy by pulling the cord. During the winter, the net can be left installed, raised in the box without removing the window.

**Aluminum frame range of colors:** white, brown, golden oak, mahogany, walnut, wenge. As an option, the frame can be painted under electrostatic charge in your desired color.







### Accessories



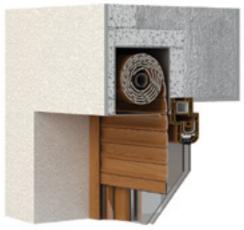
**Mercury 1**Applied on the wall



**Mercury 2**Applied in the jamb, mounted on the lateral, blades inward



Mercury 3
Applied in the jamb, mounted on the lateral, blades outward



**Apollo**Superimposed with hidden box, it can be plastered

**Mercury applied rolls** are used in existing buildings. Blades carpet run is placed inside an aluminum box located on the wall or doors, the box being also a decorative piece. There are 2 types of boxes: sloping at 45 degrees and round.

**Gemini superimposed rolls** are designed for installation both in new buildings and those under renovation. The rolled aluminum blade carpet is located inside a PVC box above the door joinery, the box being also a decorative piece The insulation inside the box provides an increased thermal insulation.

**Apollo rolls that can be plastered** are especially used in new buildings, but they can also be installed in existing buildings. The roller blade carpet is located inside an aluminum box buried / concealed inside the masonry work.

Optional, the roller shutters can be fitted with inspect nets.





**Gemini 1**Superimposed, with the case visible inward and outward



**Gemini 2**Superimposed, with the case visible inward



**Gemini 3**Superimposed, with the case visible outward



**Gemini 4**Superimposed, with concealed case

**The actuating system** can be **manual** with ribbon, cord and crank or **electric**, using a switching device or remote control (with central plant separated or built-in the engine).



Operated by crank



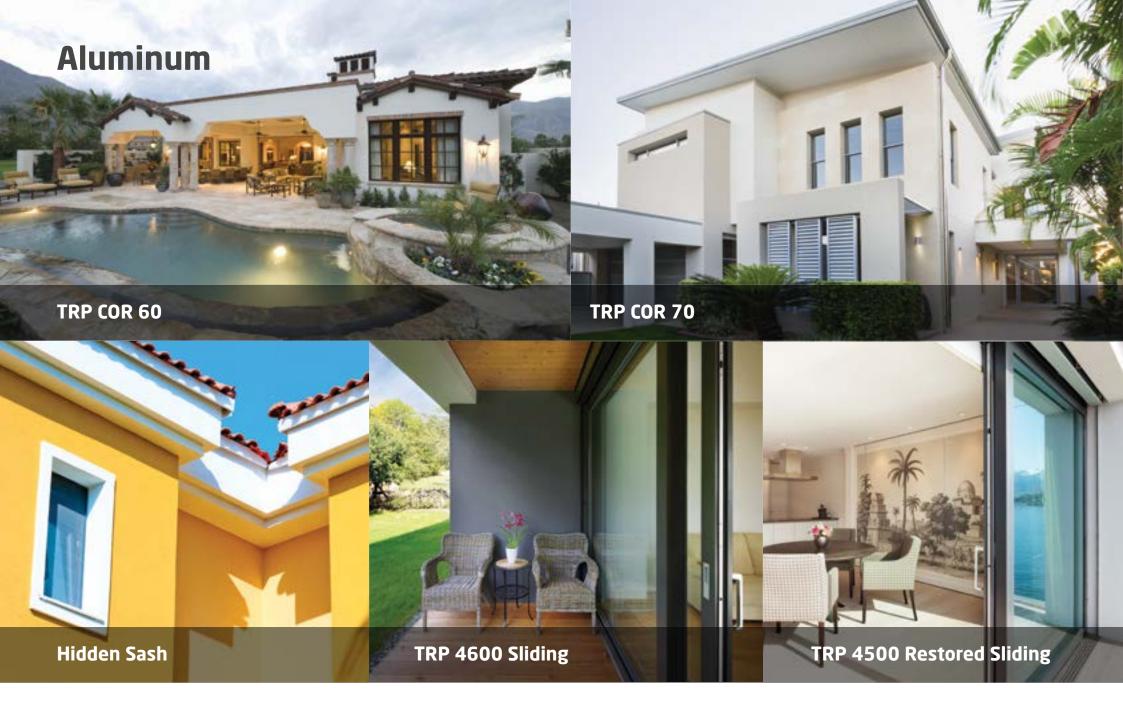
Operated by cord

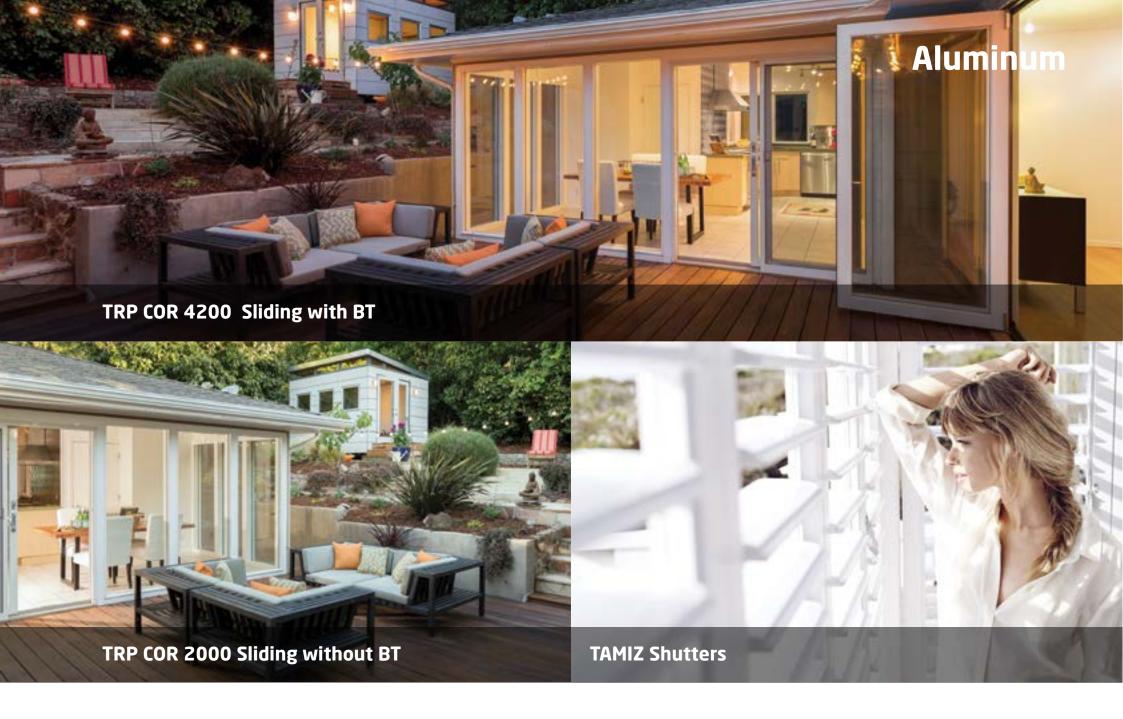


Operated by remote control



Operated by switching device

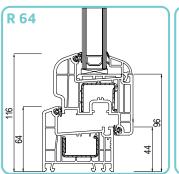


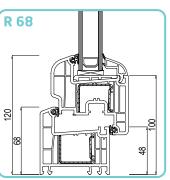


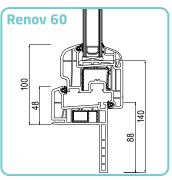
## **Sections**

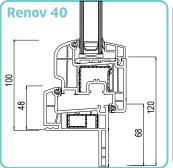


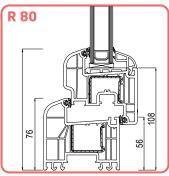
TRP 70 TRP 80





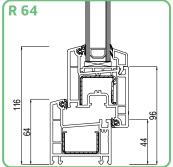




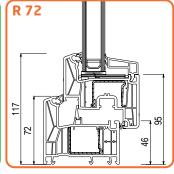


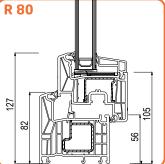
**TRP 60** 

TRP SYNEGO
R 72
R 80



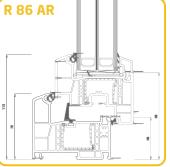


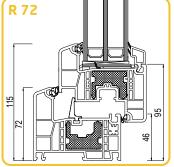


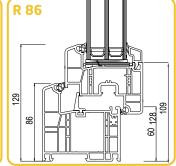


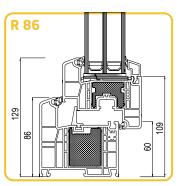
**TRP GENEO** 

















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