since 1963

LUXURY HOUSE

COMMERCIAL & RESIDENTIAL COMPLEX CONSTRUCTIONS

European Architectural Aluminum Systems

PRODUCT CATALOG

since 1963

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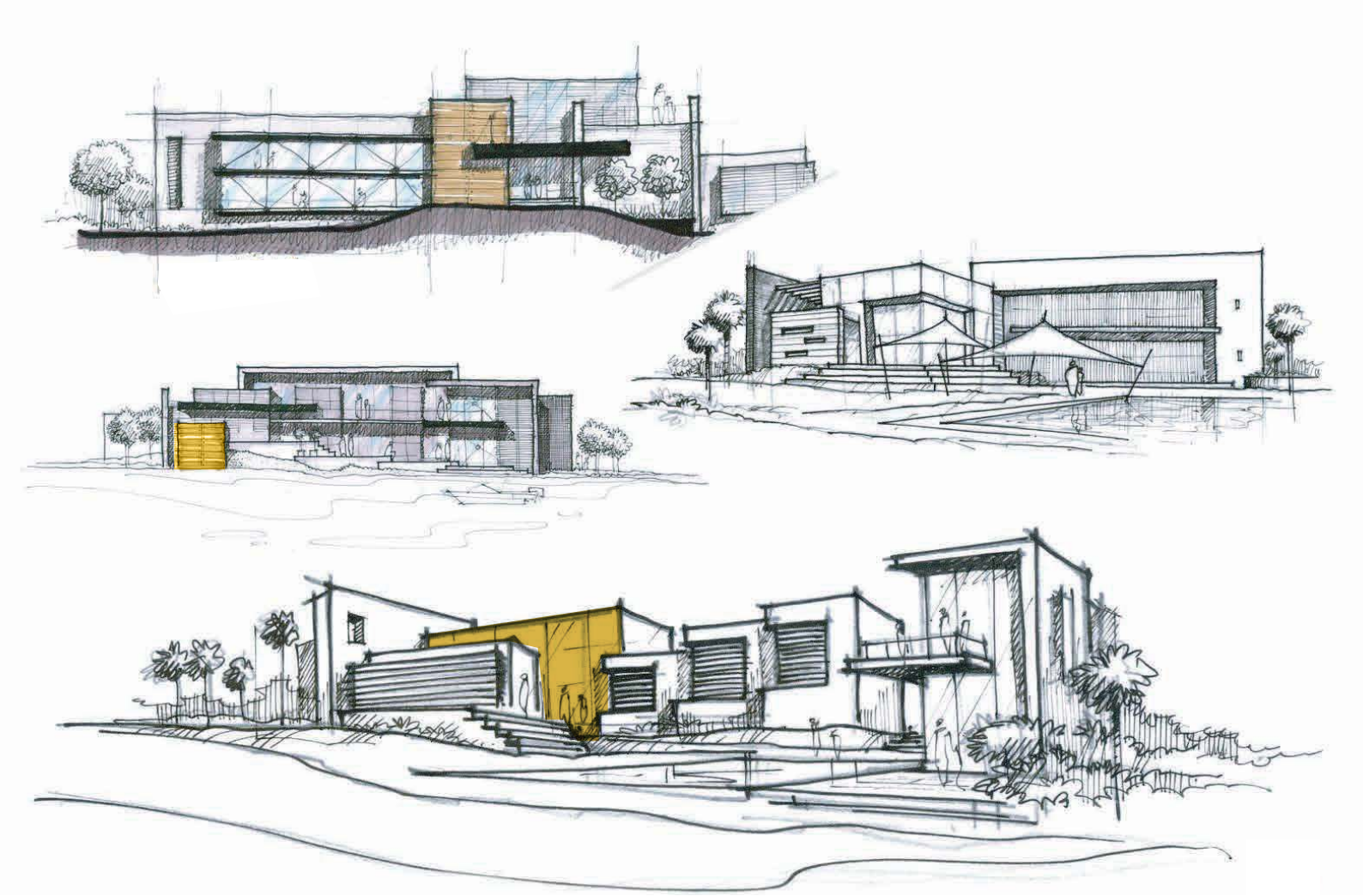

We are Luxury House

European Architectural Aluminum Systems.

Luxury House Inc. was founded in Greece in 1963. Initially the company was an iron & aluminum fabricator, but soon expanded to Australia, Europe and now the U.S. We have expertise in custom fabrication and supply of building products and offer our services to both Commercial and Residential properties owners. We manufacture, fabricate and install custom windows, doors, railings, stairs, shower enclosures, security windows, atriums, partition walls, cladding, facades and more. We are always by your side overseeing the progress of your project, in order to ensure the best possible solutions, even for custom fabrications and products.

Why Luxury House?...

Because we are the recognized leader in providing precision manufacturing solutions by offering customer-focused, high-quality, dependable services spanning precision machining, custom fabrication and product assembly, resulting in outstanding value for our customers, whether they are builders, developers, contractors or homeowners for projects of any size. Our production capacity is about 1,000 doors and windows per month. Our team's commitment and dedication comes from highly motivated individuals who take their job seriously. We are continuously moving forward, innovating, and improving, and strive to deliver our very best in all we do, holding ourselves accountable for results. Our experienced team members believe in working closely with our customers to understand their needs and provide high quality products and services. Our way of thinking ensures that Luxury House Inc is your ideal partner from the first concept sketch all the way to the final product.


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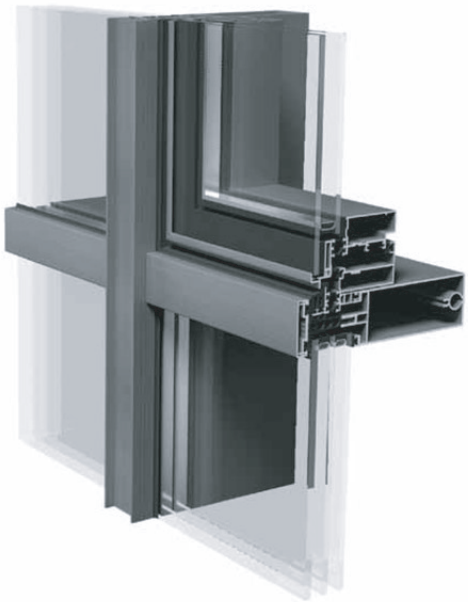
CURTAIN WALLS

E85

E85 is modern, state-of-the-art, mullion – transom façade system. It is the result of 2.5 years of research, which integrated the know-how of energy efficiency technology and characteristics with current and future building construction requirements. Its 50mm column width design ensures full compliance with the strictest international specifications and renders high thermal and water tightness performance.

E85 is a complete system that incorporates different construction solutions and gives the Architect the ability to design beyond conventional restrictions. Atriums, corner constructions, domes, pyramids, cupolas and curved constructions are feasible and easy to construct with E85.

The certifications the system acquired, which were obtained from accredited European laboratories in accordance with European and American specifications, prove that E85 is one of the top facades available.



Features

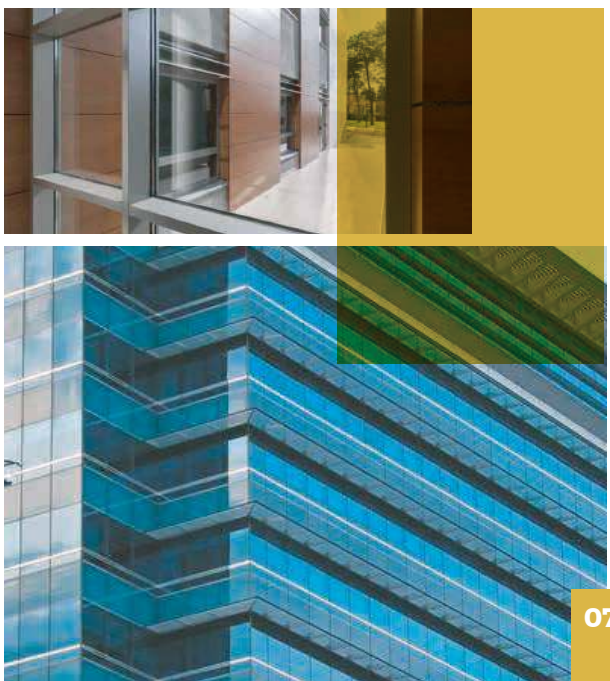
- Solutions for all modern architectural applications.
- Capability of being combined with modern materials (photovoltaic systems, composite Etalbond panels, etc.) for the construction of the entire outer shell of a building.
- Excellent thermal insulation, ideal water-tightness, and wind-tightness.
- Optimum use of the material, which ensures the best quality/cost ratio.
- Wide range of certified accessories and special mechanisms.
- All the necessary elements to ensure that the curtain wall can receive the CE mark.
- Capability of powder painting in any RAL color, special woodgrain patterns, and other surface processing methods – anodizing.

It comes in four different external forms:
Four sides with a cap.
Horizontal side with a cap – vertical side, structural.
Horizontal side, structural – vertical side with a cap.
Four sides, structural.

CURTAIN WALLS

SMARTIA M65

SMARTIA M65 is a unitized curtain wall system ideal for high-rise buildings, which provides freedom in architectural design. The construction of the building's envelope is done by assembling big panels consisted of many glass frames, either structural or with visible aluminium covers. Every unit can be freely designed by the architect, whilst the system guarantees easy and secure application.



Advantages

- High Energy Efficiency
- Increased Comfort level
- Increased of security level
- Enhancement of Natural Light
- Guaranteed performance quality in terms of air- water permeability, wind pressure as well as the Uf.
- Increased static and functionality in extreme natural phenomena
- Ability to design custom solutions tailor made to the building
- Ease of use with electric motion

SMARTIA M65

ALUMINUM CLADDING

etalbond®

etalbond® is a technologically advanced product whose unique features facilitate creative architectural design. Curved and flat surfaces in vivid colours add an elegant sense in buildings and constructions of all kinds. Attractive and flexible, etalbond® is the appropriate cladding solution for interior and exterior surfaces in new constructions and renovations. The material is rigid, light, and durable and has good insulating properties, resulting in energy-efficient buildings. Furthermore, it is easily installed and formed into a variety of shapes.

etalbond® is a first-class sandwich-type composite panel consisting of a non-toxic polyethylene core firmly bonded between fine aluminium facing and backside sheets. etalbond® sheets are produced in different core thicknesses 2, 3 and 5mm with aluminium sheets of 0.5, standard sheet widths of 1250, 1500 mm and lengths 2000 up to 7000 mm. The total thickness of etalbond® is thus 3, 4 and 6mm.
Bonding of the aluminium sheets with the core is accomplished by highly compressing the three parts (two aluminium sheets and adhesive along with the polyethylene) within the rolls, resulting in a strong and exceptionally rigid flat sheet of composite panel.
etalbond® is ideal for using in severe environmental conditions such as in polluted urban and industrial areas, as the panels are practically maintenance-free; while their cleaning is easy.

Advantages

- Outstanding strength-to-weight ratio
- Increased rigidity
- Simple forming techniques
- Due to its light weight, limited technical knowledge and time to assemble is required in contrast to traditional construction works.
- Rapid installation
- Results in the reduced completion time of a project.
- Resistant to extreme weather conditions (exposure and temperature)
- Extensive testing during production guarantees the materials resistance capability to severe weather conditions.
- Excellent UV characteristics, retaining colour after extended exposure
- Easy maintenance - pollution, acid, alkali and salt resistant
- The panels can easily be cleaned with a soft detergent due to their smooth surfaces.

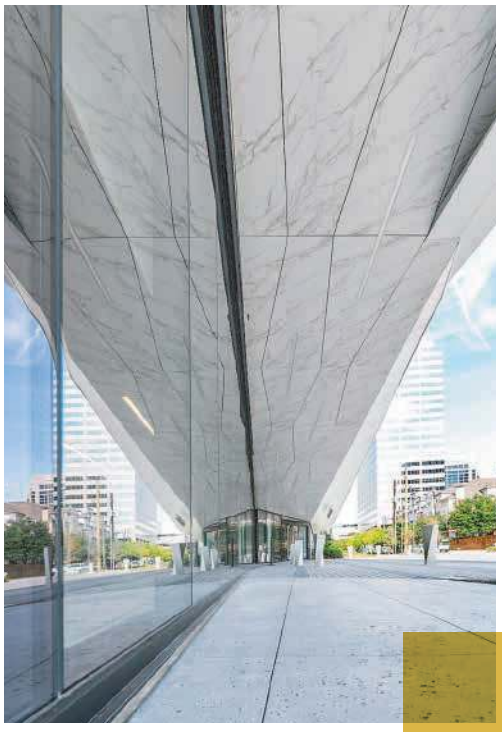
ALUMINUM CLADDING

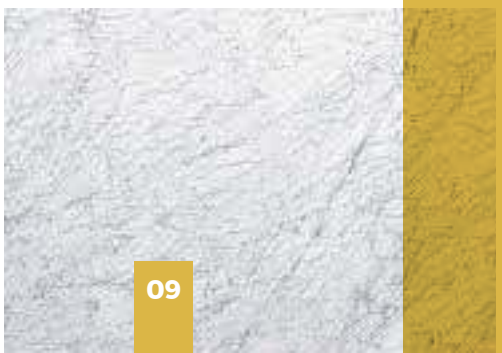
NEOLITH®

SKYLINE is the NEOLITH® facade line which offers more efficient solutions for the most demanding of architectural projects. The largest Sintered Stone on the market, which enables a high yield for each piece and reduces completion times thanks to the large formats available.

NEOLITH® SKYLINE ventilated facades provide continuous insulation and block direct solar radiation for considerable energy savings. Resistant to changes in temperature and stains, NEOLITH® is produced with 100% natural raw materials which also makes it resistant to UV rays. Characteristics that guarantee the non-alterability of the material with the passing of time.
With extraordinary physical properties, NEOLITH® has become an excellent material for exterior use also because of its lightness which enables easy installation.

In addition, it offers a very wide variety of colors and finishes allowing architects the pleasure of a great amount of esthetic freedom.





...any **Antolini marbles** and many more materials can be attached

NEOLITH

VM SYSTEM
Visible mechanical fixing.

This system is comprised of a self-supporting metal structure for ventilated façades designed to support ceramic tiling in different formats and thicknesses. It was developed for Neolith façades based on a visible mechanical fixing system comprised of supports, vertical T- or L-profiles and safety clamps to which the tiling is attached.

The vertical T- or L-profiles are levelled using supports or spacers. The complete levelling depends on whether the profiles coincide exactly with the joints between the boards, correcting possible deviations in the inner layer of the tiling façade.

The clamps used to support the structure described are situated on Neolith boards as well as in a grooved area where the adhesive is applied to provide the system with immense security.

This option, which was developed for Neolith tiling, is comprised of a hidden support system which uses a longitudinal elastic chemical adhesive with a vertical support featuring T- or L-profiles depending on whether the profiles coincide with the joints between the Neolith boards or reinforce the center of the joints and bear the support through retention or sustenance supports.

The entire system has been tested in certified laboratories with satisfactory results for the Neolith use. These results are outlined more extensively in the Neolith Technical Guide to Façade Uses.

HC SYSTEM
Hidden system with longitudinal adhesion.

STRONGFIX SYSTEM
Mixed hidden grid system.

STRONGFIX is a longitudinal mixed (chemical and mechanical) hidden profile system which works due to the pressure created by the system in the rear of a Neolith board.

These tiles are industrially mechanized with a longitudinal profile on the upper and bottom parts. The STRONGFIX system enables central mechanizations on the back of a piece for cases where, due to the dimensions of a piece, they are required on the back of a tile with a double groove and a 45 degree angle (like a dovetail) where two aluminum profiles are inserted and fixed with MS adhesive putty to secure Neolith tiling.

These metal profiles create the mechanism for hanging tiles with added benefits as removing and replacing pieces with this system is very simple.

The system is comprised of vertical aluminum profiles which support squares. With the squares, the aluminum profiles may be installed in completely flat Ts to correct any possible deviation on a façade which needs to be covered.

The panels are secured by hand to a horizontal profile with a longitudinal mechanical fixing system comprised of two aluminum fixing profiles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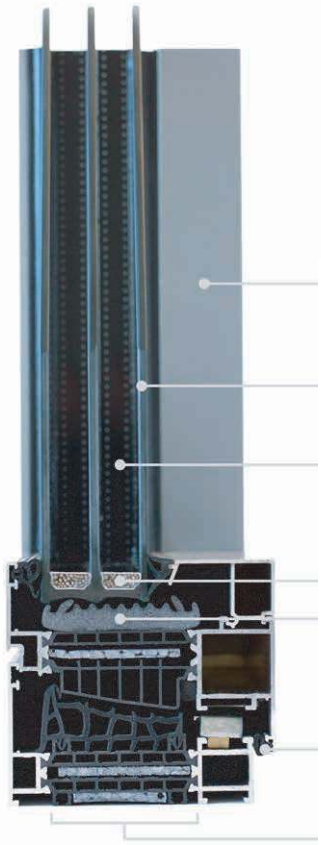
THERMAL BREAK SYSTEMS



ALL ALUMINUM FRAME FOR LOW-MAINTENANCE & DURABILITY

HIGH PERFORMANCE GLAZING UNIT

ARGON FILLED GLAZING

WARM EDGE SPACERS

INSULATION

AIR SEAL

INSULATED THERMAL BREAK (POLYAMIDE)

What is a Thermal Break?

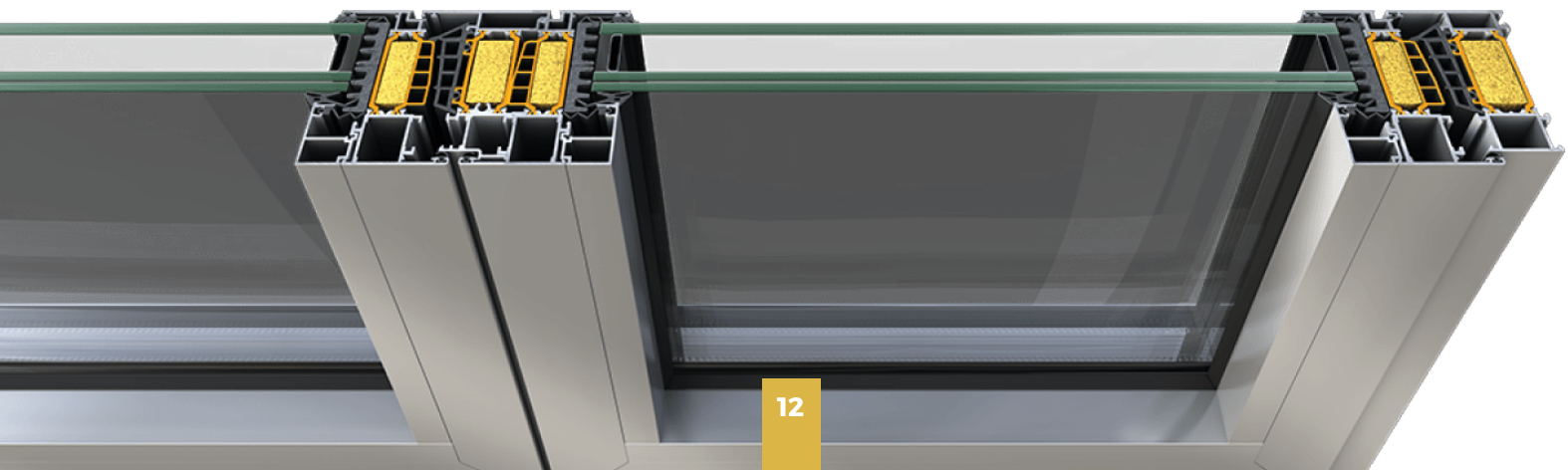
Thermally broken aluminium window systems deliver many advantages, most importantly improved thermal performance. The advantages of aluminium are maintained - such as strength, durability and stability-yet the drawback of thermal conductivity is overcome. This makes thermally broken aluminium windows an ideal solution for commercial building applications and high-end residential projects where large, complex glazing solutions are required.

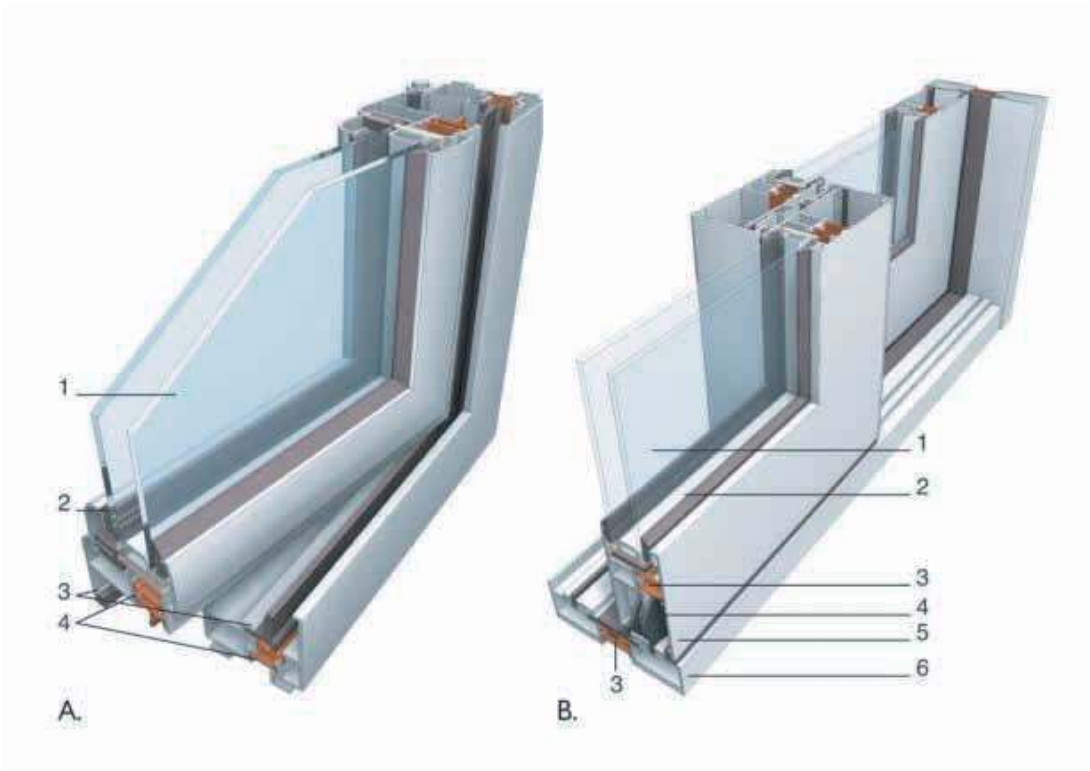
But what exactly is a thermal break and how does it work?

Thermally broken windows improve energy efficiency by controlling the forms of heat transfer. Heat or thermal heat energy can be transferred through a material in three manners:

Conduction is simply the process where heat is transferred through materials that touch one another.
Convection is where gasses or liquids circulate to transfer thermal energy.
Radiation transfers heat energy at a distance through high frequency waves such as visible light, ultraviolet light or microwaves
Thermally broken window frames are insulated against heat and cold conduction. This is done by separating the outside metal parts from the inside with a material which reduces the amount of heat or cold transferred through the frames. This feature is known as the “thermal break”.

A thermal break is a non-metallic resin or plastic material installed in the metallic window frame that physically separates the interior part of the window from the exterior part. Hence the pathway for heat energy to be transferred or conducted through the window frame is “thermally broken”.





A. Opening/swing system

1. HIGH PERFORMANCE GLAZING UNIT
2. RUBBER GASKET FOR FIXING THE GLASS PANE
3. RUBBER GASKET INSULATION
4. INSULATED THERMAL BREAK (POLYAMIDE)

B. Sliding system

1. HIGH PERFORMANCE GLAZING UNIT
2. RUBBER GASKET FOR FIXING THE GLASS PANE
3. INSULATED THERMAL BREAK (POLYAMIDE)
4. SLIDING MECHANISM
5. SLIDING DOOR PANEL
6. INSULATED THERMAL BREAK DOOR FRAME

LOCKING MECHANISMS

By working with some of the biggest companies in the field, such as Roto and G-U, we can provide you with a wide variety of mechanisms, such as multi-point door locks, electric strikes, door hinges and both mechanical and electronic locking systems. We offer you a broad selection of locking system solutions meeting all kinds of requirements such as burglary protection, fire protection, or air tightness.

Several locking variants are available to you to choose from:

- Uni shutter lock
  - Automatically locking twist locking-rod with three-point locking
  - Large pull-in via latch-hook
  - Locking rod in three lengths: 1500, 1800 and 2400 mm
- Locking-rod centre lock
  - Twist locking-rod with three-point locking
  - Operation safety-catch prevents opening from outside
  - Integrated ventilation position function
  - Locking rod in three lengths: 1500, 1800 and 2400 mm
- Centre lock
- Single-sash shutter latch

LUXURY HOUSE

COMMERCIAL & RESIDENTIAL COMPLEX CONSTRUCTION

OPENING | SWING SYSTEMS

5500

A unique combination of Thermal Break of high aesthetics and functionality, which offers a "strong identity" to every space. Modern design with the soft lines and elegant curves leaves an authentic sense of perfection meeting all modern architectural requirements. The series is also available with the Multi-locking Mechanism. It offers high thermal insulation.

Specifications

- Opening system.
- Offers high level of thermal insulation Uf=2.5 W/(m2K) (according to IFT Rosenheim certification).
- Also provides extra security levels with antiburglary WK2 and WK3 certifications (available with optional Multi-locking Mechanism).
- Certified for air permeability, water tightness and wind resistance, coefficient of thermal conductivity and noise reduction.
- Oval design: 2 sizes of sashes (small and large), 4 sizes of frames.
- Rectangular design: one frame, two sashes (small and large).
- Double or triple glass from 23 to 53mm thickness for better thermal and sound insulation.
- Single or triple security locks.
- 3 rows of rubber providing ultimate sealing.
- Usage: Thermally insulated opening systems (doors, windows, projected, reversion, fixed frames etc.).

Basic Characteristics

- Straight and curve line design.
- 3 sizes of sashes (small, large, opening outwards).
- 3 rows of rubber between the frame and sash provide ultimate sealing.
- Double or triple glass 23 to 53mm for better thermal and sound insulation.
- Safety profiles using perimetric locking mechanism for maximum security.
- Can be combined with 6000 and 10000 for complex structures.

Construction Types

- Entrance doors.
- Opening (tilting or not) windows of any typology.
- Fixed Glazing.
- Mixed constructions.
- Opening security windows (WK3).

OPENING | SWING SYSTEMS

HOTELIA A40 SI/HS

Hotelia A40 SI

Hotelia Hybrid A40 SI thermal break opening system is the latest proposition as far as the ultimate thermal insulation is concerned. Its modern design, with straight profile lines meets every modern architectural requirement.

The series are specially designed in order to provide increased thermal insulation with an Uf from 1,1W/m2K as also sound insulation. The specially designed perimetric gaskets of the sashes, the use of insulating materials XPS and EPS along with the specially designed plugs for adjoining profile made of EPDM provide ultimate sealing, added to the maximum thermal insulation. Hybrid A40 SI series is provided with multi-locking mechanisms for maximum security, which is reinforced by the tested, anti-burglar outer hinge.

Hotelia A40 HS

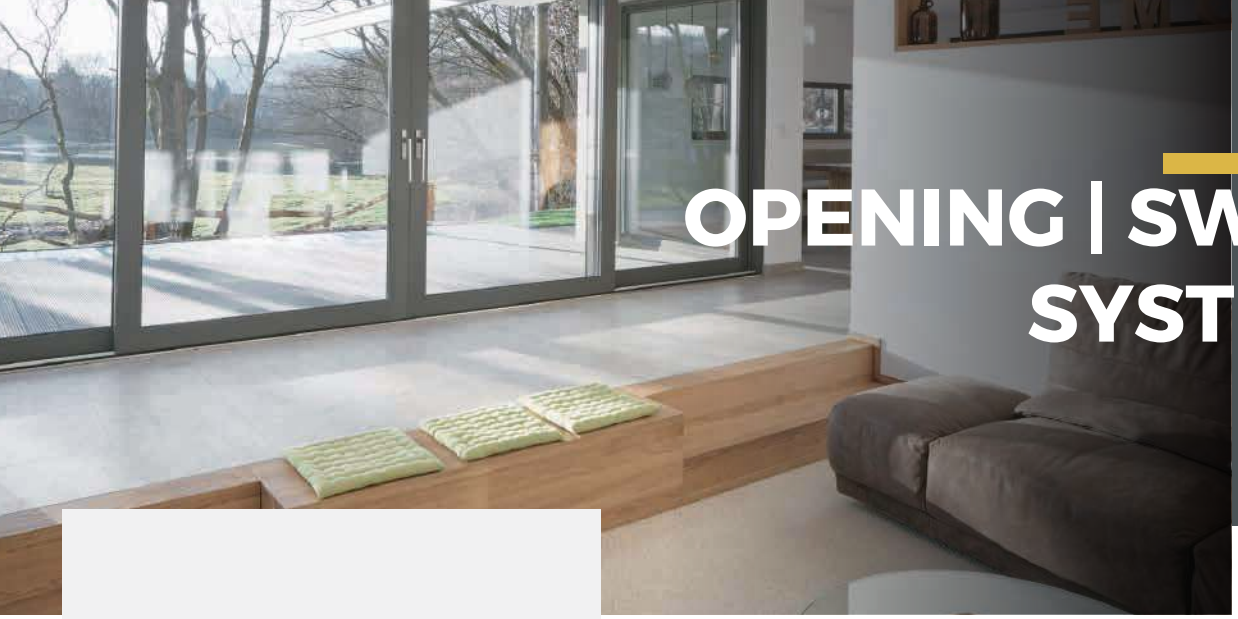
Hotelia Hybrid A40 HS is the Hidden Sash version (typology) of the system. The frame is specially designed to cover the sash ideally, so that the outer joints are not visible. The uniformity is visible even in the choice of an opening with fixed combination typology. The series provides the extra potentiality of totally aligned level entrance doors.

Specifications

- Thermal break opening system.
- Maximum thermal insulation with an Uf from 1,1W/m2K.
- Certified factor for air permeability, water tightness, and resistance to wind load.
- Straight line design profiles with two sizes of sashes and frames.
- Double or triple glass up to 44mm for better thermal and sound insulation.
- Three rows of rubber between the frame and sash providing ultimate sealing.

Basic characteristics

- Straight line design profiles.
- Two sizes of sashes and frames.
- Use of 34mm polyamides for increased thermal insulation.
- Hidden sash profile available.
- Coplanar profiles for the entrance doors.
- Safety profiles using multi-locking mechanism for maximum security.
- Double or triple glass up to 44mm for better thermal and sound insulation.
- Specially designed rubber perimetrically of the glass for optimum thermal insulation and waterproofing.
- 3 rows of rubber between the frame and sash providing ultimate sealing.
- Specially designed EPDM plugs for adjoining profiles for better waterproofing results and better application with the central rubber.
- Double-extrusion rubber for maximum thermal insulation (EPDM – Expanded EPDM).
- XPS and EPS materials for maximum thermal insulation.



OPENING | SWING SYSTEMS

E45

E45 belongs to the new generation of thermal insulated opening systems. With the primary concern to conserve energy in building structures, E45 is designed to meet a great variety of functional and aesthetic requirements.

Thanks to a wide range of profiles, the system offers a variety of design options, from classical, narrow face straight lines to rounded contours and the ability to construct a variety of complex typologies such as parallel sliding and tilting doors, parallel folding doors and opening frames using "concealed" sash giving uniform external appearance in combining opening and fixed frames.

The E45 system is a 60mm width sash (straight line profiles) and by implementing innovative design with variable length, 24mm to 30mm, polyamides, it renders superior performance characteristics in its category, with thermal insulation value of Uf = 1,9 W/m2 and sound reduction reaching 42db.

Typologies

- One-sash and two-sash inward or outward opening doors.
- One-sash and two-sash tilt & turn windows.
- One-sash and two-sash tilt & turn balcony doors.
- Doors and windows combined with fixed frames.
- Composite corner constructions.
- "Volkswagen" type balcony doors.
- Multiple-leaf folding constructions.
- Showcases.

Benefits

- High energy savings (thermal insulation) due to low Uf values.
- Exceptional in its category (60mm width) water tightness and sound reduction characteristics.
- Solutions for all construction needs.
- Straight-line and rounded profiles.
- Perfect quality/cost ratio.
- Maximum security as it is possible to use multiple perimetric locks.
- Capability of powder painting in any RAL color, special woodgrain patterns and other surface processing methods – anodizing.

OPENING | SWING SYSTEMS

M11500

M11500 is a complete system for windows, doors, as well as for entrance doors with a high level of thermal insulation. Thanks to the vast range of profiles, the system can create all kinds of typologies regarding hinged frames and offers the following advantages:

- Variety of designs (softline, flat, inclined, classic) so as to create any kind of typology.
- Uses a concealed sash for more natural lighting.
- Tilt & turn windows not only with the standard 11mm European groove but also with the 16 mm PVC groove for WK3 anti-burglar protection.
- Creates any kind of entrance doors.
- Creates horizontal or vertical pivot windows and casement doors.
- Offers alternatives to every need of architectural design.

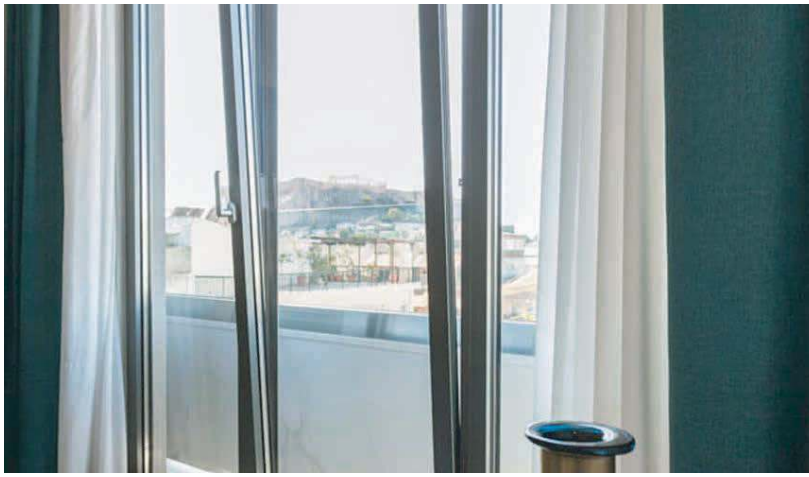
M11000

M11000 is a versatile system for any kind of thermal insulated doors and windows, which can meet the most demanding needs thanks to the variety of solutions and different designs of the profiles. Double sash side hung window (tilt and turned).

Features

- Insulated Opening System (profiles with thermal break zone) with basic width 62,5mm.
- The system could be combined with European groove hardware. Is recommended by the German AK8 of GU company.
- This system consists of great variety of different profiles in order to cover the most demanding needs.
- The system has already certified section according to ASTMS and AAMA.
- The certified section of the system (frame and sash) has visible aluminum face width of 106mm.
- All potential applications for opening systems could be implemented (fixed, single side hung, tilt and turned e.tc.).
- Three level of sealing by using EPDM gaskets (internally, externally and in the middle).
- Straight lines according to modern architectural design.
- The systems are proposed with chamber glazing beads.

M11500 & M11000



...all our **Opening/swing systems** feature **tilting** mechanisms

SLIDING SYSTEMS

HOTELIA HYBRID A40 SI

Hotelia Hybrid A40 SI

Hotelia Hybrid A40 SL thermal break sliding system is the latest proposition concerning the ultimate thermal insulation. The system's modern design, with straight profile lines meets every modern architectural requirement.

The series are specially designed in order to provide increased sound and thermal insulation with a Uf coefficient from 1,63W/m2K. The specially designed perimetric gaskets of the sashes made of EPDM and expanded - EPDM, the use of insulating material EPS along with the specially designed polyamide plugs for adjoining profile, provide ultimate sealing, therefore achieving maximum thermal insulation.

The Hybrid A40 SL and Hybrid A40 SI/HS series share a common aesthetic design and can be combined perfectly. Multilocking mechanism can be applied for maximum security. As an extra feature Hybrid A40 SL provides the typology single sash with fixed window, providing the best solution for demanding contemporary constructions.

Features

- Thermal break opening system.
- Maximum thermal insulation with a Uf from 1,1W/m2K.
- Certified factor for air permeability, water tightness and resistance to wind load (US standards).
- Straight line design profiles in compliance with the modern architectural trends.
- Optional Lift & Slide mechanism.
- Optional multilocking mechanism.
- Double or triple glass up to 36mm for better thermal and sound insulation.
- Use of additional sealing gasket on the bottom and the side parts of rail.

Characteristics

- Bended stainless steel sheet on rail profiles for smooth sliding.
- Use of 24mm & 34mm polyamides for increased thermal insulation.
- Plastic rail cover (PVC) for thermal insulation and protection from water.
- Elastic rail block seals (EPDM) for successive.
- Use of non-return valve for optimum drainage of the rail.
- Tubular gaskets (EPDM) providing absolute sealing to the sashes.
- Specially designed PVC profile addition in glass sash profiles for excellent adaptation of components and insulation improvment.
- EPS materials for maximum thermal insulation.
- Combined with A40 SI / HS for composite structures.

LIFT & SLIDE SYSTEMS

Lift & slide systems make very large and flexible openings possible, with maximum light. Living rooms open onto the garden, terraces become living rooms.
Any lift & slide system represents the new generation of high-end systems. It is an excellent solution for projects with demanding requirements, meeting the trend of "transparent" architecture through extensive glass surfaces, with high thermal insulation, safety and modern design. Its minimal design and its various innovative characteristics, make it the ideal option for projects requiring wide spans for enhanced daylight, outstanding performance and maximum ease of use.

Advantages

- Maximum ease of use and high functionality, optionally combined with automatic motion
- Enhanced natural light thanks to the wide glazing surfaces
- High energy savings thanks to the exceptional energy efficency
- High security level
- Exceptional sound insulation
- Ease of access
- Wide variety of typologies and solutions
- Exceptional quality with certified performances
- Increased static loads and functionality in case of severe weather conditions

LIFT & SLIDE SYSTEMS

10000 & PRIMA 8000

10000 HYBRID

The innovative lift & slide system, to be used in spaces where intense climatic conditions require high standards of thermal insulation. It ideally meets the need for strong thermal insulation in sliding systems. Ideal for large openings and also able to carry heavy glass, due to the advanced rolling mechanism which ensures a perfect and smooth rolling.10000 Hybrid offers high thermal insulation with a low thermal conductivity factor.

10000 corner typology

The evolution in the 10000 series, which offers the ability for a 90° corner construction without adding a corner column. The special construction of the series offers open space along with an impressive, unhindered view.

PRIMA 8000

PRIMA 8000 series is a new Economical Thermally Insulated Sliding system with a simple straight line design. The special characteristic of the system is a double option for the sliding mechanism: Lift and slide mechanism with rubber whether-stripes for sealing or simple rollers with brushes. It is made in order to have soundproof sliding systems with perfect thermal insulation, with an emphasis on functionality and contemporary style.

Advantages

- Stainless steel lamina on drivers profile for smooth sliding
- Straight line design
- Optional multilocking mechanism
- Plastic cover (PVC) for drivers for thermal insulation and protection from water
- Elastic block (EPDM) seals drivers for successive and in-wall systems.
- 34mm (maximum) double or triple glass for better thermal and sound insulation
- Rubber tubular gaskets (EPDM) providing absolute seal

Specially designed PVC profile addition for excellent adaptation of components and insulation improving

- 2 levels of channelling of waterproviding better drainage

LIFT & SLIDE SYSTEMS

SUPREME S700

The lift & slide system SUPREME S700 represents the new generation of ALUMIL's high-end systems. It is an excellent solution for projects with demanding requirements, meeting the trend of "transparent" architecture through extensive glass surfaces, with high thermal insulation, safety and modern design. Its minimal design and its various innovative characteristics, make it the ideal option for projects requiring wide spans for enhanced daylight, outstanding performance and maximum ease of use.

Advantages

- Maximum ease of use and high functionality, optionally combined with automatic motion
- Enhanced natural light thanks to the wide glazing surfaces
- High energy savings thanks to the exceptional energy efficency
- High security level
- Exceptional sound insulation
- Ease of access
- Wide variety of typologies and solutions
- Exceptional quality with certified performances
- Increased static loads and functionality in case of severe weather conditions

FOLDING SYSTEMS

FD4600

Folding Thermal Insulating Door System for high comfort & maximal transparency. FD 4600 is a brand new Bi-Folding door system, offering extremely high performance and impressive, highly competitive, technical characteristics.

The desire to create living spaces filled with daylight was never so feasible. This high performance system offers this advantage, as well as a minimal design, high insulation and functionality with hardware that have specifically been designed for folding systems. Suitable for many different typologies, having the greatest advantage of corner opening without any column. This unique feature ensures maximum transparency and easy opening, whilst another practical feature is that one leaf can act as an opening door without interrupting the other folding leaves.

FD 4600 is available in multiple threshold options in order to perfectly match all comfort and aesthetic requirements. The low threshold option offers a rise of only 24 mm (ramp) giving easy access to people with special needs and allowing maximum convenience for high-traffic areas. Specially designed rolling hinges, sliding smoothly on the bottom rail, ensure quiet and easy operation of the system.

Features & Benefits

- High level of thermal insulation (Uf values down to 2.1 W/m2K) due to 30 mm polyamides.
- Exceptional water tightness, functionality, reliability and comfort.
- Suitable for large openings, every conceivable configuration achievable up to 14 leafs (7 Left – 7 Right) with maximum height 3 m and width of 1.20 m for each leaf.
- Ultra-smooth bottom running by using specially designed rolling hinges carrying maximum weight of 120 Kgr per leaf.
- Possibility of open corners without any post.
- Able to open inward or outward door with locking system.
- Possibility of even number of openings (2, 4 etc.).
- Multiple threshold options.
- Special hinge with integrated built-in handle for easy locking.
- In and outward opening using the same profiles.
- Perfect choice for private homes, offices, restaurants and recreational areas.

INSECT SCREEN SYSTEMS

FLEXA

FLEXA is the latest insect screen system with a special type of advanced, straight fiberglass clothing. It is a horizontally moving insect screen with a caterpillar mechanism and easy detach for storage.
It features windproof aid, while the advanced roller mechanism with caterpillar allows smooth usage.
FLEXA insect screen can be mounted easily and quickly to all existing aluminium systems.

FREE

FREE insect screen with caterpillar is available with a straight gray fabric which ensures discrete and uniform internal and external aesthetic appearance, without a bottom guide. The special fiberglass fabric used for the construction of the insect screen is mold resistant, fire proof and offers perfect visibility. Available in all powder coating and wood imitation colors.

INSECT SCREEN SYSTEMS

PLISSE

PLISSE Deluxe is the premium aesthetics insect screen system due to its mesh's special appearance, becoming part of every room's decoration. It is a horizontally moving insect screen with a caterpillar mechanism and plisse cloth.
Additionally, PLISSE Deluxe offers very high resistance to everyday use, due to its advanced double caterpillar, allowing durability through time. The special, accordion style, mesh is made of reinforced polyester combustible material. The insect screen's laces are made of VECTRAN fiber, a high technology material with many applications, especially where strength and durability are required.
Remaining functional and practical, with special handles for guided smooth motion, without bottom guide for unhindered access and the ability to stay still at any desired point.
PLISSE Deluxe insect screen can be easily applied to all new and existing frames and is available in single and double sash. The mesh is available in black and grey coloring.

PLISSE

We can insure the highest possible quality for all our insect screen systems, through the following certifications and characteristics:

Certifications

QUALICOAT: Certification process of the electrostatic paint.

Technical characteristics

Aluminium Alloy AlMgSi-0.5 F22
Hardness 12 Webster
Minimum coating thickness 75μm

CONSERVATORIES

7000

EUROPA 7000 fully meets the requirement of ideal lighting and ventilation in any structure. It offers absolute strength and functionality and an impeccable aesthetic result, while at the same time it allows direct view to the outdoor environment. It offers great potential for combinations with both classic and modern structures.

The new EUROPA 7000 series covers constructions of atrium with overhead windows easily and efficiently.

The system also allows the construction of atrium with flat or inclining surfaces, from 7,5° up to 90°.

Specifications

- Atrium.
- Flat or inclining surfaces, from 7,5° up to 90°.
- Usage: Atrium with overhead windows, standard and remote control.

Basic characteristics

- Creating vertical or inclined surfaces with angles of 7,5° to 90°.
- Optional installation of roof windows for ventilation.
- Opening and closing roof window by crank or motor.
- Water drainage and gutter for effective removal of water.

Construction types

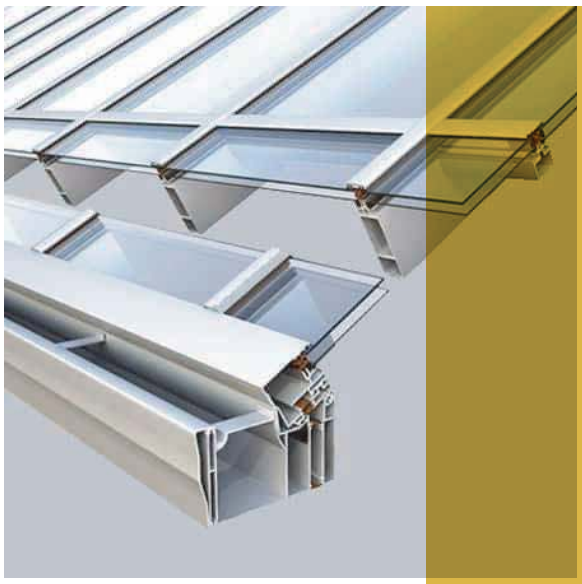
- Construction of flat atrium with or without overhead windows.
- Atrium in pyramid shape (4 faces, 8 faces, 12 faces and 16 faces).
- Can be combined with EUROPA 5500 and EUROPA 10000 for complex structures.

CONSERVATORIES

M10800

M10800 is a comprehensive system for winter gardens, skylights, atriums, greenhouses, which includes the following characteristics:

- 55 mm width of Mullion (vertical and horizontal).
- Combines with M6 curtain wall system for more complex structures.
- Draining system designed for condensed vapor removal and rainwater outflow.
- Special interior drainage mullions.
- Ability to include ventilation windows with electric mechanism.
- Sturdy Construction of any kind of geometry (pyramid, domes, circular surfaces etc.) without static issues.
- Large variety of profiles for the support all of structures, without static problems.
- Category thermal insulation Gruppe 2.1 (According to DIN52619-3 UR = 2.3 W/m2K).



SMARTIA M10800

PERGOLA

PG120F Fixed Pergola System

A complete pergola system with fixed louvers for sufficient shading and enhancing the aesthetics of the surrounding area. Characterised by a wide range of elegant solutions and categorised in three (3) basic models, the minimal Creta, the modern Corfu and the traditional Naxos.
Advantages

Advantages

- Great variety of competitive solutions which cover any need
- Elegant constructions in minimal design with clean lines and concealed fixing points
- Extreme sturdiness which resists high wind loads and vibrations, which allows very large dimensions, up to 4.8x6.0m.
- Allows multiple structures due to the way transoms are attached to mullions (expendability)
- Most of the manufacturing take place in the fabrication unit and the installation is very easy and fast
- High quality surface treatment due to the pre-anodising process option and the fact that all fittings are made of extruded aluminium and casted (coating does not peel off in time).

PERGOLA

PG120P MYKONOS

PG120P MYKONOS Bioclimatic Pergola

Pergola system with rotating louvers for adjustable solar shading and total rain protection, ideal for converting an open-air space into a cozy and enjoyable place to live. MYKONOS embraces the bioclimatic technology and guarantees controlled living conditions offering minimal and elegant structures, up to 6.2 x 4.5 m.

Advantages

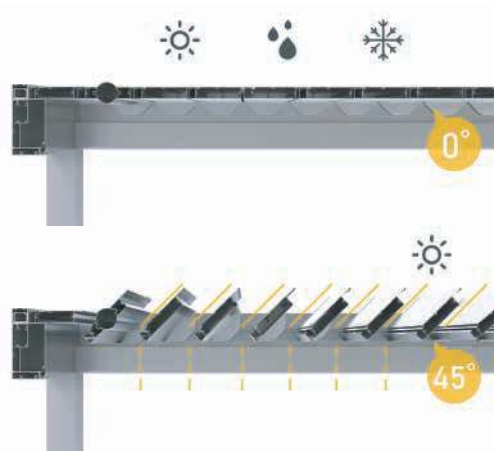
- Efficient protection against sunlight, rain, snow and other weather conditions
- Controlled living conditions due to the bioclimatic philosophy and side elements integration, such as sliding glass system, rolling shading ZIP-screens, shutters, LED, etc
- Extremely robust constructions, which allow very wide dimensions up to 6,2 x 4,5 m or 6.5 x 4.2 m.
- State-of-the-art fittings, e.g. the patented, concealed and noiseless mechanism and the integrated automation systems
- High aesthetics and minimal design with emphasis on detail, i.e. no visible fixation points
- Vast range of solutions and full customization / expendability to meet every need

PERGOLA

PG160P SANTORINI Bioclimatic Pergola

SMARTIA PG160P Santorini, a system for outstanding bioclimatic pergolas, is characterized by the high durability and the innovations it incorporates, offering ideal shading solutions for outdoor applications. It is probably the only pergola system that can cover in free-standing typologies (without wall mounting) a surface of up to 50 m2 with only four columns. The possible covered surface can be even doubled by adding just two more columns (i.e. 100 m2 with only 6 columns), without affecting the elegant and minimal design of the pergola.

The rotating louvers for adjustable shading and protection from bad weather conditions, as well as the plethora of the available equipment, reflect the system's bioclimatic philosophy and guarantee excellent living conditions all year round.



Advantages

- Efficient protection against sunlight, rain, snow and other weather conditions
- Controlled living conditions due to the bioclimatic philosophy and side elements integration, such as sliding glass system, rolling shading ZIP-screens, shutters, LED, etc.
- Extremely robust constructions, which allow very wide dimensions up to 7.5 x 7.5 m with just four columns
- State-of-the-art fittings, e.g. the patented concealed and noiseless mechanism and the integrated automation systems

High aesthetics and minimal design with emphasis • on detail, e.g. no visible fixation points

Vast range of solutions and possibility of full customization and expandability to meet every need

PG160P SANTORINI

PERGOLA

EUROPA PERGOLA

The EUROPA PERGOLA series is an integrated shading system in the form of a pergola, that allows protection against the rain and solar radiation offering a unique cool "shadow", particularly during the summer. The innovative design of the series is fully harmonized with every architectural style, while at the same time offering a significant saving of energy.

- Integrated shading system in pergola form.
- Fixed or adjustable shading wings.
- Manual or remote control use.
- Shading wings ups to 4 meters.
- Usage: For buildings and pergolas.

Pergolas with moving shading flaps 150/200

By choosing the inclination of the shading flaps, the user can regulate the shading of the space as they wish. Also, the shading flaps can be tilted manually, using a crank. Pergolas with 151 mm moving shading flaps are fitted with sealing gaskets upon closing, offering protection from rain. When the flaps are closed, the pergola offers protection from stormwater. Stormwater is drained from the pergola's cover by means of a special water drainage profile.

Special construction /Composite structure pergola

Pergola with folding tent. The pergola with the folding tent is ideal for covering small or large spaces. The tent's fabric opens and closes with a motor allowing the user to stop the fabric at any point.

Composite structure pergola, with 200mm horizontal fixed shading flaps, 100mm vertical fixed shading flaps and tent fabric. The 200mm fixed, horizontal, shading flaps, can be screwed at any desired inclination and spacing. The 100mm fixed shading flaps are fitted with special plastic caps at their ends, offering perfect aesthetic results.

PERGOLA

Pergola with moving shade wings: “Model -I-” SK34 / “Model -II-” SK40

Pergola with moving shade wings of 151mm have rubbers which seal the pergola when the wings are closed, in order to provide protection from the rain. Pergola with moving shade wings of 143mm, move by a “special hidden gear mechanism” and have rubbers which seal the pergola when the wings are closed, in order to provide protection from the rain.
Special water drainage profile removes the water.

EUROPA PERGOLA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SHADES & LOUVERS

Europa Louvers Shading System

It is the integrated energy saving proposal for sun protection in “smart” buildings. The pioneer design of the louver in the form of a flap allows easy installation on the exterior facade of both new and old buildings. The system has four different types of shading wings with a special design in order to avoid the overheating of interior spaces and also to provide protection to the glass surfaces from sunlight or breakage. The position of the shading wings can either be fixed (permanently to a preferred angle) or adjustable at any angle according to the user’s choice.

Specifications

- Fixed or adjustable shading wings.
- Pergolas construction.
- Fully integrated shading system.

Basic characteristics

- 4 wing profiles for shading.
- Option for pergola constructions or sunshade facades of buildings.
- Movable or fixed-wing profiles.
- 2 wing profiles with rubber stripes on one side, seals pergola from the rainwater.
- Water drainage profiles for effective removal of water for pergola systems. Use motors to move the wings and crank mechanism for manual movement.
- Available with motor use and hand crank.

M13700

The new generation of energy rolling shutters, placed onto the sash (top-mounted), with or without insulation. A product of top aesthetics with excellent functionality which, apart from shading, contributes to the energy saving and the anti-burglar protection of the entire structure.
It consists of reinforced chambered profiles for increased torsional and static rigidity which is the main requirement during box installation and operation which makes them ideal for large openings.
The innovative design includes an additional set of construction details that ensure noiseless and smooth operation with emphasis on minimizing metallic noise and vibrations. The thermal version is characterized by a unified thermal zone with the frame.

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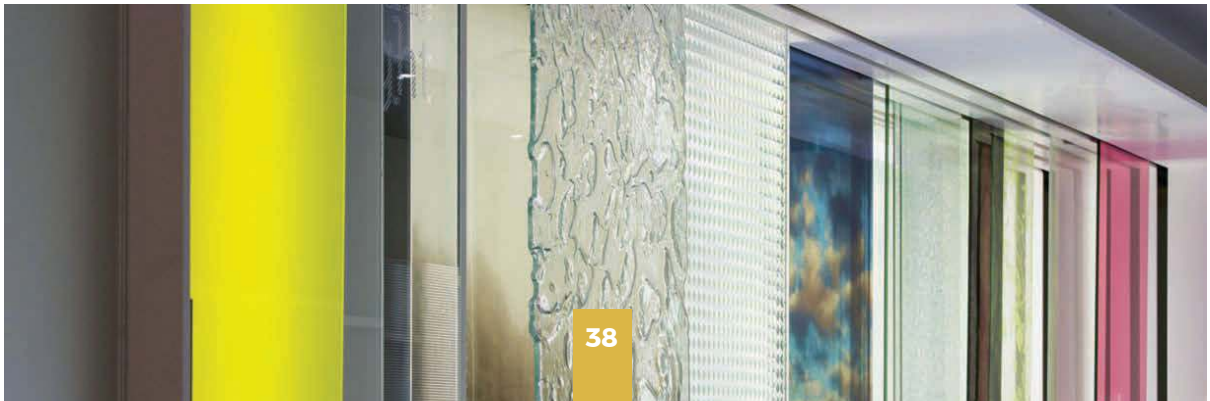
GLASS SOLUTIONS

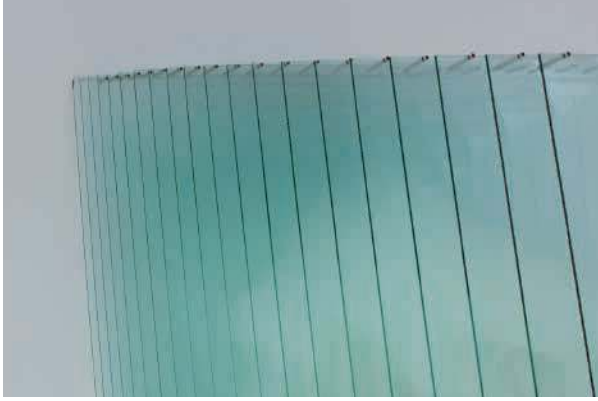
Glass doors

Welcome more natural light into your home!
Glass doors are a great source of natural light. Whether you prefer the fine, thoughtful details of traditional styling or the clean, smart lines of modern doors, our products are made to inspire spectacular views.

With ceiling-height window fronts, organic curves or sloping glass units, we lay the foundation for customized spatial concepts and outstanding architecture. Inspired by the Bauhaus vision of "free-flowing space", glass doors open up the home interior. Indoor and outdoor space merge to create a unified living environment. Wall pockets allow the sliding windows to be fully retracted out of sight. The eternal charm of the frameless window concept transforms the view into a spellbinding design feature.

Its durability, longevity, easy maintenance and timeless aesthetic, makes glass the ideal solution for today's interior finishing requirements: we can provide high-performance solutions that improve comfort and protect the environment.





Saint-Gobain | Guardian Glass

Protect yourself against the cold, heat, noise, live safely, reduce cleaning and even protect your privacy. In response to these issues, we offer a wide range of glass specifically designed for new construction and renovation projects. Combining transparency, durability and design, sustainable habitat glass contributes to the aesthetic appearance and energy efficiency of residential and tertiary buildings while also improving user comfort. This is why we work with some of the best manyfacturing companies, **Saint-Gobain** and **Guardian Glass**.

As a component in a building's envelope, glass plays a crucial role in energy performance and comfort. Assembled as double-glazing, our products have an energy performance close to that of triple-glazing, thanks to low-emissivity coatings on both interior surfaces of the glazing unit. Effective thermal insulation ensures occupant comfort in summer and winter, and eradicates the cold wall effect.

Glazing provides architects with a wide range of possibilities for designing extensively glazed, transparent facades that are also energy-efficient. In addition to thermal comfort, glazing on our products combines various complementary functions: personal and property security, fire protection with a transparent fire-retardant that protects for 30 to 120 minutes, acoustic insulation which halves the level of noise entering a building from outside and self-cleaning treatment to avoid the phenomenon of external condensation on high thermal insulation glass. This is truly "multi-function" glazing that provides building occupants with maximum well-being.

Our products can also be used to personalize a façade with a unique design in colored, opaque or translucent mineral enamel or structurally for safe, transparent floors.

Both companies emphasize:

- Reducing their energy, water, and raw material consumption, and CO2 emissions during production,
- Enhancing glazing's thermal performance during use,
- Improving glass recycling glazing at its end-of-life.

SAINT-GOBAIN

GUARDIAN GLASS

GLASS SOLUTIONS

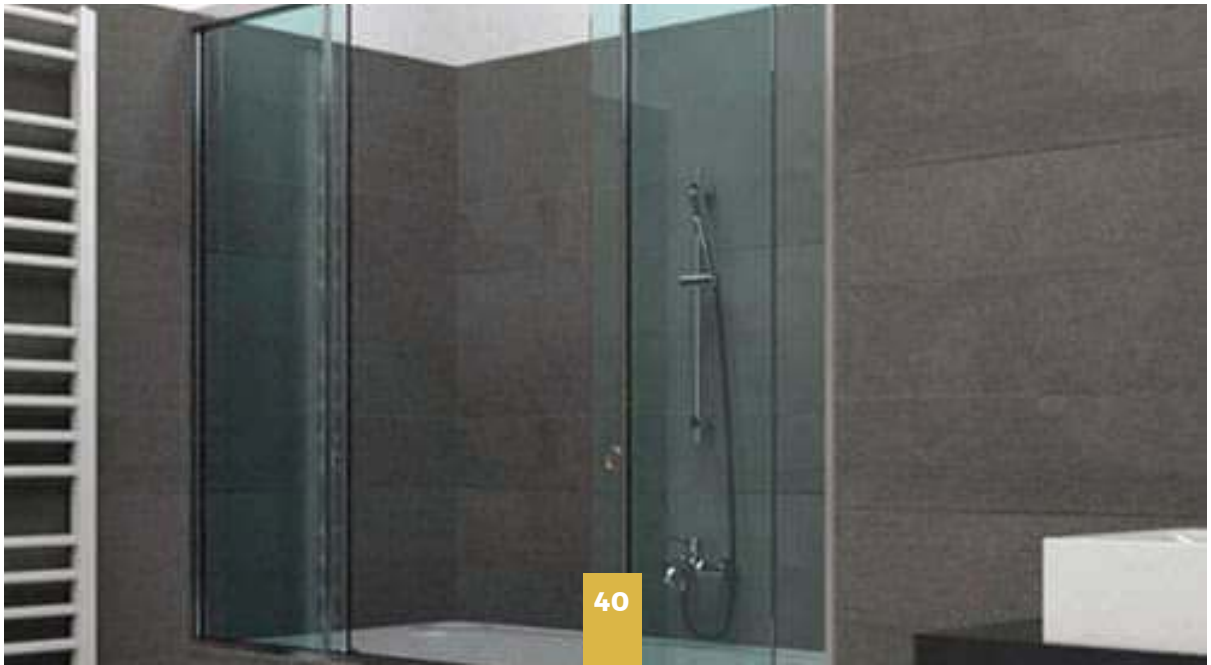
Shower cabins

Elegant aluminum profile, installed around the shower's opening, fully adjustable and easily modified to meet the exact needs of your space, while offering a touch of modern, discreet design to your bathroom. By having the choice between straight or cornered cabin, with either single or double sliding panels, one can find the most favorable combination, depending on the space's arrangement.

The system uses tempered crystals 8mm to 10mm in thickness. They can be of any color, and coupled with anodized or electrostatically painted aluminum in a variety of color choices.

Round socket handles can be used, which fully free the opening as they allow panels to slide into one another or discrete small handles. A bottom drainage design, good peripheral isolation and a magnetic sealing between glass panels, are only a few of our design points.

Smooth movement and safety stops guarantee excellent operation and component longevity, resulting in an overall satisfying showering experience that lasts.

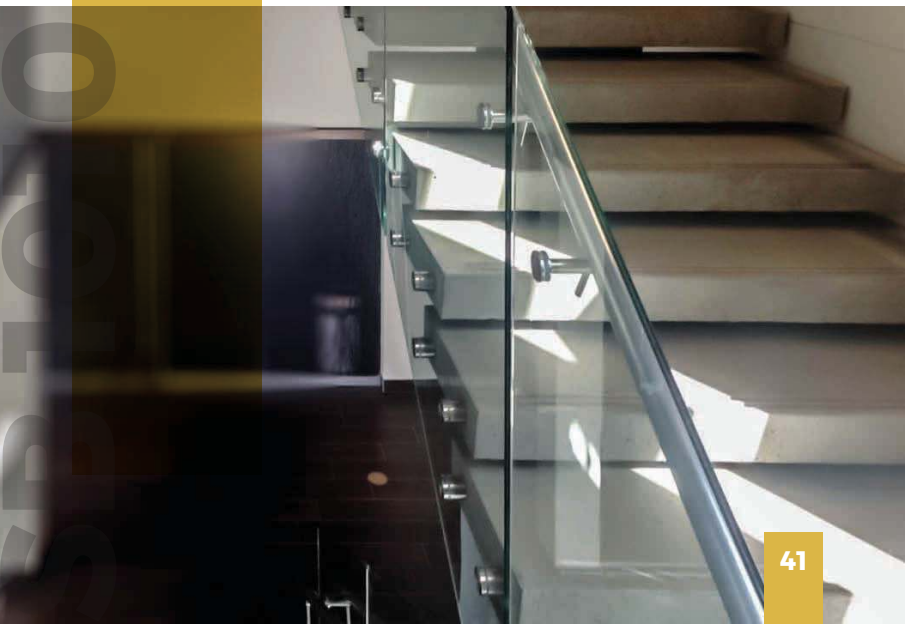


SHOWER CABINS

GLASS SOLUTIONS

GLASS RAILING SB 1010

Glass-board mounting system, without the need for vertical supporting components, with sturdy aluminum profile made of high grade alloy, measuring 100x100mm for the formation of glass railings onto final flooring or parapet. It supports uniform glass-boards of 16-17,7 in thickness, without any holes or notches, laminated or tempered laminated, with transparent of colored membranes. Replacing the glass-board is easy, without causing any damage to either the system or the flooring. The end height of the railing can reach up to 100cm. The glazing can have a special finishing or bear aluminum handrails. The mounting base can be covered with aluminum caps of oval and rectangular shape, which can be anodized (natural anodization or stainless-steel imitation) or electrostatically painted in any RAL color. Mounts are detachable, made of EN AW 6060 T66 aluminum alloy and are anchored at specified distances from each other onto stable ground with metal plugs M10 to M12 made of galvanized or stainless steel.



STAIR SYSTEMS

Minimal designs to make you feel like you are walking on air. Glass, Iron, Staineless steel, or Aluminum railings systems can be applied according to your design style.
Staircases that are light and open in appearance and are supplied for new builds or refurbishments.
Frameless or framed glass options available for staircases.
The steps of the stairs can be made out of glass, iron, marble or wood.
Custom handmade stiars provide functionality, high aesthetics and maximum durability.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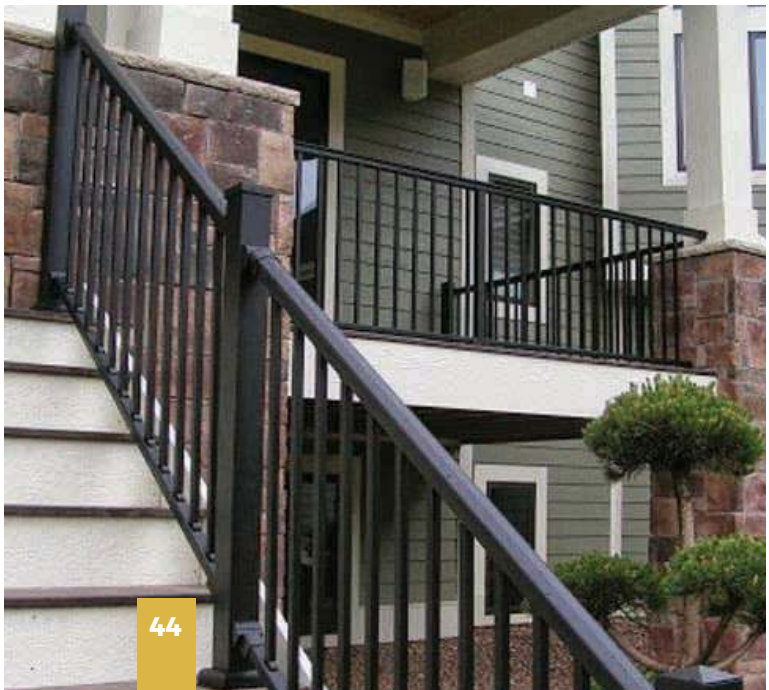
METAL SOLUTIONS

Aluminum railings

A complete system for aluminum railings. Specially designed aluminum tubes combined with suitable accessories, which offer solutions for every application. The high strength of the anodized aluminum elements allows the use of the system in indoor and outdoor spaces. A wide range of accessories offers increased flexibility to the system applications such as stairs, balustrades, swimming pools and asymmetrical balconies.

Railing systems can receive panels made of crystals or other decorative aluminum panels providing the solution to every architectural requirement. It offers functionality, high aesthetics and durability. All system profiles and accessories are manufactured of aluminum and have been subjected to anodization which offers particular strength and corrosion resistance to the final product.

Especially in the case of the EUROPA railings, the anodization thickness is 20 microns, ensuring durability of the profiles. The system does not have any particular maintenance requirements. Regular cleaning with a soft cloth and warm water ensures durability of the finish, preserving the shining effect of the anodized surfaces.

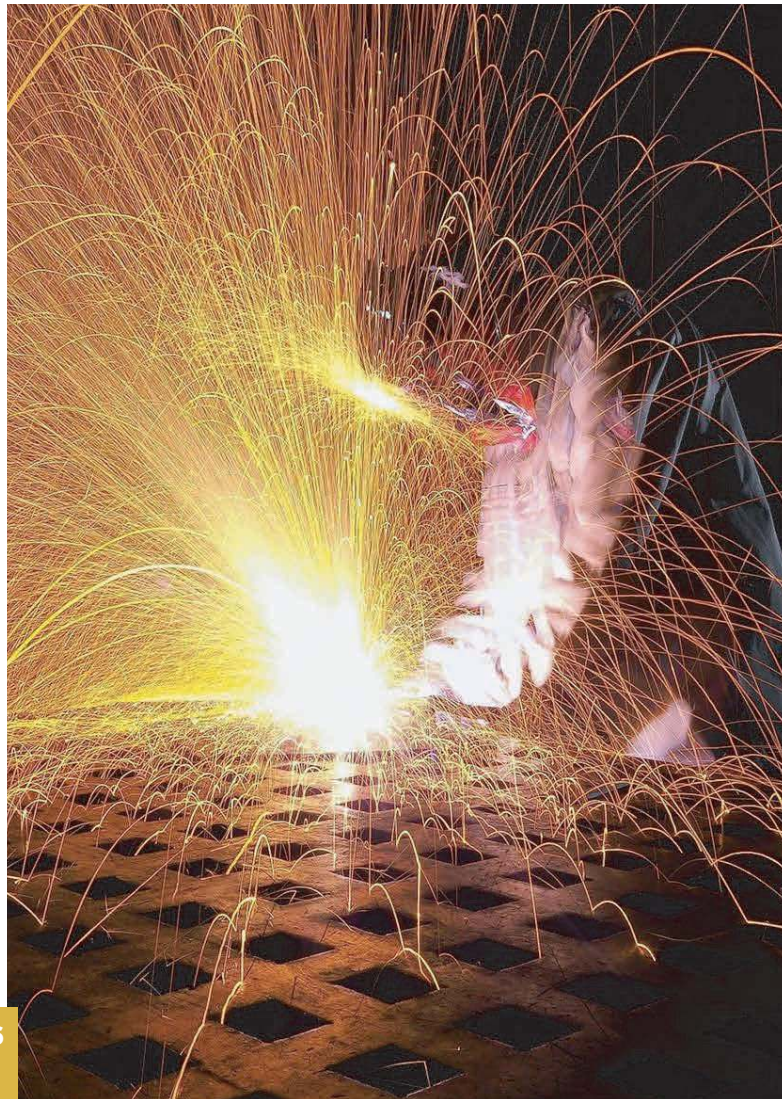


METAL SOLUTIONS

GATES & FENCES

Custom iron gates in a variety of designs.

Pre-welded, easily customized and enhanced versions of traditional wrought iron for various solutions.
Custom designs for entrance gates, lamp posts and railings.
Designs that follow a theme to unify the look of your house.
Pre-welded panels featuring a Patented bracket system



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ENTRANCE DOORS

We offer exceptional application possibilities to create an impressive result through a wide range of products that include the axial door, the recessed hinge door and specifically tailored constructions. The huge variety of materials provides the ultimate freedom in design, whilst the patent protected door mechanisms ensure longevity. The high production specifications certify that our products are in Classes 3 and 4 in terms of security, sound insulation, fire safety and a low thermal loss coefficient. All of the production stages are automated with total quality control and provide a final product that meets high specifications.
Special structures with fixed sides and dormer window are tailored to fit any size. In case that the fixed parts of the structure are glass-bearing, we use exclusively either anti-ballistic transparent glass or triplex sand-blasted glass, ensuring maximum protection and minimising heat losses. If the fixed parts have a similar lining to that of the door, then they are manufactured with special section armouring achieving utmost security.

Pivot doors offer excellent application capabilities, covering large openings and creating a particularly impressive result thanks to its rotation around its axis. It gives freedom to the architectural design as the door ceases to have the meaning of a typical opening and acquires the power of an important architectural element of the space. It is designed to follow the trends of contemporary design, offering absolute straightness between the wall and the door. Its rotation around its axis allows the pivot door to function well in large openings that can reach 2 meters in width. The door mechanism, made with special bearings located at the top and bottom of its axis, keeps the axis stationary and leaves the door to rotate around it, thus ensuring long life without damage, while at the same time allowing the height adjustment of the door.

ENTRANCE DOORS

ZEN doors

ZEN door series creates new horizons for modern residential and industrial design by adopting hi-tech, classic materials (e.g. wood) and a variety of designs, offering exceptional solutions. Limitless architecture with temporal feelings, natural veneers with special processing for external environments, LED illumination on external recessed handle, 2 different ways of e-access are only some of the endless choices to create a tailor-made ZEN door. **"ZEN Pivot"** series, high-end aluminium entrance doors with pivot mechanism, has been designed after combining various architectural trends and ideas, but the final design is after all an in-house inspiration.

ZEN BASE

The coplanar surfaces between wall – frame and sash offer pure clean lines, which provide elegance and functionality.

ZEN ENGRAVE

Maximum versatility and customization, allows you to communicate your message.

ZEN CARBON

Carbon fiber is utilized for the first time in architectural applications and that consists a global novelty.

ZEN GLASS

Simplicity is bliss, and ZEN Pivot Glass is designed to make this motto a reality.

ZEN WOOD

Limitless architecture with temporal feelings

BARAUSSE INTERIOR DOORS

Since 1967, Barausse has specialized in the production of interior doors, which are 100% designed and manufactured in Italy. Barausse develops and offers furnishing solutions for the purpose of creating a separate space which is both functional and prestigious with a high esthetical value. The result is both a beautiful and comfortable place to live in! Thanks to multiple certifications of our fire rated doors, the ability to design bespoke products and our more than twenty years of experience in the contract field, Barausse is able to provide worldwide, a high quality product for luxury hotels. We also provide this same high end standard for public buildings, high rise residential and private homes.


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COMMERCIAL & RESIDENTIAL COMPLEX CONSTRUCTIONS

APPENDIX A

Why Aluminum?

Aluminum is a metal with excellent mechanical properties that has revolutionized many technological fields. Though much lighter than other metals, it possesses very high mechanical strength, which is why it is used a lot in the very demanding area of aeronautics. Furthermore, it is very resilient to various forms of corrosion and entails minimal maintenace costs.

Aluminum is the third most common element around the Earth's crust. It is a "green" material which can be recycled an infinite number of times while retaining its characteristics without any quality degrading. The energy required for its recycling is only 5% of that consumed in its initial production. Thus, it is hardly a surprise that in Europe 85% of 'the aluminum used in costruction comes from recycling.

Aluminum has a unique and unbeatable combination of properties which make it extremely versatile, highly usable and attractive as a construction material.

Weight
Aluminum is light with a density one third of that of steel.

Strength
Aluminum is strong with a tensile strength of 70 to 700 MPa depending on the alloy and manufacturing process. Extrusions of the right alloy and design can be as strong as natural steel.

Elasticity
Young's modulus for aluminum is a third of that of steel (E=70,000 MPa), which means that the moment of inertia has to be three times greater for an aluminum extrusion to achieve the same deflection as a steel profile.

Formability
It has very good formability, a characteristic that is fully utilized in extruding. Aluminum can also be cast, drawn or milled.

Machining
It is very easy to machine. Ordinary machining equipment such as saws or drills can be used. Aluminum is also suitable for forming in both hot and cold conditions.

Corrosion resistance
A thin layer of oxide is formed when in contact with air, which provides very good protection against corrosion, even in highly corrosive environments. This layer can be further strengthened by surface treatment such as anodizing or powder coation.

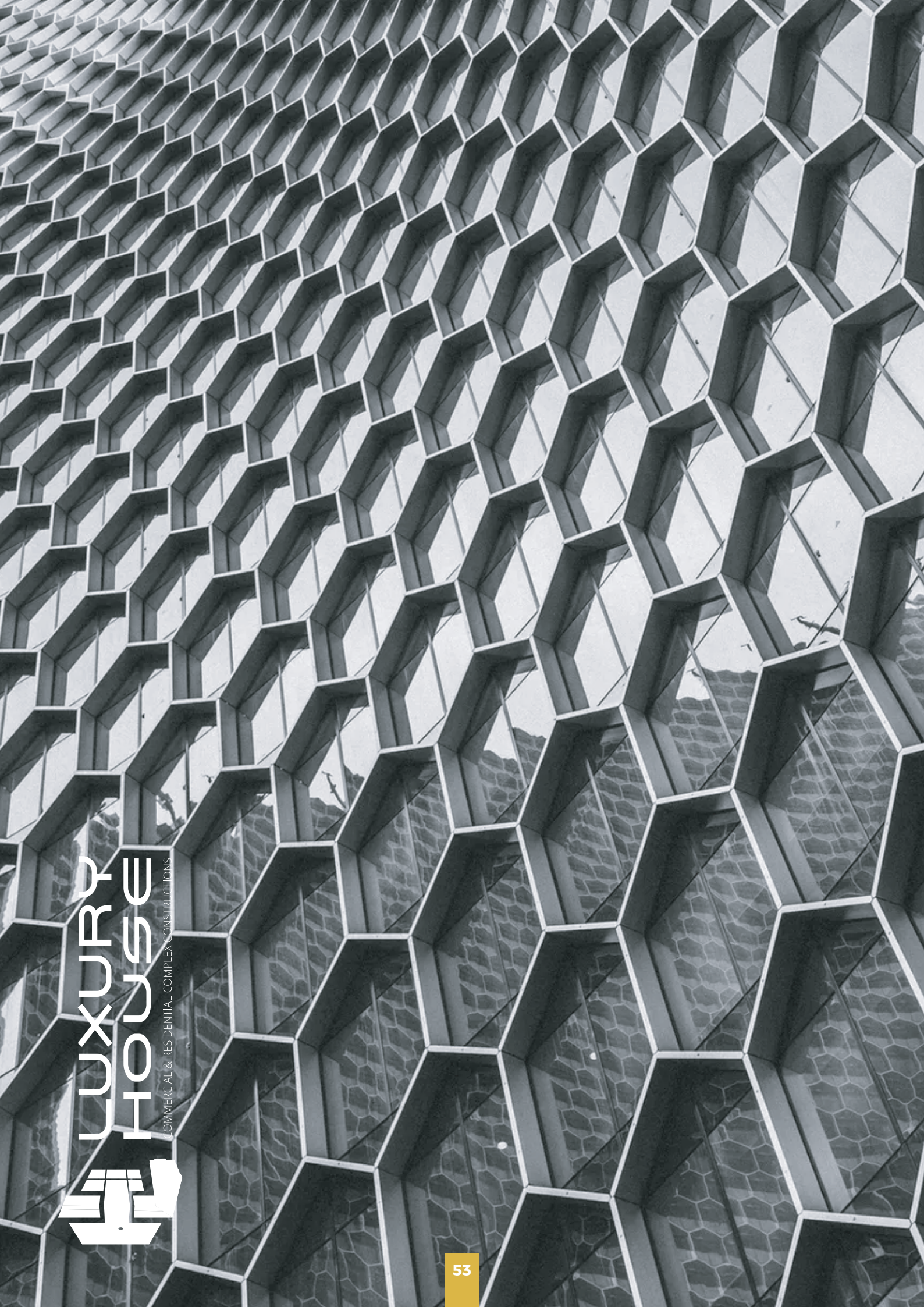
Conductivity
The thermal and electrical conductivities are very good, even when compared to copper. Furthermore, an aluminum conductor weighs half of an equivalent copper conductor.

Linear expansion
Aluminum has a relatively high coefficient of linear expansion compared to other metals. This should be taken into account at the design stage to compensate for differences in expansion.

Non-toxic
Aluminum is not poisonous and is therefore highly suitable even for food preparation and storage.

Joining
Aluminum can be joined using all the normal methods available such as welding. soldering, adhesive bonding and riveting.

Reflectivity
Aluminum is a good reflector of both light and heat.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APPENDIX B

The production process

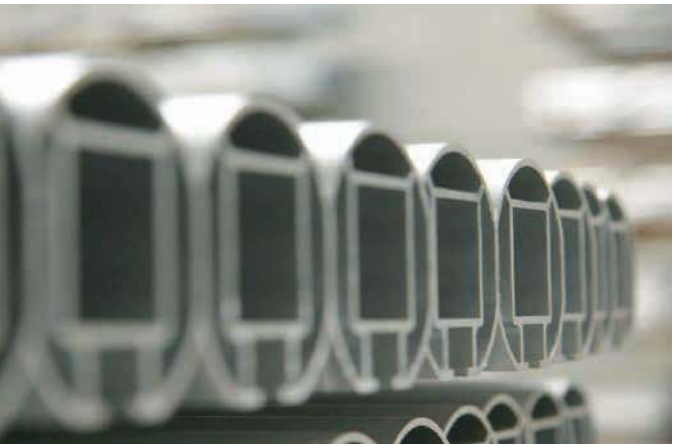
Aluminum Extrusion Process

Extrusion is defined as the process of shaping material, such as aluminum, by forcing it to flow through a shaped opening in a die. Extruded material emerges as an elongated piece with the same profile as the die opening.

Start of extrusion can be nothing but raw material. Different materials are called alloys and consist of different chemical components. Choosing the right alloy is important because it affects many of the aluminium's characteristics: formability, tensile strength, surface treatment options, machinability, and electric conductivity. The professional skills of our sales department and profile engineers are at your service. Our material range, combined with a suitable temper will give your product the specified properties. In addition, we present the mechanical properties of each one determined by EN-755-02. Dimensional tolerances are determined by European norms EN-755-09 and EN-12020 but if you wish we can agree to special tolerances on very important dimensions.

There are two types of extrusion processes, direct and indirect. Direct extrusion is a process in which the die head is held stationary and a moving ram forces the metal through it. Indirect extrusion is a process in which the billet remains stationary while the die assembly located on the end of the ram, moves against the billet creating pressure needed for metal to flow through the die.

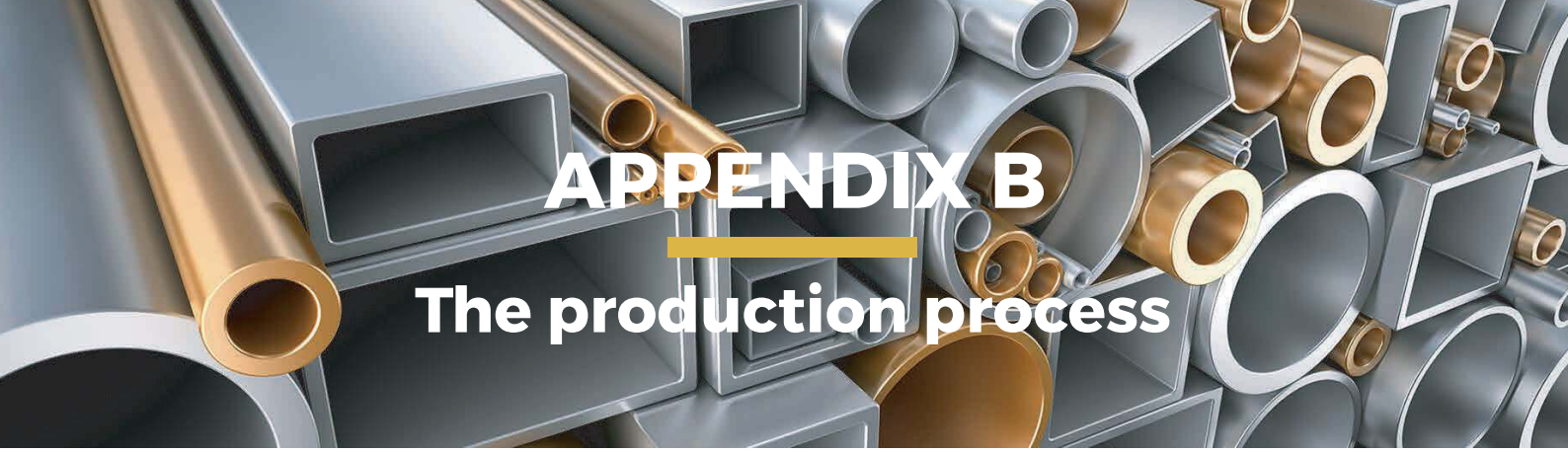
Press size determines how large of an extrusion can be produced. Extrusion size is measured by its longest cross-sectional dimension, i.e. its fit within a circumscribing circle. A circumscribed circle is the smallest circle that will completely enclose the cross section of an extruded shape. The most important factor to remember in the extrusion process is temperature. Temperature is most critical because it gives aluminum its desired characteristics such as hardness and finish.



Steps in the aluminum extrusion process

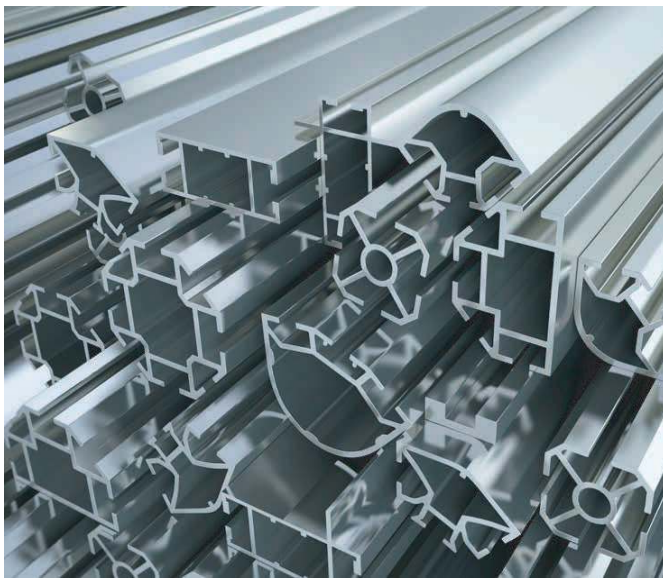
Billets must be heated to approximately 800-925° F. After a billet reaches the desired temperature, it is transferred to the loader where a thin film of smut or lubricant is added to the billet and to the ram. The smut acts as a parting agent (lubricant) which keeps the two parts from sticking together.

The billet is transferred to the cradle, and the ram applies pressure to the dummy block which, in turn, pushes the billet until it is inside the container. Under pressure the billet is crushed against the die, becoming shorter and wider until it has full contact with the container walls. While the aluminum is pushed through the die, liquid nitrogen flows around some sections of the die to cool it. This increases the life of the die and creates an inert atmosphere which keeps oxides from forming on the shape being extruded. In some cases nitrogen gas is used in place of liquid nitrogen. Nitrogen gas does not cool the die but does create an inert atmosphere. As a result of the pressure added to the billet, the soft but solid metal begins to squeeze through the die opening.

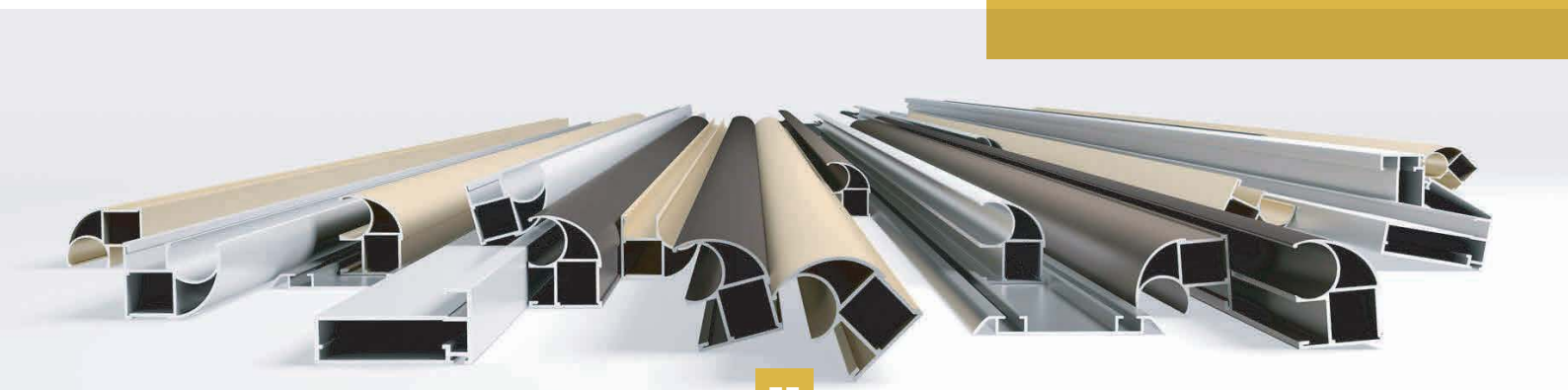


APPENDIX B
The production process

As an extrusion exits the press, the temperature is taken with a True Temperature Technology (3T) instrument mounted on the press plate. The 3T records exit temperature of the aluminum extrusion. The main purpose of knowing the temperature is to maintain maximum press speeds. The target exit temperature for an extrusion is dependent upon the alloy. For example, the target exit temperature for the alloys 6063, 6463, 6063A, and 6101 is 930° F (minimum). The target exit temperature for the alloys 6005A, and 6061 is 950° F (minimum).
Extrusions are pushed out of the die to the leadout table and the puller, which guides metal down the run-out table during extrusion. While being pulled, the extrusion is cooled by a series of fans along the entire length of the run-out and cooling table. (Note: Alloy 6061 is water quenched as well as air quenched.)

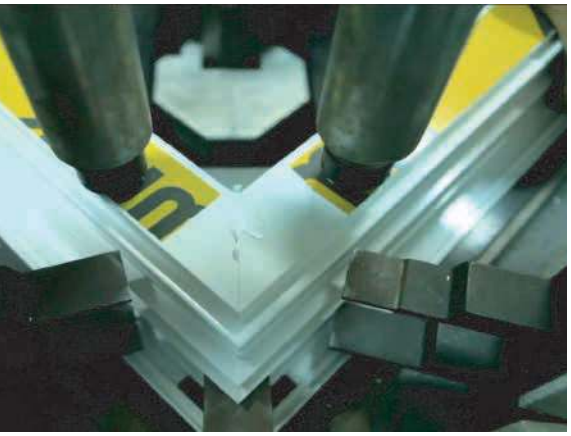


When the extrusion reaches a desired length, the extrusion is cut with a profile saw or a shear. Metal is transferred (via belt or walking beams systems) from the run-out table to the cooling table. After the aluminum has cooled and moved along the cooling table, it is then moved to the stretcher. Stretching straightens the extrusions and performs 'work hardening' (molecular re-alignment which gives aluminum increased hardness and improved strength).
The next step is sawing. After extrusions have been stretched they are transferred to a saw table and cut to specific lengths. The cutting tolerance on saws is 1/8 inch or greater, depending on saw length. After the parts have been cut, they are loaded on a transportation device and moved into age ovens. Heat-treating or artificial aging hardens the metal by speeding the aging process in a controlled temperature environment for a set amount of time.



APPENDIX B

The production process



Thermal Break Assembly

The thermal break is a continuous barrier between the inside and outside window frames that prevent conductive thermal energy loss. The barrier securely bonds the interior and exterior metal frames of the window sash. This thermal break creates thermal energy loss resistance and combined with gas-filled glazing, keeps the interior space of your window at a more comfortable temperature.

Usually the preferred insulating material is polyamide (a combination of nylon and glass fiber) which is very tough and can withstand the high temperatures of the painting oven, or PVC which has better thermal properties but has to be inserted after painting the profiles.

Temper

Temper is the combination of aluminum hardness and strength produced by mechanical and/or thermal treatments.

The measures used to test mechanical properties of aluminum are tensile, yield, and elongation. Tensile is an indication of the maximum pulling load that a material can stand without failure, usually measured in pounds per square inch of cross-sectional area. Yield is the stress at which a material first exhibits a specific permanent set. Elongation is the maximum percentage of stretch a material will stand before breaking. A defined range of alloy and temper properties must be met in order to satisfy certificate of compliance requirements.

Rockwell Hardness is an indentation hardness test based on the penetration depth of a specified penetrator into a specimen under certain fixed conditions.

Webster is a relative indicator of hardness but does not guarantee certificate of compliance requirements.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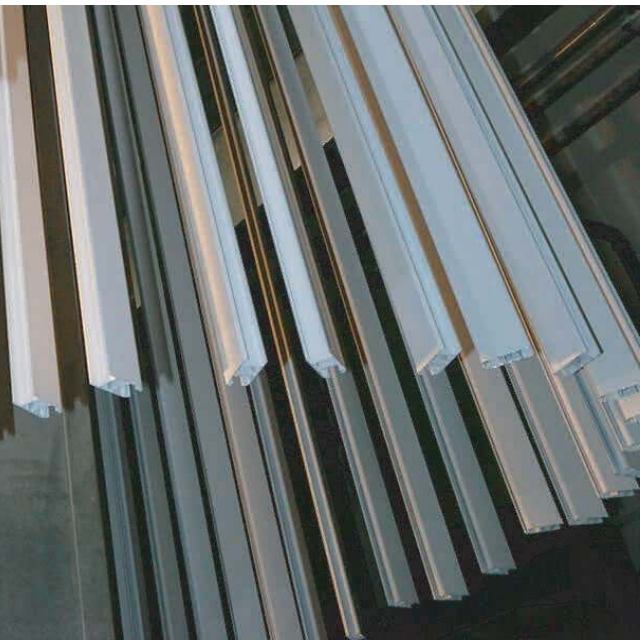
APPENDIX C

Surface treatment

We can offer advanced surface treatment solutions thanks to our partners' state-of-the-art anodizing and powder coating facilities, with multiple powder coating and anodizing lines. Always in accordance with QUALANOD and QUALICOAT specifications, we acn assure top quality, fast responsiveness and overall satisfaction of our partners and customers.

Powder coating

We work with companies that are in the top five largest in Europe regarding surface treatment of architectural and industrial aluminum profiles, with an annual production of ca. 10.000 tons of painted profiles.
The certifications of QUALICOAT, GSB, Quality Management ISO 9001 and Environmental Management ISO 14001, provide complete assurance. Thanks to our strict quality controls, we can guarantee complete customer satisfaction.
Every production line has a fully equipped laboratory, in order to meet all international quality specifications as set by QUALICOAT and GSB standards. The quality control process starts with the evaluation of raw materials (powder and chemicals) and continues to the production level, with a sample evaluation every 20 minutes.



Furthermore, we can assure the highest possible protection against corrosion for our finished products, by using:

- enhanced chemical treatment process, with a high etching degree equal or higher to 2.0g/m2, in accordance to QUALICOAT and GSB specifications and as required for sea side glass aluminum profiles.
- optional anodic pre-treatment (pre-anodizing) that provides complete protection against filiform corrosion to the painted aluminum profiles, for projects near coastal areas or swimming pools.
- automated processing is used with constant online controlling of all the critical parameters concerning chemical pretreatment, painting processes and polymerization during the whole surface treatment procedure., so that consistent quality during the production process is guaranteed.

Moreover, we use ecological powder coating products without toxic TGIC. This demonstrates our perpetual effort to provide a safe working environment to our employees and to have environmentally friendly production processes.

APPENDIX C

Surface treatment

Sublimation

On our effort for a greater and more complete meet of our customers needs, we have established one additional process for finishing aluminium profiles called sublimation or wood effect powder coating. With the same quality standards as the powder coating process we ensure top quality characteristics for the products of this special finishing.

Key points

- Use of special polyurethane powder coatings as the base,
- Specially defined chemical pretreatment method,
- Seaside class certification,
- Qualicoat certification,
- Superior quality inks for printing the effect foils,
- Cooperation with the first company worldwide that evaluated this technique.

All the above give a final result of really high aesthetics and increased durability. We offer a wide palette of 25 wood colors, meeting the needs of every potential user.

Anodizing

Anodizing is an electrolytic passivation process. During this process, a thin layer of aluminum oxide is created on the outer surface of the profiles, which improves durability and aesthetic appearance. This aluminum oxide is not applied to the surface like paint or plating, but it is fully intergrated into the aluminum metal structure. Thus, in cannot chip or peel.

Benefits

- Durability
- Color stability,
- Ease of maintenance,
- Health and safety

We work with Europe's larget and most advanced anodizing production lines. All facilies operate in automatic mode with the highest technical standards and are cerified with QUALANOD by the European Aluminum Asocition (EAA). These specifications define the requirements for Sulfuric Acid Anodizing and their subproducts.

APPENDIX D

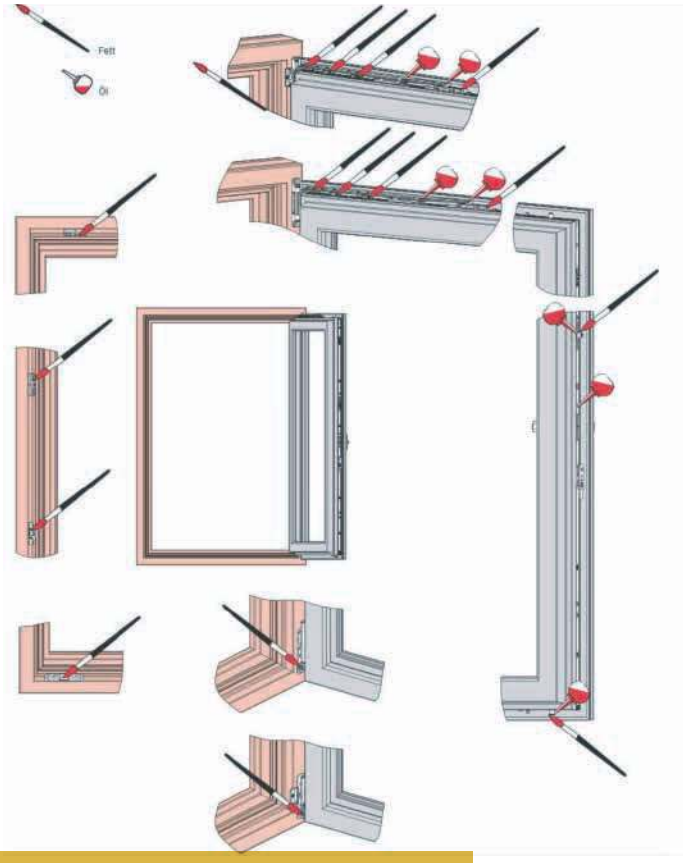
Maintenance and Cleaning

All our systems are manufactured at the highest possible quality standards, and require minimum maintenance. In order to take full advantage of the systems' characteristics and long life, here are some basic rules of proper maintenance and cleaning:

• The frame should be opened and closed using the handles in the correct positions, as indicated by the installer. If the frame has a retraction mechanism, the above procedure must be followed in a very meticulous manner, as otherwise the mechanism and the sliding guides may be blocked. Any trash should be removed from the guide channels.

• If the frames have a "protective film", this should be removed immediately after the completion of the installation work, because exposure to the sun for a long time may damage the surface.

• Clean windows frequently with a soft cloth and neutral cleaning liquids (light detergent). Do not use any acid, solvents or other strong cleaning fluids. Do not rub the surfaces with sandpaper, wires, metal brushes, metallic tools (eg spatula, blades) or other engraving materials, as they may damage the appearance of the frame.



aluminum frame oiling points

• If your home is near the sea or in industrial areas with severe pollution, maintain the system by washing it frequently (every 15 days) in order to remove the sea salt or the industrial pollutants deposited on it, so that the gloss and color remains unchanged for a long time.

• Rolls, operated by an electric device, must be operated as indicated by the installer. If the electrical device is blocked, contact the installer and in no case intervene on your own to avoid the risk of serious damage or accidents.

• A periodic oiling of hinges and recall mechanisms will provide them with longer life and good functionality. For the proper functionality of the frames, it is necessary to examine the good condition of the frame accessories (brushes, locks, etc.) once in a year, both visually and in operation.

• Rubber sealing materials should be replaced every 8-10 years and should also be cleaned using neutral detergents, if necessary with cold or lukewarm water and a soft cloth.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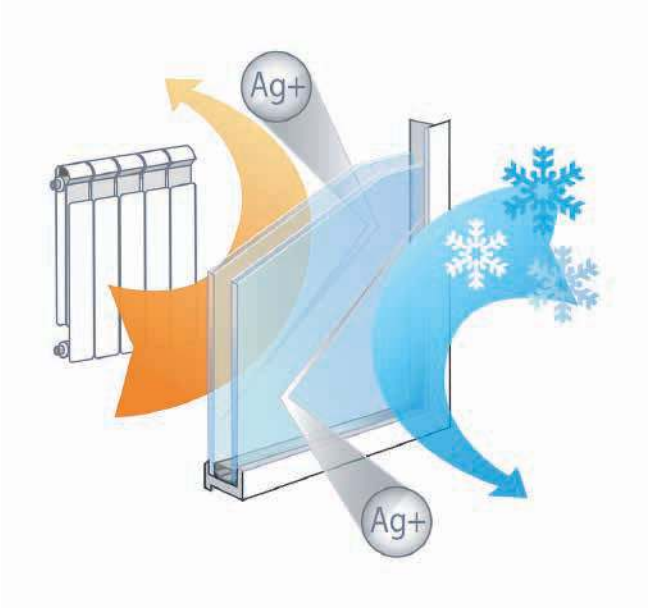
APPENDIX E

Glass Categories with Specific Features



Low-E: Low-Emissivity Window Coating

Low-E coating is a very thin layer that is applied to the inner surface of the glass on dual- or triple-pane window units. The coating may be invisible to the naked eye, but it is definitely there to offer various advantages.

The coating protects from UV rays that can fade carpets, damage furniture, and even harm your skin and eyes. It also reflects heat during summer by filtering the sun radiation and keeping infrared radiation out.

Furthermore, a special category of Low-E glazing (passive Low-E coatings), contribute to maintaining warm air in your home during winter, functioning in a way which is similar to thermos bottles (vacuum flasks).

Safety Glasses

Multipanel or laminated glazing consists of two or more glass panes welded together. One or more special strong binding films (PVB, polyvinyl butyral film), which do not affect the glasses' clarity are placed between the glass panes.

The film functions as a connective material between the glasses, resulting in a "sandwich" of glasses and films composing a single body, considerably compact and resistant, with increased durability against breaks, high security and enhanced sound reduction. If laminated glass panels break, they won't shatter, because of the film placed between the panes which holds the broken parts together. In that way, sharp and dangerous edges are avoided in case of broken glasses, which otherwise could cause serious injuries.

Reflecting Glasses

Reflecting glasses reflect a significant amount of sun radiation, reducing to a large extent its impact onto the interior. They are a good choice in areas characterized by high sunshine, as they ensure better temperature conditions especially during summer, by preventing excessive heating due to intense sun radiation. However, they will probably cause annoying sunlight reflections on the surrounding environment and buildings.

APPENDIX E

Glass Categories with Specific Features

Fire Resistant Glasses

Fire resistant glasses are distinguished for their resistance against fire, in other words against extremely high temperatures. Depending on their use, they can be single glazed (without spacer) or double glazed with a spacer in between for improved thermal insulation.

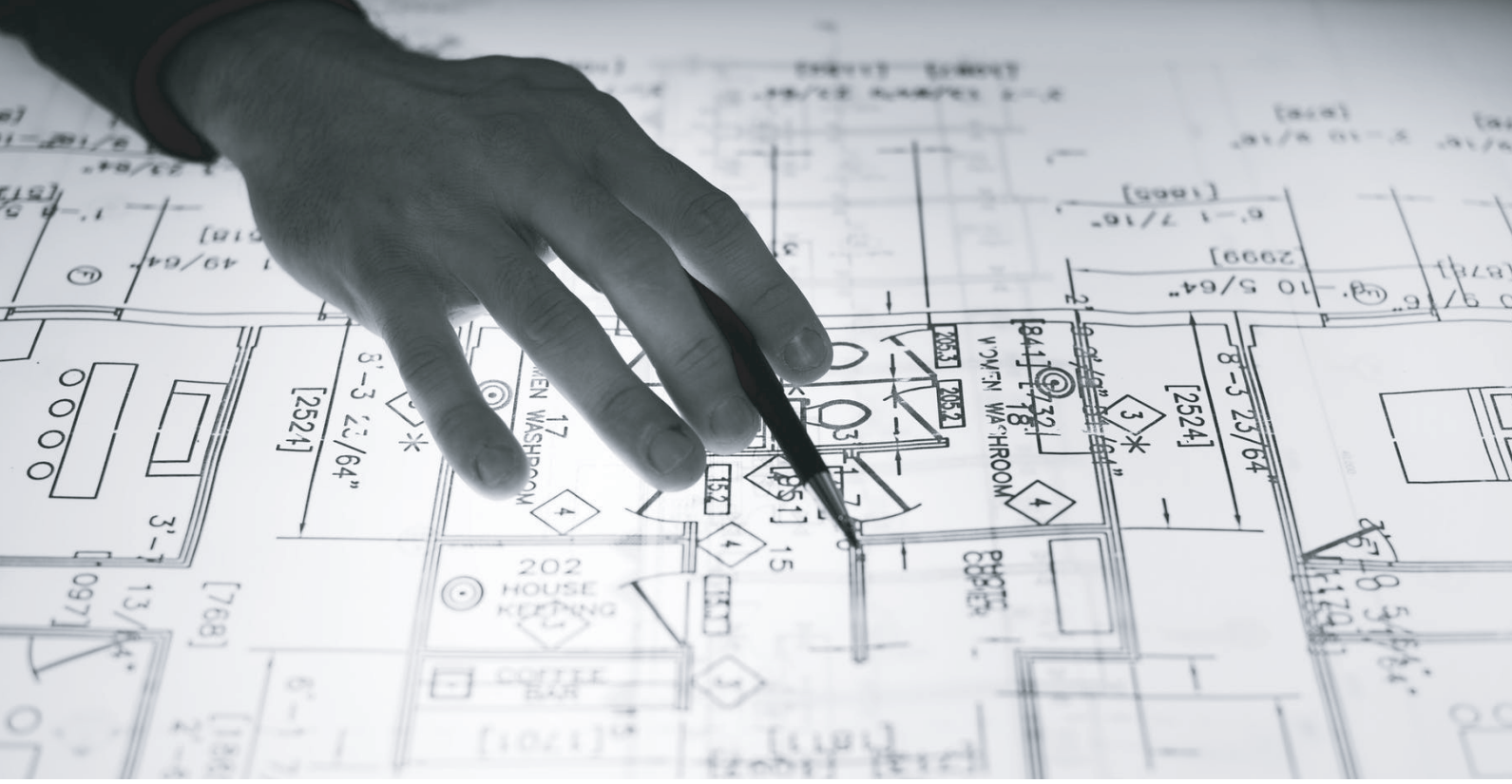
The glasses used in fire resistant glasses are always laminated, meaning they incorporate a "sandwich" form, with special expansive films that will expand after reaching a particular high temperature so as to provide enhanced fire resistance. Depending on the time required to delay the entry of fire into the room, someone can choose the most suitable glass category ensuring protection for 30, 60, 90, or 120 minutes. Of course, the glass panel itself is not enough to ensure the required fire protection. The aluminium window or door system in which the glass panel is placed, must also be able to withstand fire accordingly. That is why fire resistant systems are always tested and certified for a specific duration in combination with fire resistant glazing.

Tempered Glasses

Tempered glasses are thermally processed glasses with higher mechanical and thermal durability. The glass is heated reaching temperatures of up to 600° C and then is rapidly (full tempering) or slowly (thermal amplification) cooled. In both cases, a strictly controlled cautious cooling speed is required.

This processes submits the glass surface under a permanent compression force, providing the glass with special properties, as for example resistance to mechanical or thermal shocks, i.e. up to 5 times higher (thermally tempered) or up to 2 times (thermally amplified) compared to conventional glasses. This process protects the glass from shattering due to high temperature differences taking place on its surface (e.g. because of ever-changing shading).

This is particularly important for glasses exposed to intense sun radiation with high energy absorption on an everyday basis. In addition, in case of breakage, tempered glasses break into small, round glass particles, eliminating the risk of dangerous sharp shards which otherwise would be a serious danger in the case of conventional glasses.



OUR DESIGN CENTER

Our mission is to approach each project with a holistic vision, and we commit to creating spaces that are a true reflection of the clients living in them. We thrive in collaboration and believe the strength of our products is rooted in our diverse backgrounds, our broad areas of expertise, and our passion for details. This is why we are proud to open our brand-new, state of the art, all in one **Design Center in Newport, Delaware**.

We provide design services and products for your home or business, as well as residential and commercial new construction and remodeling services, all under one roof . Our firm is available to assist in all aspects of a project from start to finish including selection of architectural details and finishes, collaborating with interior decorators, designing functional living areas and constructing beautiful spaces tailor-made for your living space. Our unique location allows us the opportunity to help you with all of your selections in one convenient place. Our designers can manage your project from beginning to end to ensure that your desired goals are met.

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LUXURY HOUSE

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Luxury House Inc. was founded in Greece in 1963. Initially the company was an iron & aluminum fabricator. The company expanded to Australia, Europe and now the U.S. The company has expertise in custom fabrication and supply of building products and offers its services to both Commercial and Residential properties owners.