

LE CATALOGUE



THE CATALOGUE

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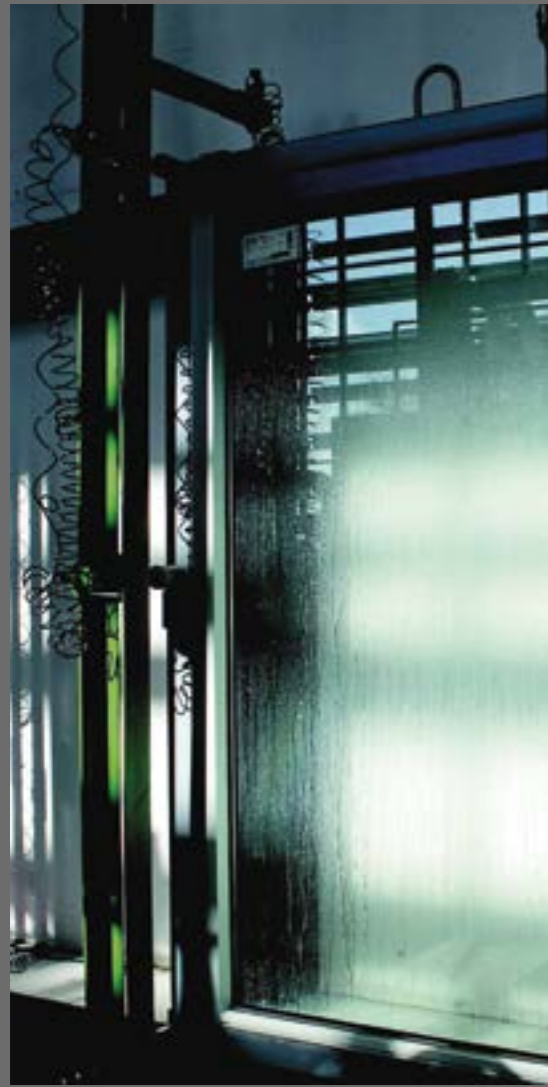
# ALUMINIUM SOLUTIONS FOR THE WHOLE WORLD



Architect: Éric Lenoir Architecte | Photographer: Philippe Ruault

Within the international community of architects and fabricators, Technal has gradually established itself as the point of reference for aluminium joinery.

The company's path over the last 55 years has demonstrated its boundless design culture, technical excellence and quality requirements.



## A BRAND DRIVEN BY INNOVATION

Technal's Test Centre in Toulouse (France) is like no other anywhere else in the world in the field of aluminium joinery. It's here that all kinds of preliminary studies are carried out during the prototype stage, as well as multiple tests on finished products, including a wide range of benchmark tests: mechanical strength, opening-closing, manoeuvrability, shocks, thermal resistance, resistance to corrosion, weather resistance (air permeability, water tightness, wind resistance), etc. This Test Centre produces a wealth of information which is then shared and distributed worldwide in accordance with national standards and regulations to be able to provide each market with high quality products that exceed the strictest regulatory requirements.

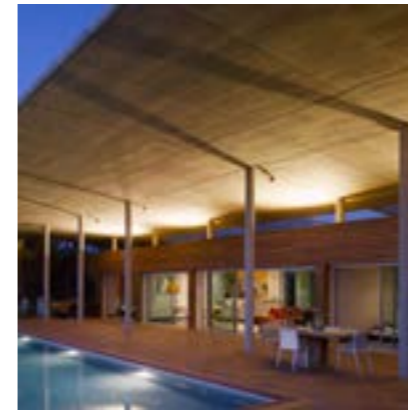
## DESIGN THAT SETS US APART

Technal design goes beyond mere aesthetics. It is a compendium of functionality, respect for the environment, ergonomics, energy saving, integration with the surroundings and, last but not least, a healthy dose of uniqueness. What's more, special attention is paid to the use of colour, with the combination of exclusive colour lines and traditional collections, the offer of various finishes (anodised, powder coated, textural effects, etc.) and the development of innovative processes such as bi-colouration which allows two different colours to be used on the same profile, one on the inside and one on the outside. Finally, the wide variety of handles and accessories offers all the flexibility you could ever wish for to ensure their perfect integration with all architectural styles.



Architects: Ateliers Jean Nouvel and François Fontès Architecture  
Photographer: Luc Boegly

## MARKET PRESENCE ACROSS MANY DIFFERENT SECTORS



### PRIVATE RESIDENTIAL

Architect: Koffi and Diabaté Group  
Photographer: DR Technal



### RENOVATION

Architects: Guillermo García  
Photographer: Andres Negróni



### COLLECTIVE HOUSING

Architects: Alba-Beyrouth  
Photographer: DR Technal



### TOURISM, LEISURE AND TRANSPORT

Architect: Moshe Safdie  
Photographer: Timothy Hursley



### EDUCATION AND CULTURE

Architects: Nelly Breton and Olivier Fraise (Terreneuve)  
Photographer: Daniel Rousselot



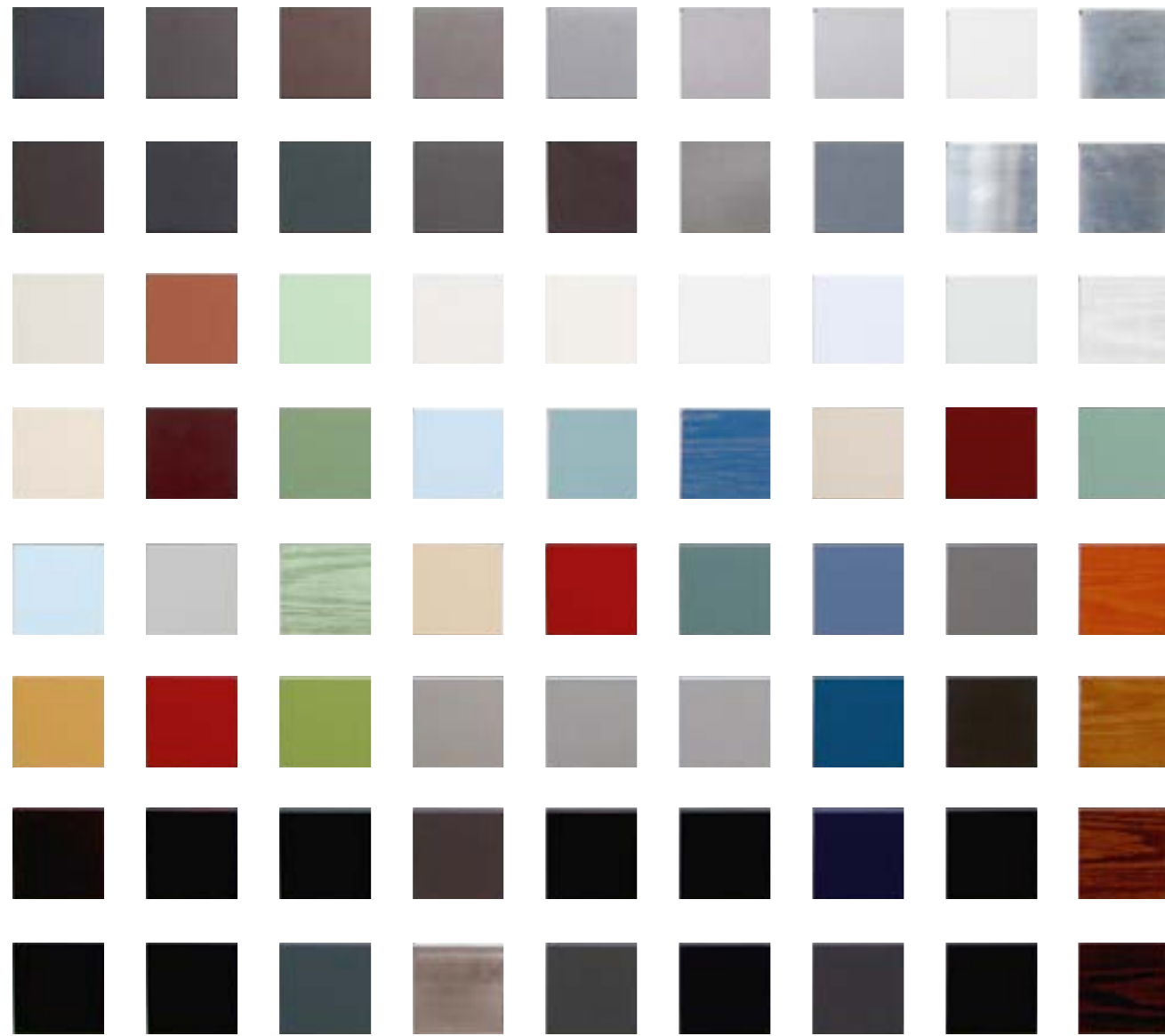
### HEALTH AND WELL-BEING

Architects: Carlos Ferrater and Alfonso Casares  
Photographer: Joan Guillamat



### OFFICES AND SHOPS

Architect: Esteban Y Tan & Associates  
Photographer: DR Technal



## WIDE SELECTION OF COLOURS

Technal offers a wide range of colours which enhance the appearance of the aluminium by playing with surface and lighting effects:

- **The Exclusives: a Classic collection** with seven traditional shades **and the new Downtown collection** with eight exclusive colours.

- **The Basics:** Selection, Standard and Wooden Decoration.

TECHNAL also offers the possibility of having two-tone joinery, a process which allows you to have two different colours on the same profile, one on the inside, the other on the outside.

The **Qualicoat, Qualanod, Qualimarine** and **Qualidéco** approved colour ranges guarantee the longevity of our products.

## A COMPREHENSIVE RANGE FOR ALL YOUR PROJECTS

Technal offers a wide variety of different solutions to create a dialogue between the interior and the exterior of buildings and to design façades that revolve around large glazed surfaces. For all markets from construction to residential, from new builds to renovations. Curtain walling, windows and doors are available in many different versions and thus offer appropriate solutions to the different needs expressed by the industry's professionals.

## TECHNAL, THE BRAND OF CHOICE FOR ARCHITECTS

In addition to its 50 years of experience in creating innovative solutions for aluminium windows, doors and façades, Technal has also gained experience on five continents where it operates. This legacy has allowed it to work with a large number of architects, some well-known, others emerging, which has resulted in the acquisition of a global vision that knows no bounds, enabling it to provide effective solutions to the most complex architectural issues.

### Our showroom:

#### A backdrop for our products

More than just a place for displaying products and innovations, this showcase fits seamlessly into the site thanks to its minimalist design. The dialogue with architects and specifiers focusses on the multitude of innovations and exclusive concepts available:

the latest sliding systems, windows, doors, solar protection systems, etc.



## A CUSTOMISED SOLUTION AND PROJECT GUIDANCE

The design and technical support teams are based on site so that they can work closely with architects and fabricators to produce high quality installations for all types of buildings, and also develop unique profiles.

Technal has the resources to fulfil the requirements of each and every project through tailor-made designs: for specific applications, performance enhancements and innovations.

Support for architects:

- Engineering service
- Structural and thermal calculations
- Costing
- CAD
- Weather resistance tests in our ITC test centre

## A HIGH QUALITY TRAINING CENTRE

Our training centre has built its strategy and training programmes on a strong conviction: the success of any business depends on the ability of its staff to adapt to change (technical, regulatory, IT, etc.), to increase its productivity and to constantly improve the quality of the services offered to its clients.

The training programme offered by TECHNAL is based on a constant and comprehensive assessment of clients' needs and expectations. It has been developed by professionals for professionals and is fully operational.



## A COMPREHENSIVE RANGE OF SOFTWARE DEVELOPED FOR ALUMINIUM PROFESSIONALS

This software is supplied ready to use and with a comprehensive database of products from the TECHNAL range.

- Tech3D Façade: 3D modelling.
- TechDesign: quotes, joinery output, orders for suppliers, manufacturing records.

In order to build faster and better, we must modify our methods and move from sequential to collaborative work flows. Through digital 3D modelling, or BIM, which has gradually taken root in the world of building, it is possible to create a unique evolving project. It centralises information and pools resources and offers genuine time savings for stakeholders, industrialists, installation companies, clients and project managers. In anticipation of regulations, TECHNAL offers TECH3D, an exclusive BIM software dedicated to specifiers.

## HIGH-LEVEL INDUSTRIAL AND LOGISTICS SERVICES ACROSS PRODUCTION SITES FROM EXTRUSION TO DISTRIBUTION

# SLIDING SYSTEMS

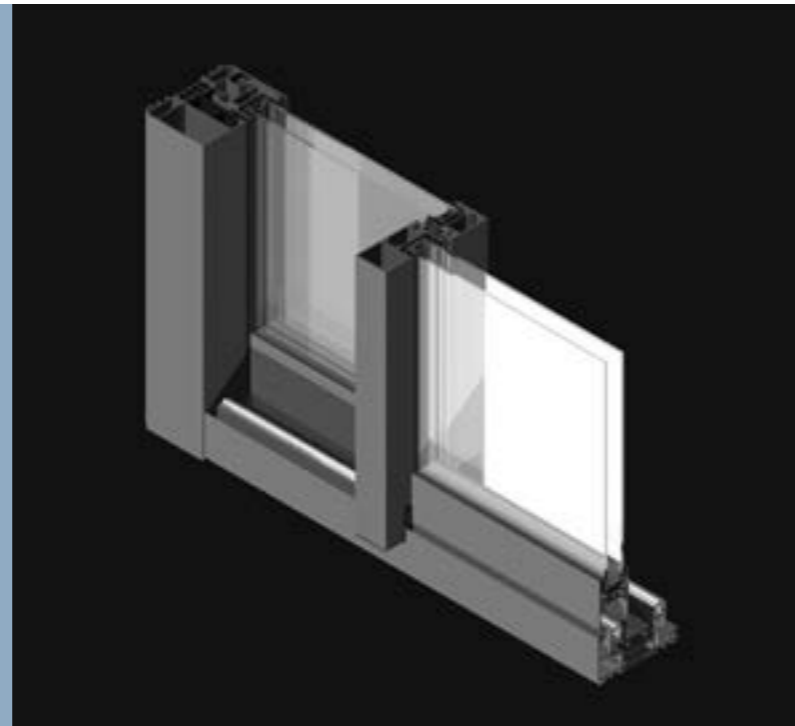
LUMEAL · GALENE · SOLEAL · TOPAZE



# LUMEAL, the minimal sliding system with a concealed opening frame: where design meets performance

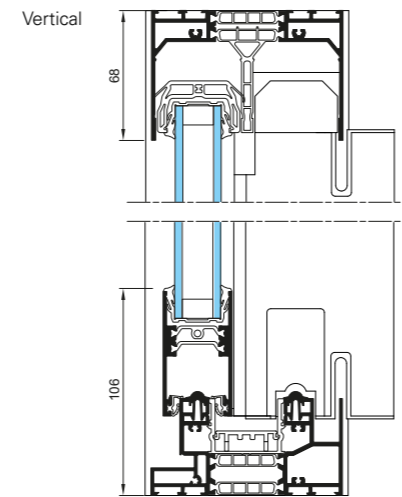
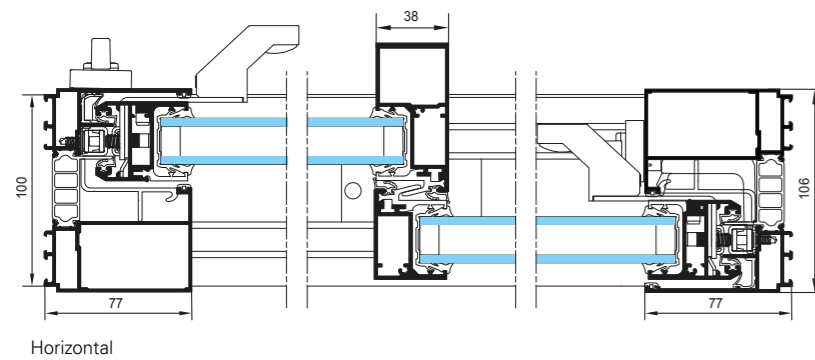
## PRODUCT BENEFITS

- Discreet aluminium frame with a visible 38 mm and 77 mm central aluminium stile
- Large sizes up to W 5.30 m x H 2.70 m available for 2-leaf patio doors
- Concealed drainage in all configurations
- Threshold adapted for disabled persons
- Enhanced security: RC3 resistance class according to European standard EN 1627-30
- Motorisation (optional)



Architects: Dank Architectes Photography: DR Technal

## CROSS-SECTIONS



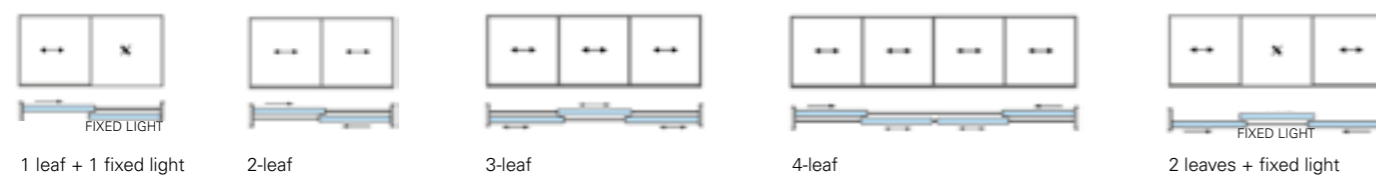
## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W 5.30 m x H 2.70 m. 2-leaf patio door on 2 tracks
	MAXIMUM WEIGHT PER LEAF	Up to 300 kg
	THERMAL	Uw = 1.2 W/m <sup>2</sup> .K and Sw = 0.46 TLw = 0.65 Double glazing with Ug = 1.0 W/m <sup>2</sup> .K + insulating crossbar (W 4.50 m x H 2.70 m)
	ACOUSTIC	-35 dB (Ra, Tr) Patio-door with 2 tracks - 1 leaf + 1 fixed light (W 2.8 m x H 2.2 m)
	WEATHER PERFORMANCE	A <sub>4</sub> -E <sub>7A</sub> -V <sub>B3</sub> * Patio door with 1 leaf + 1 fixed light (W 3 m x H 2.50 m)
	ACCESSIBILITY	Disabled access threshold
	SECURITY	Class 3 break-in resistance classification according to the European standard EN 1627-30

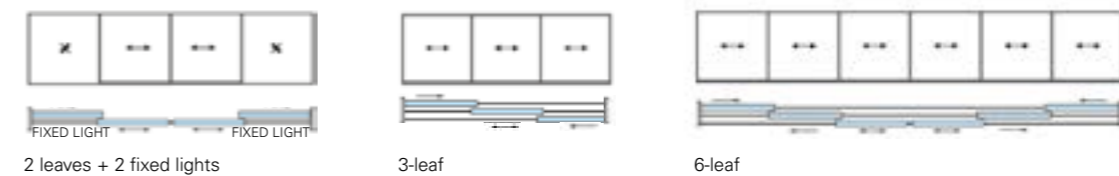
Test results according to product standard NF 270-1  
\*(A = Air, E = Water, V = Wind)

## CONFIGURATIONS

### 2 tracks



### 3 tracks

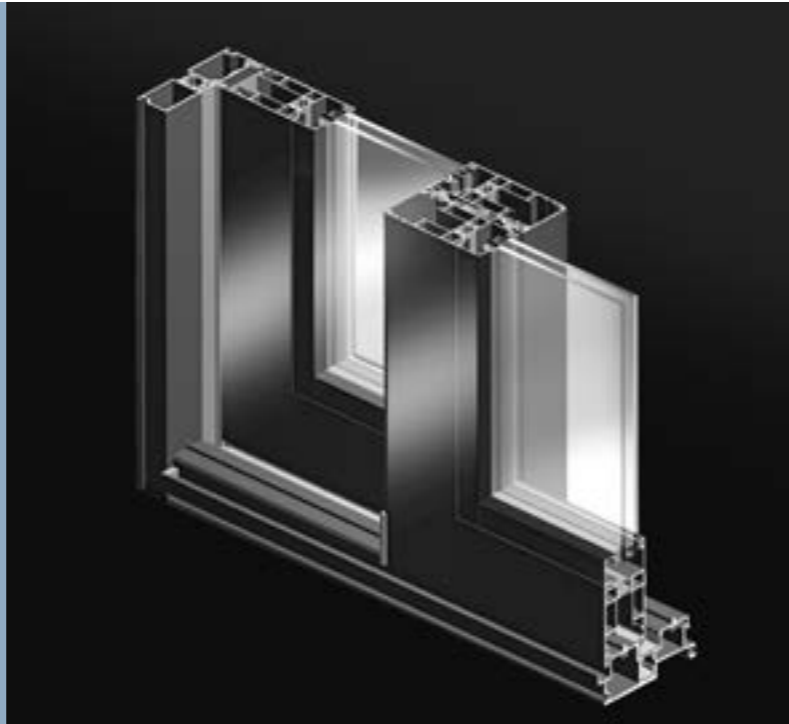




# GALENE, the panoramic lift-and-slide system

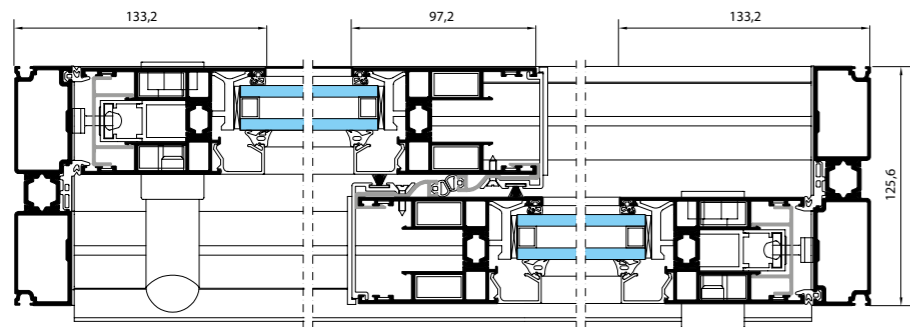
## PRODUCT BENEFITS

- Lift-and-slide system with a 126 mm module
- Available with or without a thermal break
- Various configurations possible to meet the requirements of even the most ambitious architectural projects (including 90° angle sliding frames).
- Large sizes up to W x H = 6.5 m x 2.5 m available for the 2-leaf frame
- 2-,3- or 4-point locking systems activated by a special handle (single or double)
- Possibility of glazing with an integrated blind for solar protection

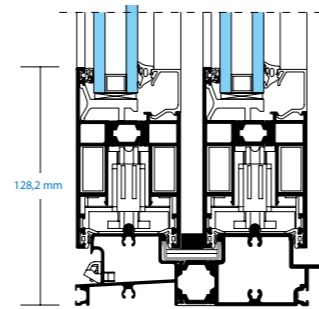


Architect: Mora, Sant Vicens Arquitectes Associats Photographer: Lluís Casals

## CROSS-SECTIONS



Horizontal cross-section, 2 tracks, 2 leaves

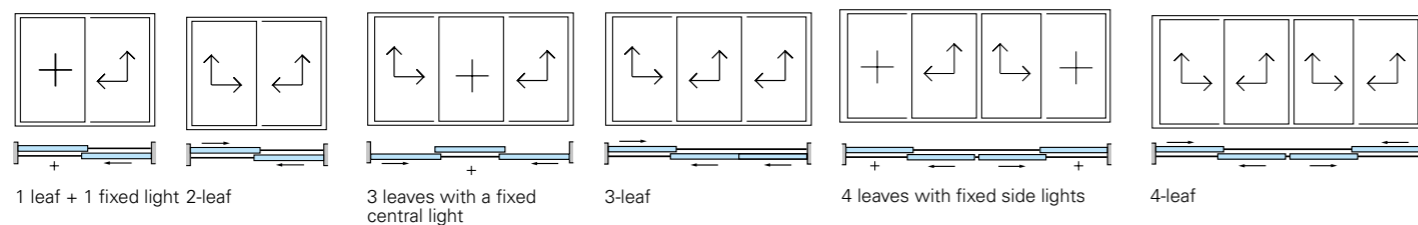


Vertical cross-section, 2 tracks

## CONFIGURATIONS

Basic frame

**2 tracks**



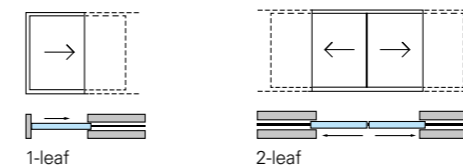
## PERFORMANCE

	<b>MAXIMUM DIMENSIONS</b>	Up to W 6.50 m x H 2.50 m. 3-leaf patio door on 3 tracks
	<b>MAXIMUM WEIGHT PER LEAF</b>	Up to 300 kg
	<b>THERMAL</b>	Uw = 1.6 W/m <sup>2</sup> .k With Ug = 1.0 W/m <sup>2</sup> .K + insulating crossbar
	<b>WEATHER PERFORMANCE</b>	A <sub>4</sub> E <sub>7</sub> V <sub>C5</sub> * 2-leaf patio door on 2 tracks (W 3 m x H 2.20 m)

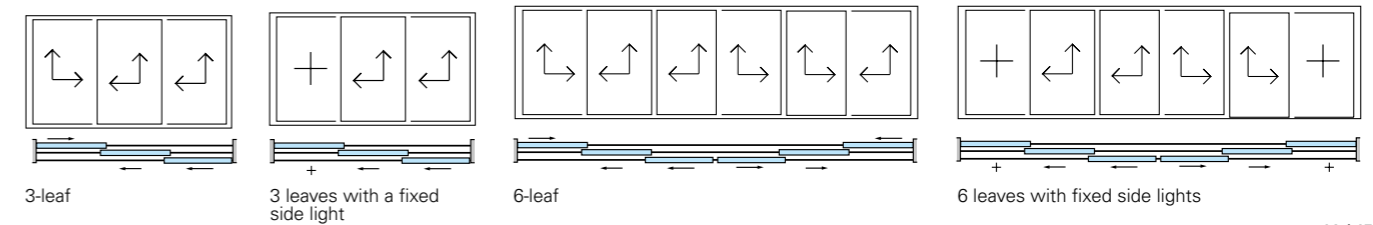
\* (A = Air, E = Water, V = Wind)

Full-access frame

**single track**



**3 tracks**



# SOLEAL 55\*, the universal sliding system suitable for all your large-scale projects

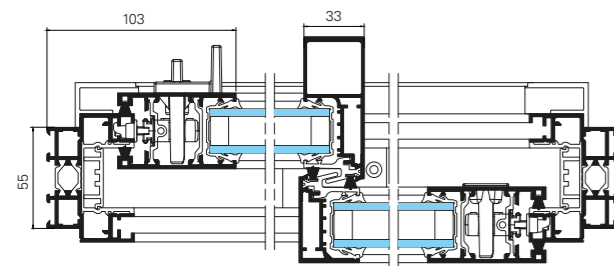
## PRODUCT BENEFITS

- Many different configurations to meet the requirements of residential and tertiary sector projects
- Multipoint locking system (from 1 to 4 points) with a key lock option
- Tubular or blade-shaped reinforcer with optional decorative elements
- Concealed drainage in all configurations
- Accessibility solutions in accordance with legislation on access for disabled persons for all configurations

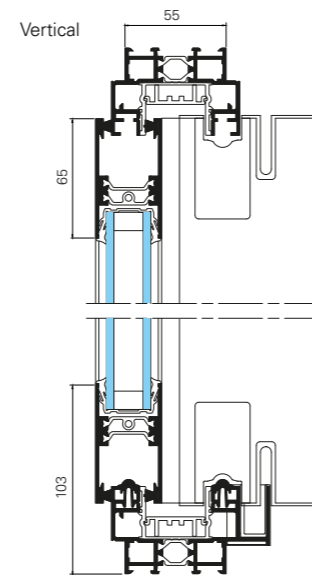


Architects: Lacaton & Vassal | Photography: DR Technal

## CROSS-SECTIONS



Horizontal

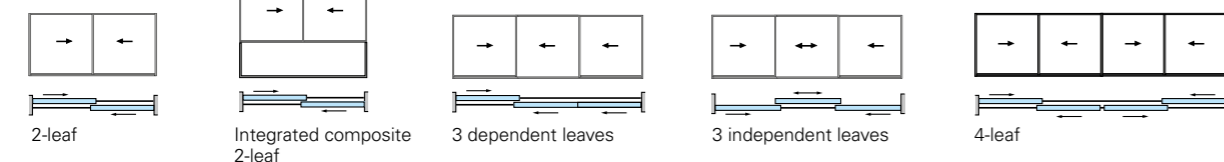


Vertical

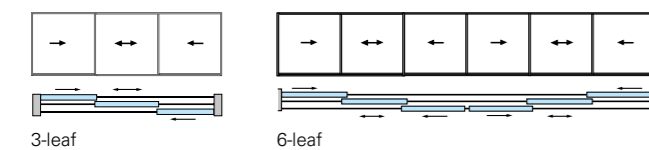
## CONFIGURATIONS

Basic frame

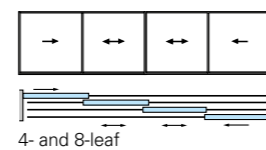
### 2 tracks



### 3 tracks



### 4 tracks



\* The SOLEAL sliding system is also available in a straight cut 65 mm module, version with a 40 mm thermal break to meet high thermal requirements

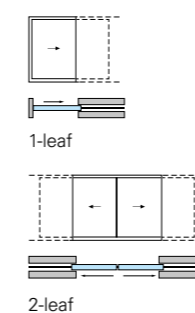
## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W 4.30 m x H 2.60 m. 2-leaf patio door on 2 tracks
	MAXIMUM WEIGHT PER LEAF	Up to 200 kg
	THERMAL	Up to 1.4 W/m <sup>2</sup> .K, Sw: 0.45 and TLw: 0.59 Double glazing with Ug = 1.0 W/m <sup>2</sup> .K + insulating crossbar (W 4.30 m x H 2.60 m)
	ACOUSTIC	-35 dB (Ra, Tr) Patio door with 2 tracks - 2 leaves (W 1.85 m x H 1.48 m)
	WEATHER PERFORMANCE	A <sub>4</sub> - E <sub>6A</sub> -V <sub>B2</sub> * Patio door with 2 tracks - 2 leaves (W 3 m x H 2.50 m)
	ACCESSIBILITY	Disabled access threshold

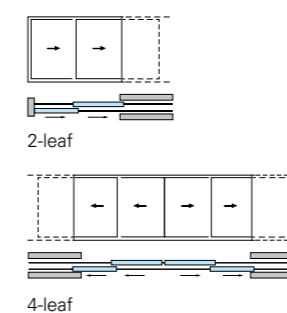
Test results according to product standard NF 270-1  
\*(A = Air, E = Water, V = Wind)

### Full-access frame

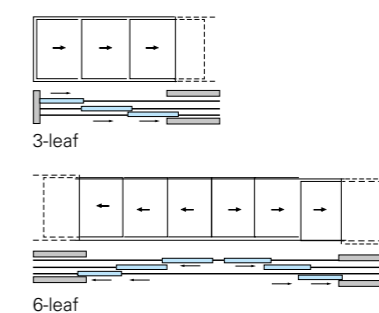
#### Single track



#### 2 tracks



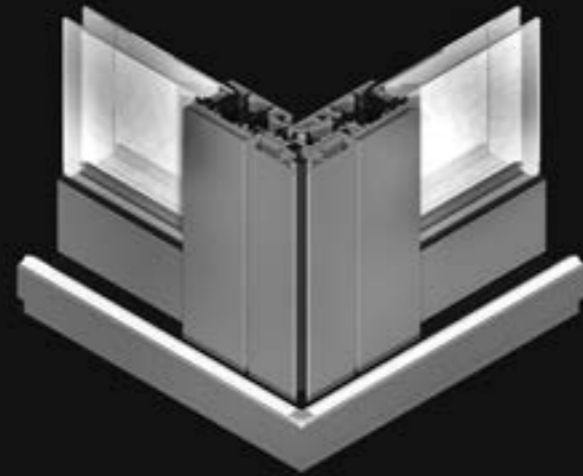
#### 3 tracks



# SOLEAL, the 90° corner sliding system for large contemporary openings

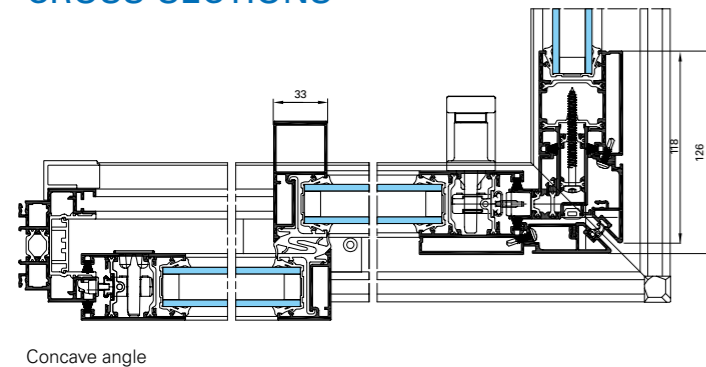
## PRODUCT BENEFITS

- Basic configurations from 2 to 4 tracks and full-access up to 3 tracks
- Opening with a concave or convex angle
- Large sizes available up to W 6 m x H 2.50 m per side, on 3 tracks
- Discreet corner post
- Concealed drainage in all configurations
- Accessibility solutions in accordance with legislation on access for disabled persons available for all configurations

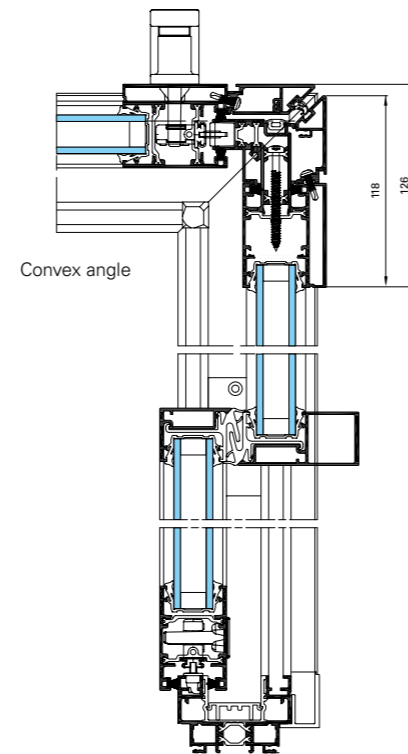


Photography: DR Technal

## CROSS-SECTIONS



Concave angle



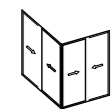
Convex angle

## CONFIGURATIONS

Basic frame

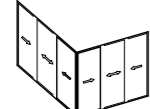
Concave angles

2 tracks



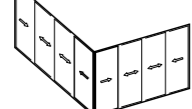
2 x 2 leaves

3 tracks



2 x 3 leaves

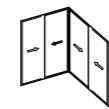
4 tracks



2 x 4 leaves

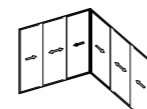
Convex angles

2 tracks



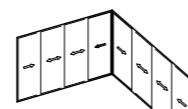
2 x 2 leaves

3 tracks



2 x 3 leaves

4 tracks



2 x 4 leaves

## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W 4.30 m x H 2.60 m. 2-leaf patio door on 2 tracks
	MAXIMUM WEIGHT PER LEAF	Up to 200 kg
	THERMAL	Up to 1.4 W/m <sup>2</sup> .K, Sw: 0.45 and TLw: 0.59 Double glazing with Ug = 1.0 W/m <sup>2</sup> .K + insulating crossbar (W 4.30 m x 2.60 m)
	ACOUSTIC	-34 dB (Ra, Tr) Patio door with 2 tracks - 2 leaves (W 2.35 m x H 2.18 m)
	WEATHER PERFORMANCE	A <sub>4</sub> -E <sub>7A</sub> -V <sub>B2</sub> * 2 tracks - 2 leaves with a disabled access threshold (W 3 m x H 2.5 m)
	ACCESSIBILITY	Disabled access threshold

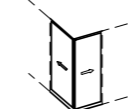
Test results according to product standard NF 270-1

\* (A = Air, E = Water, V = Wind)

Full-access frame

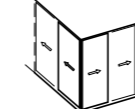
Concave angles

Single track



2 x 1 leaves

2 tracks



2 x 2 leaves

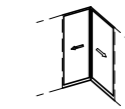
3 tracks



2 x 3 leaves

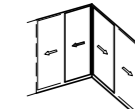
Convex angles

Single track



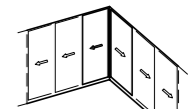
2 x 1 leaves

2 tracks



2 x 2 leaves

3 tracks

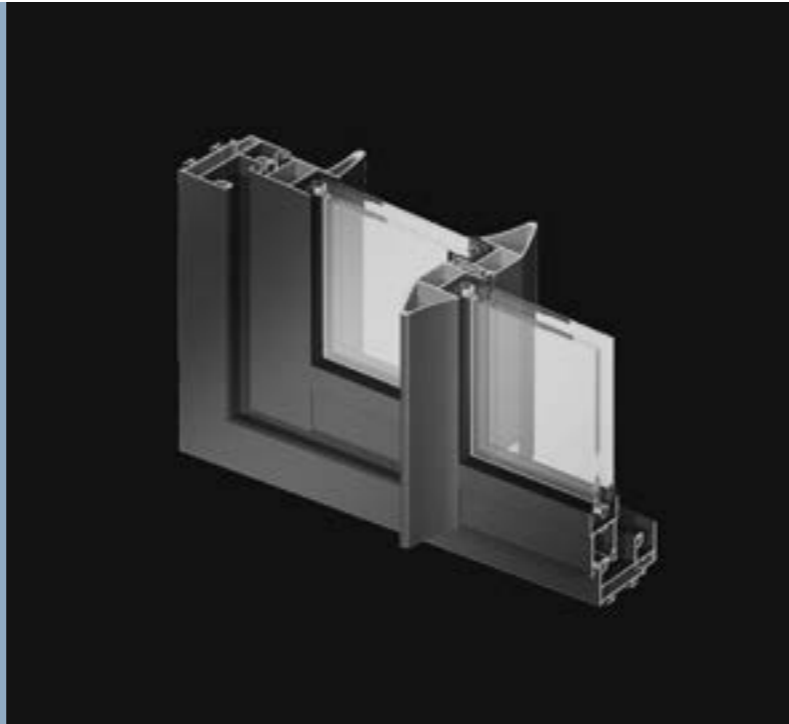


2 x 3 leaves

# TOPAZE, the contemporary sliding system that combines subtlety and simplicity

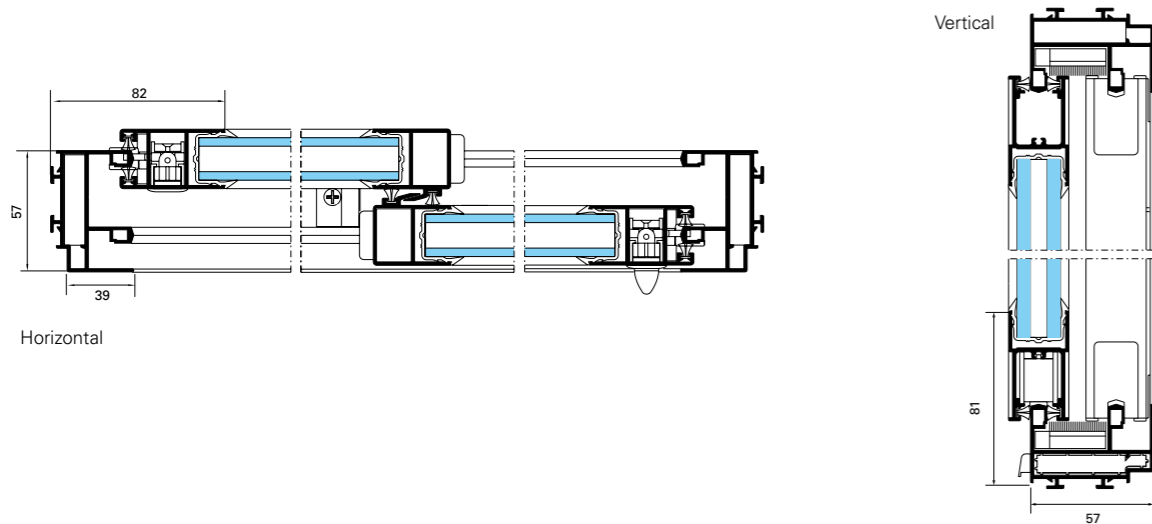
## PRODUCT BENEFITS

- 46 mm module with no thermal break
- Significant glazed area
- Discreet 36 mm central stiles
- Infill from 5 to 20 mm
- Full range of closing mechanisms
- Tested for class 5 cyclone resistance
- Suitable for tropical zones
- Compatible with doors and windows from the same range



Architects: Cabinet KOFFI and DIABATE Architectes Photographer: DRTechnal

## CROSS-SECTIONS

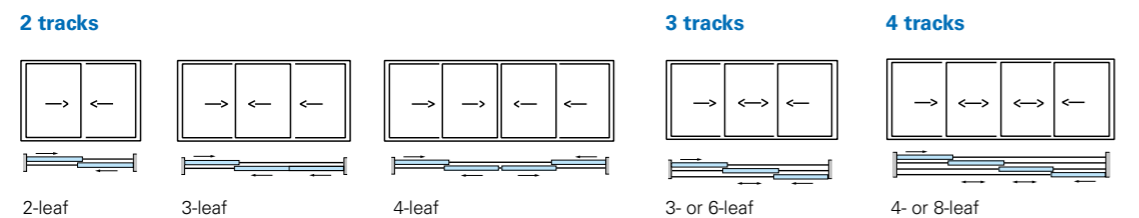


## PERFORMANCE

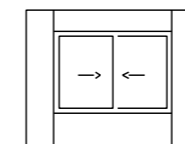
	MAXIMUM DIMENSIONS	Up to 2.60 m high
	MAXIMUM WEIGHT PER LEAF	Up to 140 kg
	THERMAL	No thermal break
	ACOUSTIC	-35 dB (Ra, Tr) 2-leaf window W 1.47 m x H 1.48 m
	WEATHER PERFORMANCE	A <sub>3</sub> - E <sub>4A</sub> -V <sub>A5</sub> * Patio door with 2 cyclone-resistant leaves W 2.20 m x H 2.15 m

Test results in accordance with European standards in force  
\*(A = Air, E = Water, V = Wind)

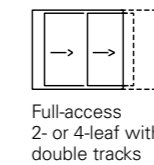
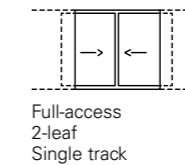
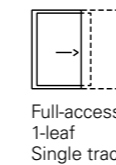
## CONFIGURATIONS



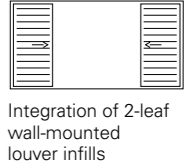
### Composite frames



### Full-access frames



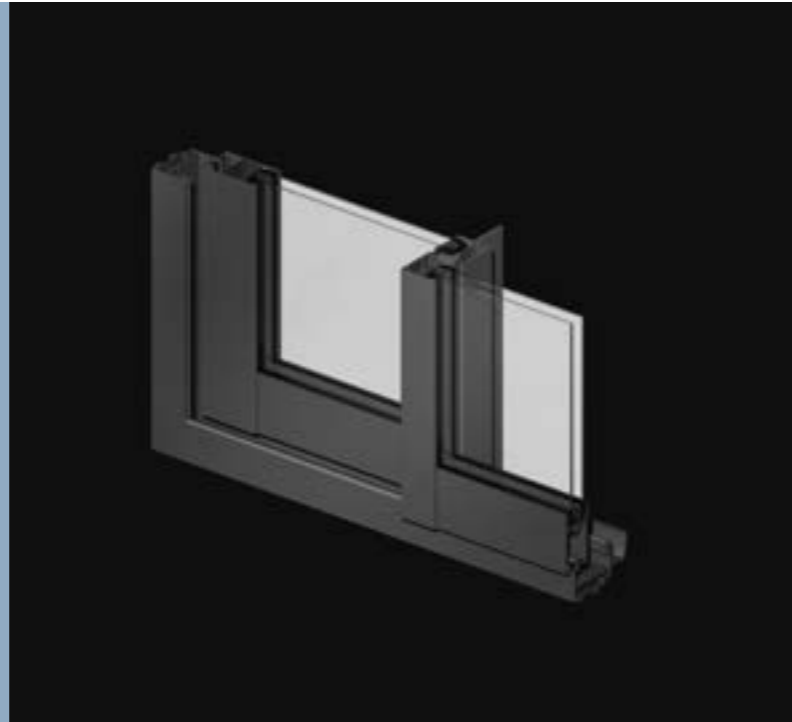
### Integration of infills for shutters



# TOPAZE +, the contemporary sliding system for large openings

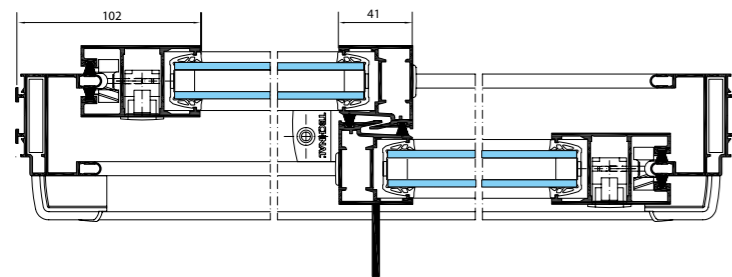
## PRODUCT BENEFITS

- 46 mm module with no thermal break
- Variety of different creations with straight or curved designs
- Discreet 36 mm central stiles
- Infill from 6 to 24 mm
- Full range of closing mechanisms
- Subjected to more than 20,000 open and close test cycles
- Suitable for tropical zones
- Compatible with doors and windows from the same range and SAFETYLINE louver window compositions

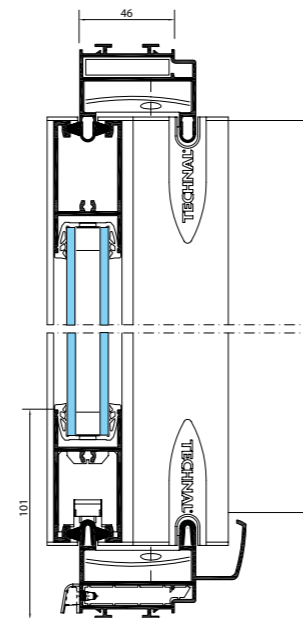


Architects: A+A Photography: A + A

## CROSS-SECTIONS



Horizontal cross-section, 2 tracks - 2-leaf



Vertical cross-section

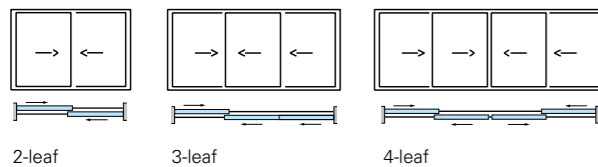
## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to 3 m high
	MAXIMUM WEIGHT PER LEAF	Up to 200 kg
	THERMAL	No thermal break
	ACOUSTIC	-33 dB (Ra, Tr) 2-leaf window W 1.47 m x H 1.48 m
	WEATHER PERFORMANCE	A <sub>3</sub> - E <sub>A7</sub> -V <sub>C3</sub> * 2-Leaf patio door W 1.80 m x H 2.15 m
	ACCESSIBILITY	Disabled access threshold

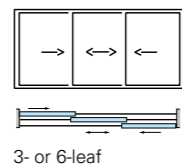
Test results in accordance with European standards in force  
\*(A = Air, E = Water, V = Wind)

## CONFIGURATIONS

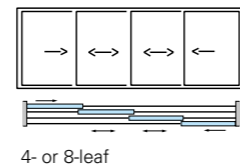
### 2 tracks



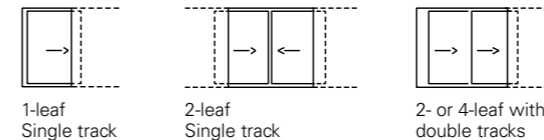
### 3 tracks



### 4 tracks



### Full access and exterior wall mounting



# REFERENCES



SINGLE-FAMILY HOME, Lalbenque (France)

Architect: Franck Martinez Client: Private Technal-approved aluminium frame maker: Semis Miroiterie  
Technal solutions used: LUMEAL sliding systems with concealed opening frames  
Photographer: Franck Martinez



HOTEL QUEMADO, Al Hoceima (Morocco)

Architectural practice: Patrick Genard  
Technal solutions used: SOLEAL sliding systems Photographer: Patrick Genard



SINGLE-FAMILY HOME,

Architect: Isasi & Pieltáin Arquitectos Client: Private  
Technal solutions used: GALENE sliding systems Photographer: Ambassador



FACULTY OF SCIENCE AND EDUCATION, Seville (Spain)

Architectural practice: Cruz y Ortiz Arquitectos Client: Universidad de Sevilla  
Technal-approved aluminium frame maker: Rubio Gámez SL Technal solutions used: TOPAZE sliding systems  
Photographer: Pedro Pegenaute

# WINDOWS AND PATIO DOORS

SOLEAL 55 · SOLEAL 65 · TOPAZE · SAFETYLINE

# SOLEAL 55 Minimal, the universal window that highlights the finer points of designs

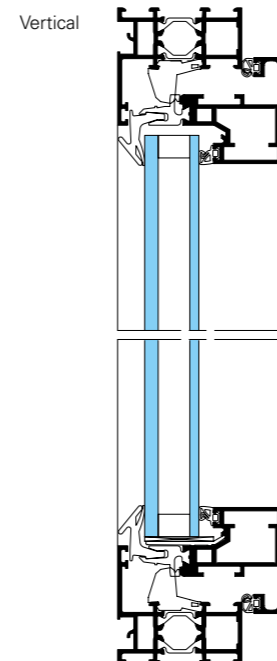
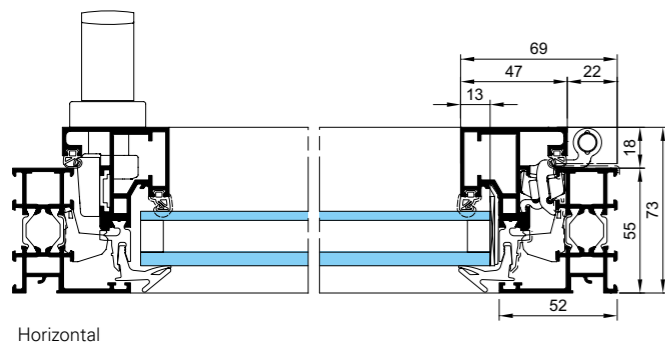
## PRODUCT BENEFITS

- Discreet profiles, 52 mm circumference and 66 mm central post
- 3 attractive designs: Contemporary, Classic or Traditional
- Clip-on-trim to tastefully highlight the opening frame
- "Equilibre" version: harmonious balance between the mullions and transoms
- 24 to 32 mm infill for the opening section and 6 to 42 mm for the fixed section
- Concealed drainage in frames and composite assemblies
- Compatible with the range's sliding systems and doors



Architects: W-Architectures (Voinchet & Architectes Associés) Photographer: DR Technal

## CROSS-SECTIONS



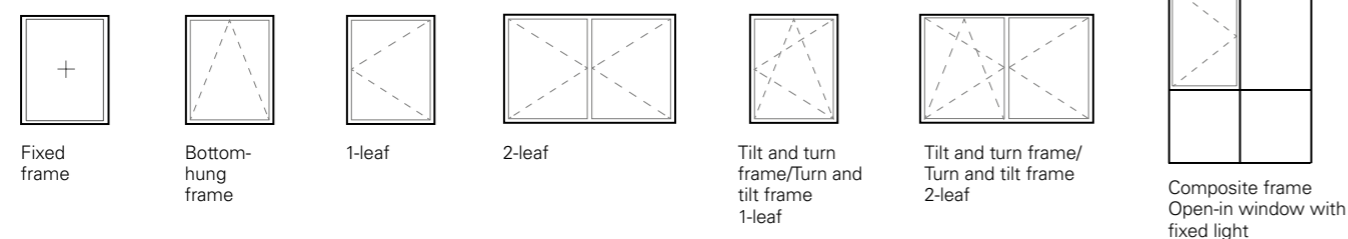
## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W 1 m x H 2.50 m
	MAXIMUM WEIGHT PER LEAF	Up to 130 kg
	THERMAL	U <sub>w</sub> up to 1.4 W/m <sup>2</sup> .°K, S <sub>w</sub> = 0.43 and TL <sub>w</sub> = 0.57 with triple glazing (U <sub>g</sub> = 0 + warm edge) (W 1.25 x H 1.48 m)
	ACOUSTIC	-38 dB (Ra, Tr) 1-leaf tilt and turn Minimal opening Frame
	WEATHER PERFORMANCE	A <sub>4</sub> -E <sub>9A</sub> -V <sub>C3</sub> * 1-leaf tilt and turn window (W 1.20 m x H 1.60 m)
	ACCESSIBILITY	Patio door with disabled access threshold

Test results according to product standard NF 270-1  
\*(A = Air, E = Water, V = Wind)

## CONFIGURATIONS

### Open-in





# SOLEAL 55 Visible sash, the universal window suitable for all styles

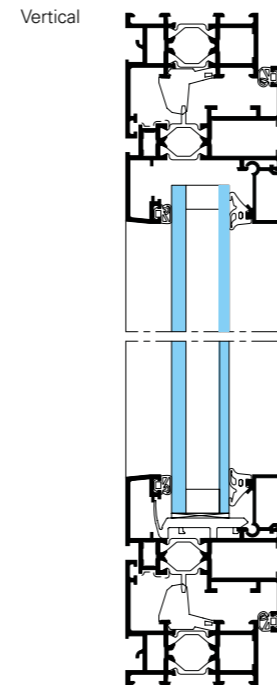
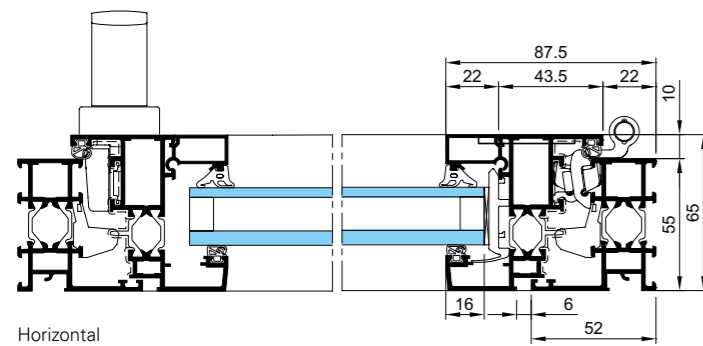
## PRODUCT BENEFITS

- Wide selection of configurations to better meet the needs of each project
- 3 attractive open-out designs:  
Contemporary: straight and minimalist  
Classic: curved and round  
Traditional: with moulding for greater authenticity
- 3 open-in styles to customise the joinery
- Clip-on flashing for all 3 styles
- Concealed drainage on the frames and composite assemblies



Architects: Agence Architecture Séquences Photographer: DRTechnal

## CROSS-SECTIONS



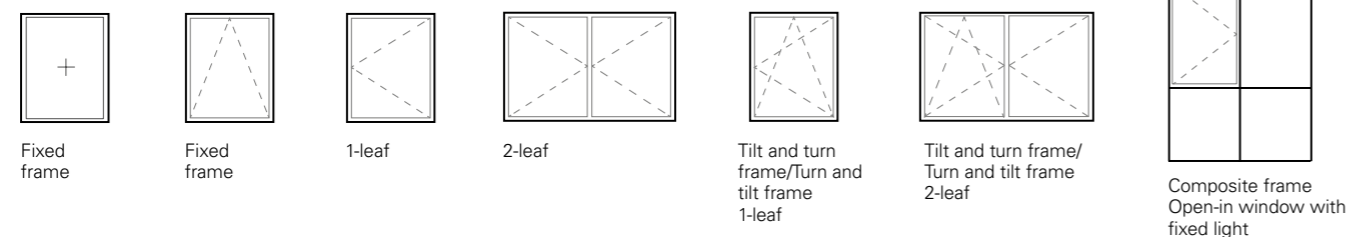
## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W 1 m x H 2.5 m
	MAXIMUM WEIGHT PER LEAF	Up to 130 kg
	THERMAL	Uw up to 1.2 W/m <sup>2</sup> .°K, Sw = 0.39 and TLw = 0.54 with triple glazing (Ug = 0.6 + warm edge) (W 1.25 x H 1.48 m)
	ACOUSTIC	-40 dB (Ra, Tr) 1-leaf tilt and turn window
	WEATHER PERFORMANCE	A4- E9A-VC3* 1-leaf tilt and turn window (W 1.20 m x H 1.60 m)
	ACCESSIBILITY	Patio door with disabled access threshold

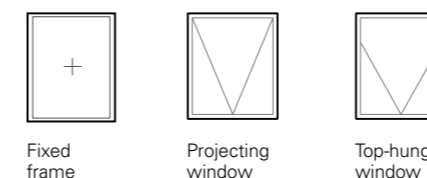
Test results according to product standard NF 270-1  
\*(A = Air, E = Water, V = Wind)

## CONFIGURATIONS

### Open-in



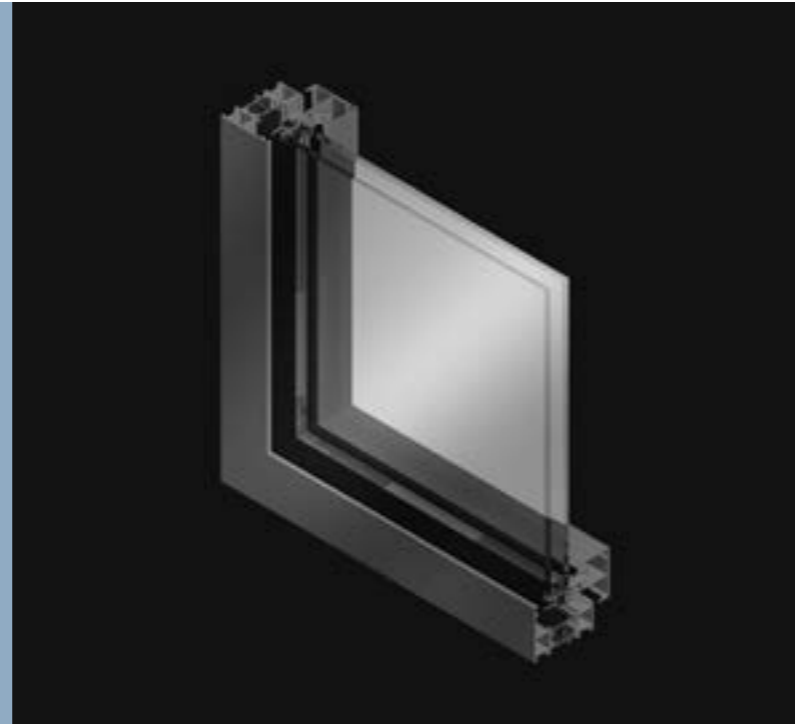
### Open-out



# SOLEAL 65 Minimal, the universal high-performance window offering sleek design

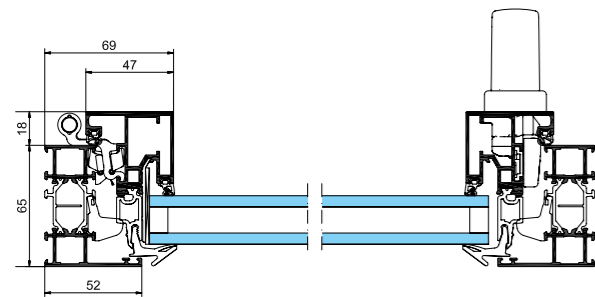
## PRODUCT BENEFITS

- 65 mm module and 30 mm polyamide strip
- Minimal open-in frame
- Discreet profiles, 52 mm circumference and 66 mm central hinge
- Clip-on-trim to tastefully highlight the opening frame
- Concealed drainage on frames and transoms
- Infill:
  - From 24 to 42 mm on the opening frame
  - From 24 to 54 mm on the fixed section
- Compatible with the range's sliding systems and doors

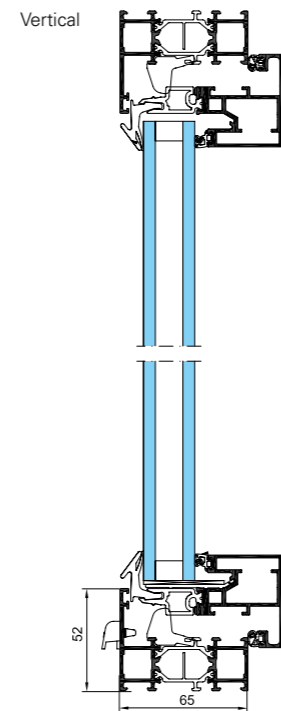


Architect: Manuelle Gautrand | Photographer: Vincent Fillon

## CROSS-SECTIONS

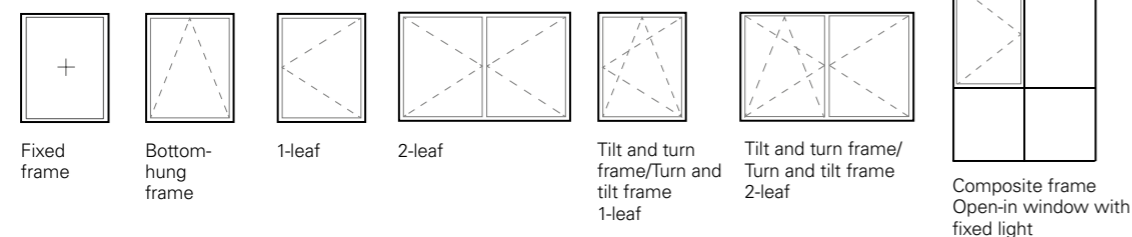


Open-in  
1-leaf window and patio door



## CONFIGURATIONS

### Open-in



## PERFORMANCE

✦	MAXIMUM DIMENSIONS	Up to W 1 m x H 2.70 m
kg	MAXIMUM WEIGHT PER LEAF	Up to 130 kg
🌡️	THERMAL	Uw up to 1.0 W/m <sup>2</sup> .°K, Sw =0.43 and TLw = 0.57 with triple glazing (Ug = 0.6 + warm edge) 1-leaf window W 1.25 m x H 1.48 m
🔊	ACOUSTIC	38 dB 1-leaf turn and tilt Minimal opening frame 44-1SI(20) 12 (W 1.23 m x H 1.48 m)
☂️	WEATHER PERFORMANCE	A4- E750-Vc4* 1-leaf tilt and turn window
♿️	ACCESSIBILITY	Patio door with disabled access threshold

Test results according to product standard NF EN 13380  
\*(A = Air, E = Water, V = Wind)

# SOLEAL 65 Visible sash, the universal window for optimum performance

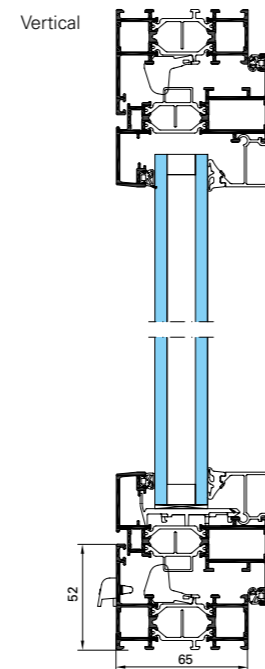
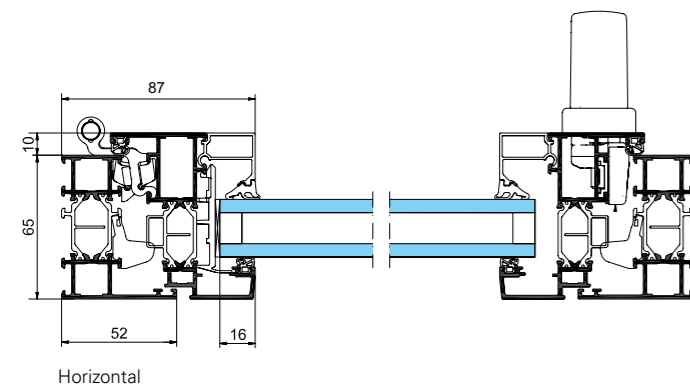
## PRODUCT BENEFITS

- 65 mm module and 30 mm polyamide strip
- Open-in and open-out Visible sash opening frame
- Wide selection of configurations to better meet the needs of each project
- Concealed drainage in frames and composite assemblies
- Version with concealed hardware available for large openings with an opening frame up to W 1.70 m x H 2.50 m
- Enhanced security: RC2 resistance class according to European standard EN 1627-30



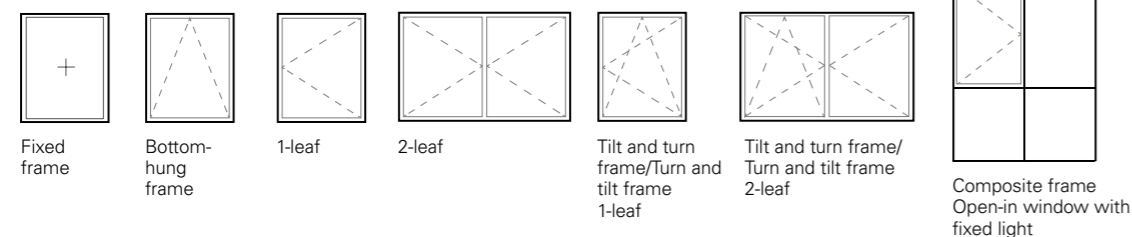
Architects: A.D.H. Photo: DR Technal

## CROSS-SECTIONS



## CONFIGURATIONS

### Open-in

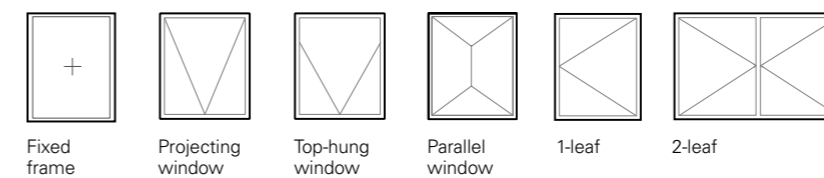


## PERFORMANCE

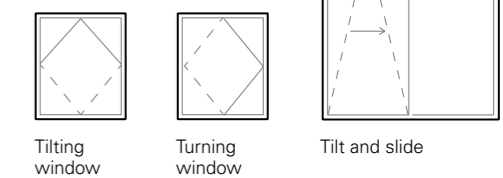
	MAXIMUM DIMENSIONS	Up to W 1.70 m x H 2.50 m for 1-leaf patio door
	MAXIMUM WEIGHT PER LEAF	Up to 160 kg with concealed hardware Up to 130 kg with standard hardware
	THERMAL	Uw up to 0.9 W/m <sup>2</sup> ·K, Sw = 0.41 and TLw = 0.54 with triple glazing (Ug = 0.5 + warm edge) 1-leaf window with concealed hardware W 1.25 m x H 1.48 m
	ACOUSTIC	-43 dB (Ra, Tr) Test on window with 88.1/-20/-66.2 sound-proof glazing
	WEATHER PERFORMANCE	A4- E1050-VC4* 1-leaf tilt and turn window
	ACCESSIBILITY	Patio door with disabled access threshold
	SECURITY	RC2 break-in resistance class (turn and tilt - tilt and turn)

Test results according to product standard NF EN 13380  
\*(A = Air, E = Water, V = Wind)

### Open-out



### Special openings



# TOPAZE, the contemporary window that combines subtlety, simplicity and versatility

## PRODUCT BENEFITS

- 46 mm module with no thermal break
- 3 styles of open-in frames: straight, curved or basic  
Square or rounded glazing beads on the inside
- Infill from 6 to 33 mm
- Double sealed fixed/opening frames via an internal/external multi-purpose gasket
- Recessed casement for multipoint locks
- Suitable for tropical zones
- Compatible with doors and sliding systems from the same range

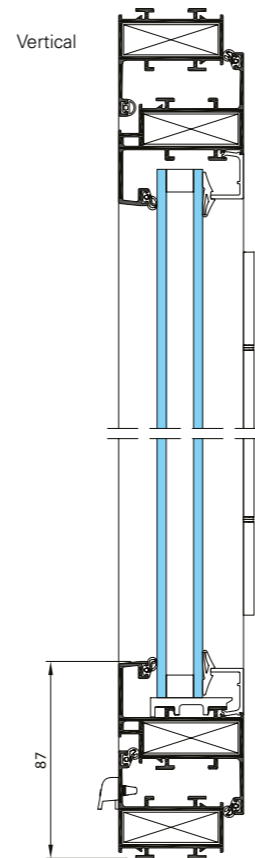


Architects: Cruz y Ortiz Arquitectos Photographer: Pedro Pegenaute

## CROSS-SECTIONS



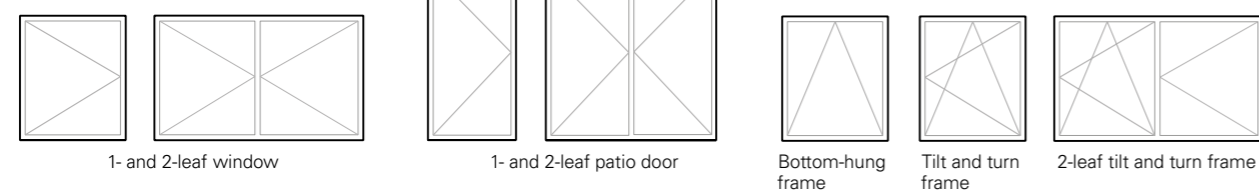
Horizontal



Vertical

## CONFIGURATIONS

### Open-in

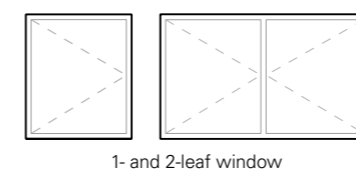


## PERFORMANCE

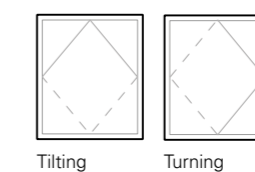
	MAXIMUM DIMENSIONS	Up to W 1.1 m x H 2.35 m 1-leaf patio door with lock
	MAXIMUM WEIGHT PER LEAF	Up to 100 kg
	THERMAL	No thermal break
	ACOUSTIC	Rw (C ; Ctr) < 38 dBa (-1 ; -4) depending on the glazing
	AIR PERMEABILITY	Up to 600 Pa (class 4)
	WATERTIGHTNESS	Up to 1200 Pa (class 1200A)
	WIND RESISTANCE	Up to 2000 Pa (class 5)

Tested according to European standards EN1026 – EN1027 – EN12211

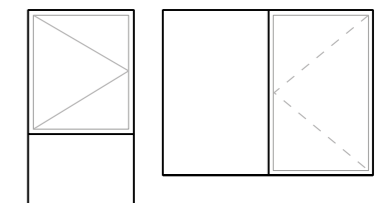
### Open-out



### Special opening



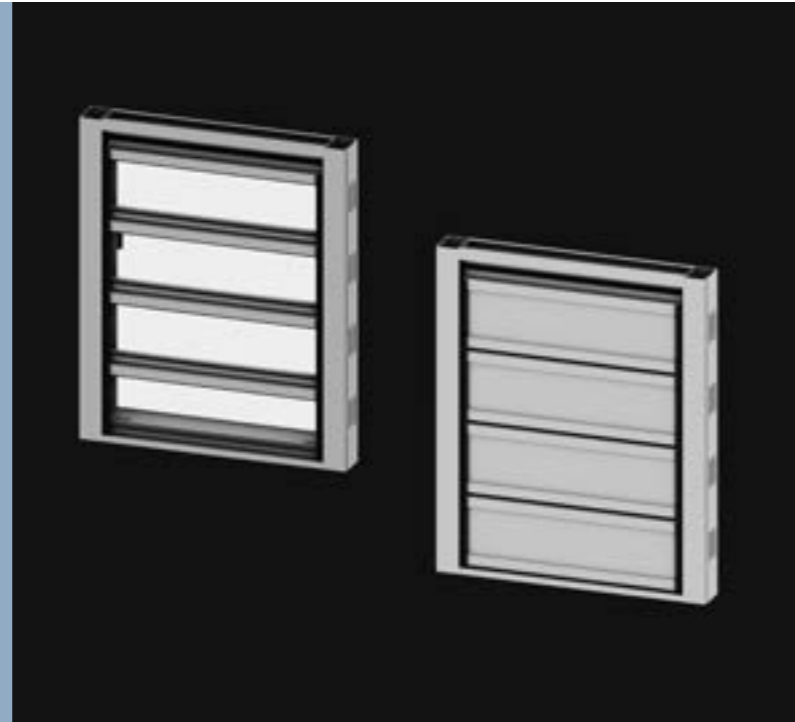
### Composite frames



# SAFETYLINE, the contemporary louver window: natural ventilation and solar protection

## PRODUCT BENEFITS

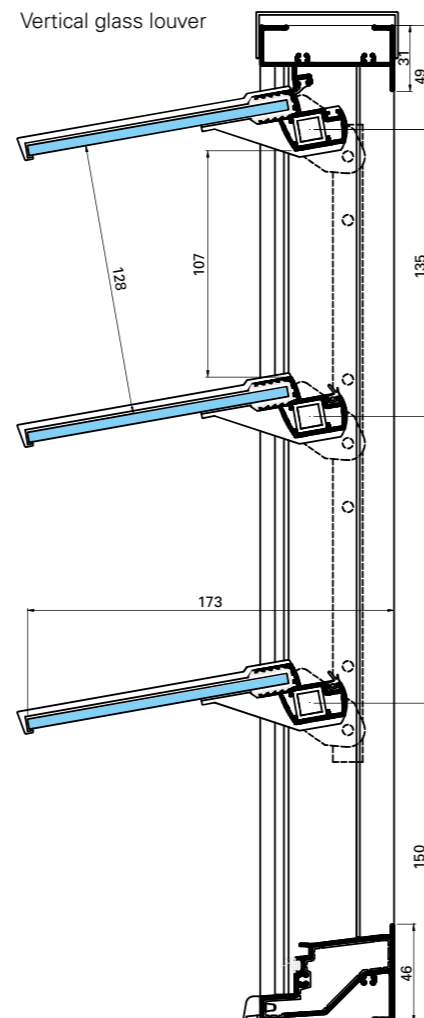
- Ideal for new builds or renovations
- Large sizes up to 1.4 m wide available with high performance levels
- Multiple compositions to choose from: fixed/mobile louvers, aluminium/glass/combination
- Integrated fly screen
- Compatible with the entire TOPAZE range
- Optional concealed motorisation that is compatible with home automation systems



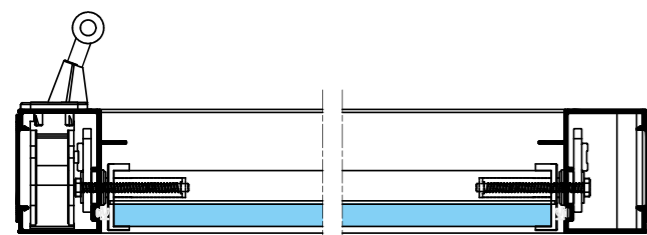
Architect: 2APMR Photographer Hervé Douris

## MOTORISATION FEATURES

- Motor integrated into the standard fixed frame
- A single motor can power up to 18 aluminium louvers or 12 glass louvers
- Possibility of using several motors
- Louvers driven by cassettes
- No need for compensation springs
- Integration into a home automation system/centralised control system
- Energy efficient motor (12 VDC / 10 W)
- Wired or remote control
- Endurance tested over 30,000 cycles
- Weather resistance is the same for the manual and motorised versions



## CROSS-SECTIONS



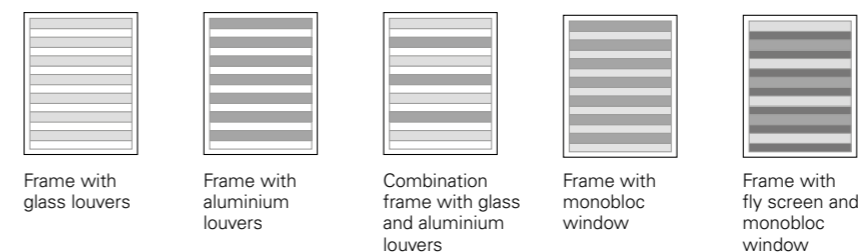
Horizontal glass louver

## PERFORMANCE

	LOUVER DIMENSIONS	Up to 135 mm
	MAXIMUM DIMENSIONS	Up to 1.4 m wide
	WEATHER PERFORMANCE	A <sub>2</sub> E <sub>7B</sub> V <sub>C5</sub> * Glass louvers (W 1 m x H 1.14 m)
	CYCLONE RESISTANCE	Class 5
	ORIENTATION	Up to 80°

Tested according to European standards EN1026 – EN1027 – EN12211  
 \*(A = Air, E = Water, V = Wind)

## CONFIGURATIONS



# REFERENCES



**CITY HALL, Montpellier (France)**

Architects: Ateliers Jean Nouvel (representative architect), François Fontès (external architect)  
 Client: Town of Montpellier  
 Technal-approved aluminium frame maker: Labastère  
 Technal solutions used: Joinery systems developed using SOLEAL windows  
 Photographer: Luc Boegly



**SINGLE-FAMILY HOME, Dakar (Senegal)**

Architects: Koffi and Diabaté Group  
 Technal solutions used: TOPAZE window, TOPAZE sliding system, SAFETYLINE louver window  
 Photography: DR Technal



**RESIDENTIAL HOUSING, Hong Kong (China)**

Architectural practice: P & T Architects and Engineers LTD. Client: Manhattan Group, Hong Kong Installer: HK MB  
 Technal solutions used: TOPAZE windows Photographer: DR Technal



**PALACE OF CONGRESS, Seville (Spain)**

Architect: Guillermo Vázquez Consuegra Client: Consorcio Palacio de Exposiciones y Congresos de Sevilla Technal-approved aluminium frame maker: Cristalería y Aluminios Guzmán Technal solutions used: SOLEAL doors and windows, LUMEAL sliding systems and GEODE curtain walling Photographer: Fernando Alda

# DOORS

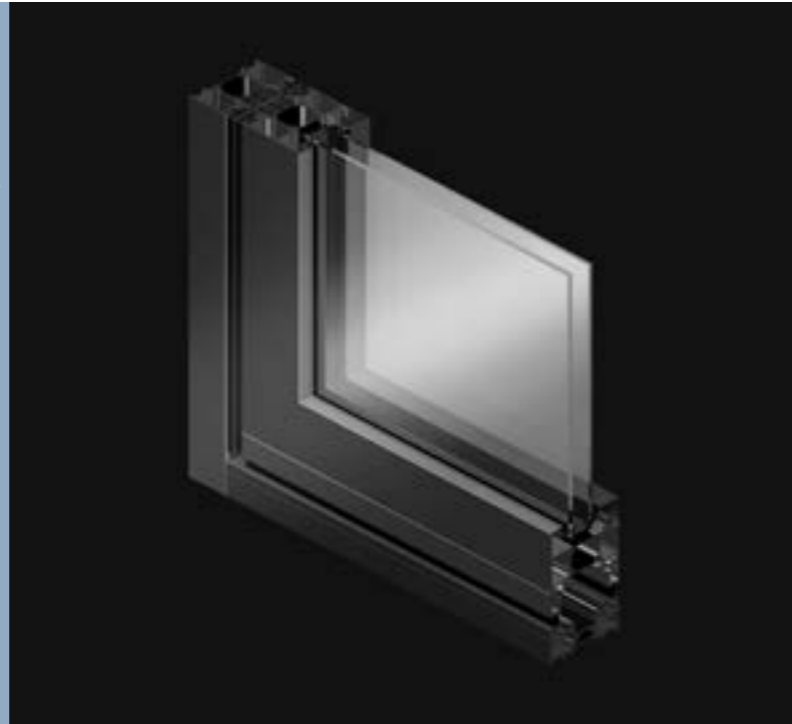
AMBIAL · SOLEAL 55 · TITANE · TOPAZE



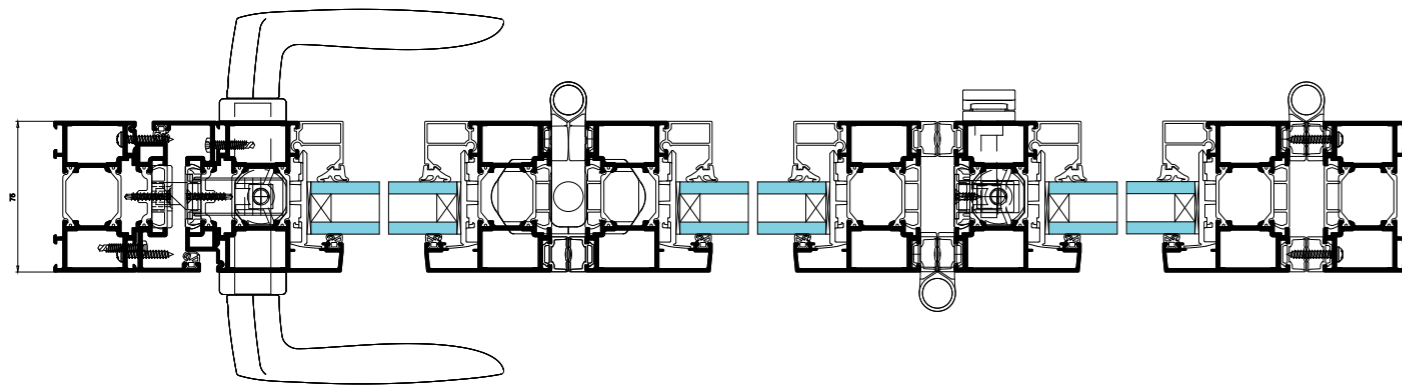
# AMBIAL, the multi-space folding door

## PRODUCT BENEFITS




- 75 mm module for the opening and fixed frame
- Large sizes available up to 12 m long in 10 leaves
- Infill from 14 to 52 mm
- Sleek design:
  - Straight uniform black lines in the open position thanks to the black gasket and hardware
  - Black hinges concealed in the vertical line of the gasket in the closed position
  - Exclusive Technal handle solution with an integrated or removable key, no visible fixings in the closed position
- Advanced thermal performance
- 3-point locking system with insulated key lock



## CROSS-SECTIONS

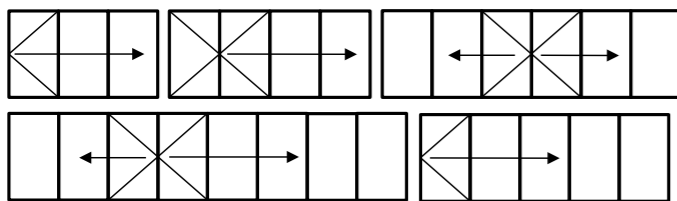


## PERFORMANCE

	LARGE SIZES	Up to W 1,2 m x H 3 m for the 1-leaf door
	MAXIMUM HEIGHT	Up to 150 kg per leaf
	SECURITY	RC2 (certification pending)

## CONFIGURATIONS

Up to 10 leaves



Open-in and open-out



Open from the middle or from the side



## PRODUCT FOCUS



Bottom rollers concealed by black covers



Screw heads covered with black caps which also contribute to weather performance



Black painted lock and hardware faceplates



Extra-flat leaf handles and half-cylinder key covers which can be powder-coated in any Technal colour



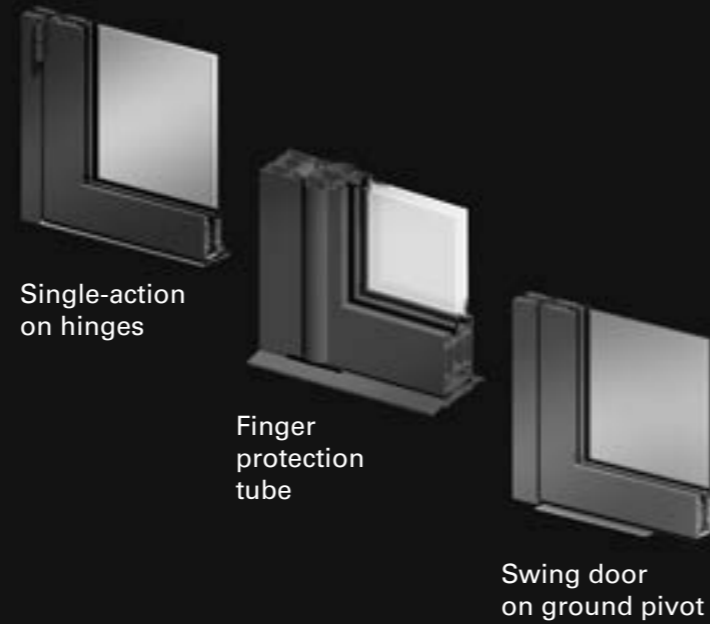
Opening frame groove cover: synthetic profile or black acoustic gasket



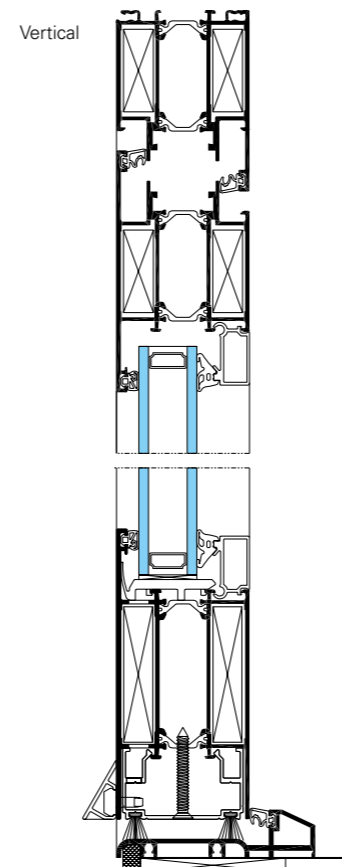
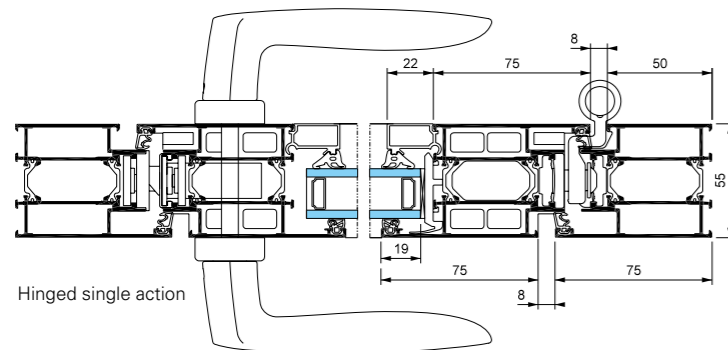
# SOLEAL 55, the universal door that offers multiple solutions

## PRODUCT BENEFITS

- 55 mm module
- 3-In-1 design: hinged door, pivoting swing door and tube-bulb stile door all from the same base product
- Large size door available up to 3 m high
- Intensive-use door (high volumes of traffic)
- Door compatible with SOLEAL windows and sliding systems

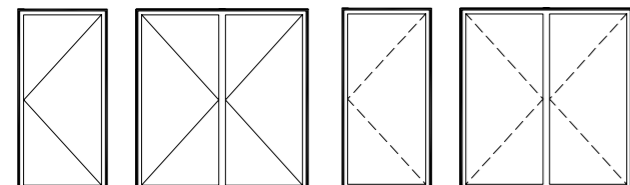


## CROSS-SECTIONS



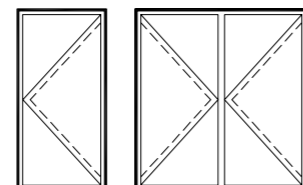
## CONFIGURATIONS

### Single action open-in/open-out











1 leaf - 2 leaves

### Double-action



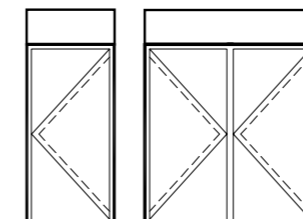
1 leaf - 2 leaves

## PERFORMANCE

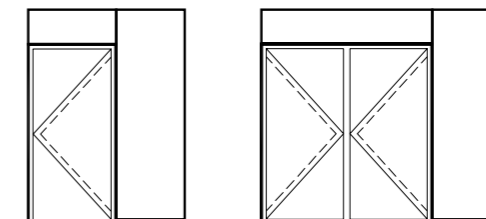
	MAXIMUM DIMENSIONS	Up to W 1.1 m x H 3 m
	MAXIMUM WEIGHT PER LEAF	Up to 150 kg
	THERMAL	$U_w = 1.4 \text{ W/m}^2\cdot\text{K}$ , $TLW = 0.47$ , $Sw = 0.37$ with triple glazing $U_g = 0.6 \text{ W/m}^2\cdot\text{K}$ , $TL = 0.73$ , $g = 0.51$ and insulating glazing crossbar
	RESISTANCE	Tested at torsion and warping stresses in accordance with the standard EN 947-2 (vertical loads). 100 daN EN 948-2 (torsion). EN 949-2 (soft body shocks) 150 joules
	ENDURANCE	Subjected to more than 1 million opening/closing test cycles in accordance with the method described in standard EN 1191: class 8 of scale EN 642-2
	WEATHER PERFORMANCE	A <sub>4</sub> E <sub>6A</sub> V <sub>C3</sub> * (1-leaf open-out hinged door with a disabled access threshold)
	ACCESSIBILITY	Threshold-less installation to facilitate access for disabled persons.
	SECURITY	RC3 break-in resistance class (according to the standard EN 1627)

\* (A = Air, E = Water, V = Wind)

### Composition



1 leaf - 2 leaves



1- and 2-leaf with transom or fixed side light

# TITANE, the intensive use door with enhanced burglary resistant security features

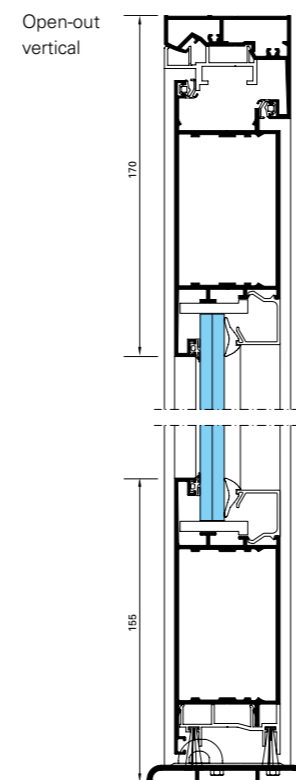
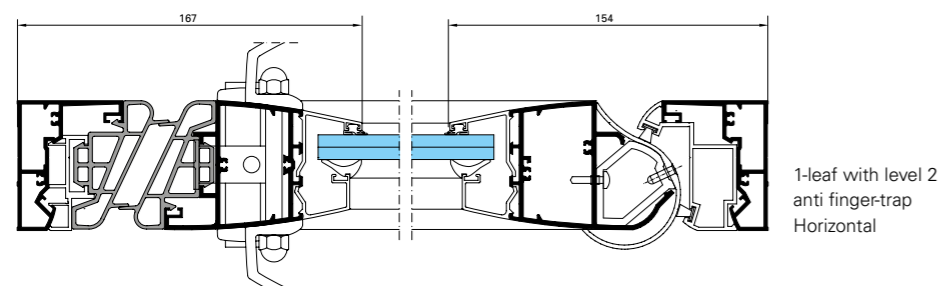
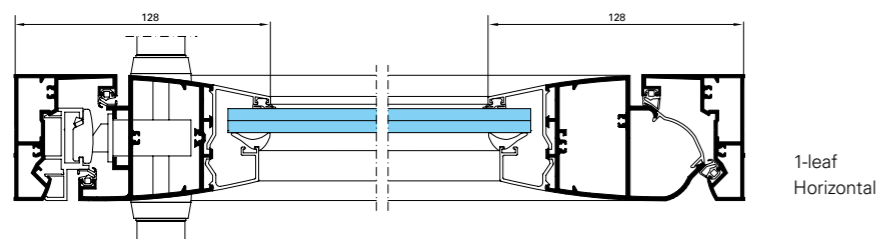
## PRODUCT BENEFITS

- 63 mm module
- Sleek aesthetic, elliptical lines, concealed hinges, integrated handle
- Hinge system subjected to 1 million class 8 test cycles
- Anti-finger trap version is ideal for public places
- Screwed internal glazing beads to delay burglary and vandalism
- Access controlled via an electromagnetic closure system and 3-point lock

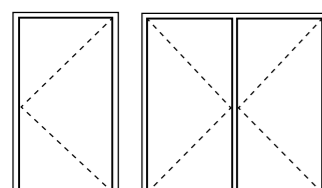


Architect: Nathalie Larradet Photographer: DR Technal

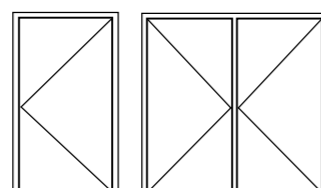
## CROSS-SECTIONS



## CONFIGURATIONS











1- and 2-leaf, open-in

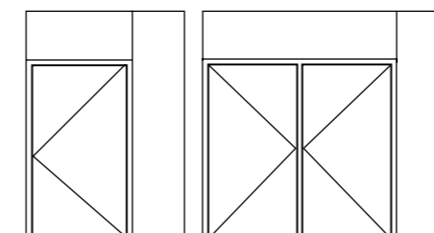


1- and 2-leaf, open-out

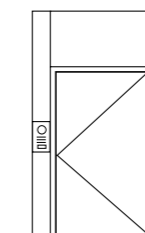
## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W 1.30 m x H 2.50 m
	MAXIMUM WEIGHT PER LEAF	Up to 140 kg
	THERMAL	No thermal break
	RESISTANCE	Subjected to torsion and warping stress tests in accordance with the standard EN 947-2 (vertical loads), 100 daN EN 948-2 (torsion), EN 949-2 (soft body shocks) 150 joules
	ENDURANCE	Subjected to more than 1 million opening/closing test cycles in accordance with the method described in standard EN 1191: class 8 of scale EN 642-2
	WEATHER PERFORMANCE	Double barrier peripheral seal (rubber and brush seals) that continue over the hinges Additional weather resistance provided by a tubular threshold
	ACCESSIBILITY	Threshold-less installation to facilitate access for disabled persons.
	SECURITY	RC2 break-in resistance class (according to the standard EN 1627)

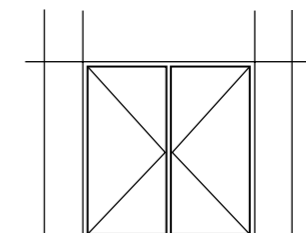
Test results according to product standard NF 270-1



Composite assembly with transom and/or fixed side lights



Compatible with a technical mullion

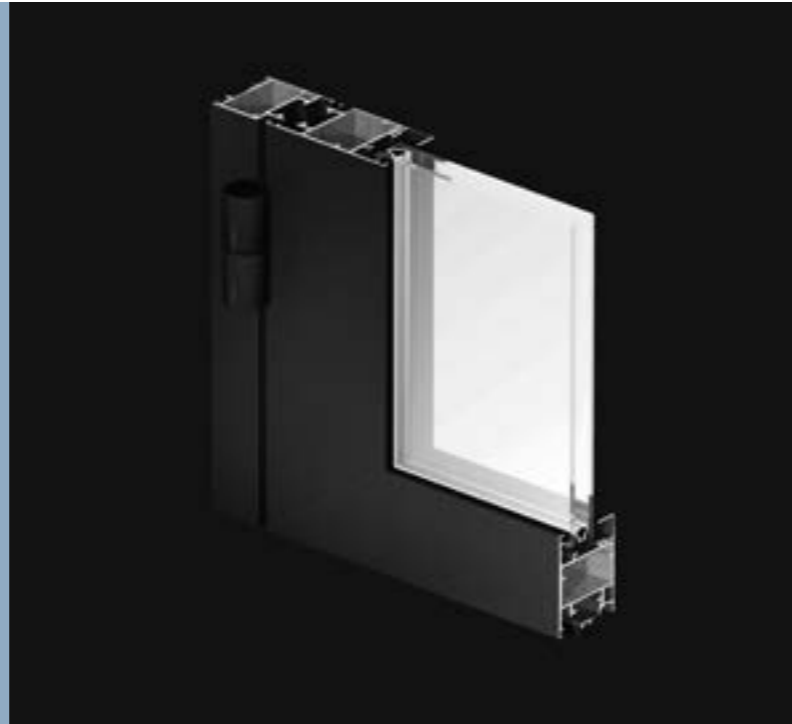


Compatible with GEODE curtain walling

# TOPAZE, the contemporary door that can be adapted to each project

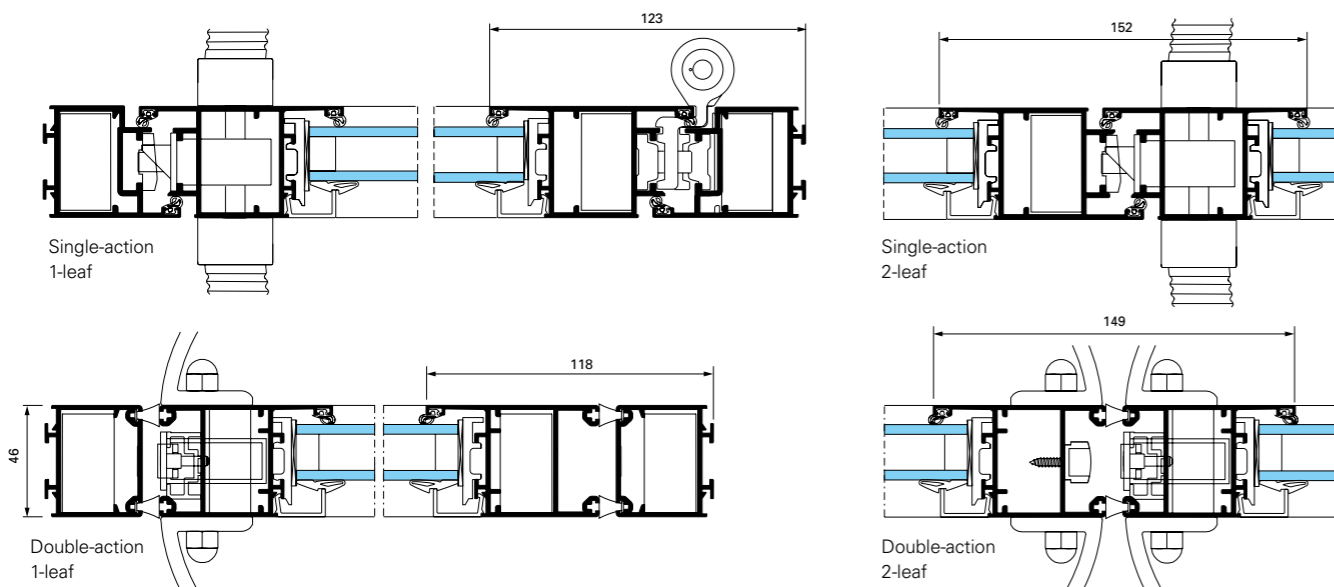
## PRODUCT BENEFITS

- 46 mm module with no thermal break
- Hinged single-action door
- Double-action door via an in-ground pivot.
- Double-action anti finger-trap version
- Wide range of handles and closing mechanisms
- Several different thresholds suitable for different locations








Architects: LOTT JP/ BRESSON - COMBES - ONDET/ ARCHITECTES Photographer: Camus

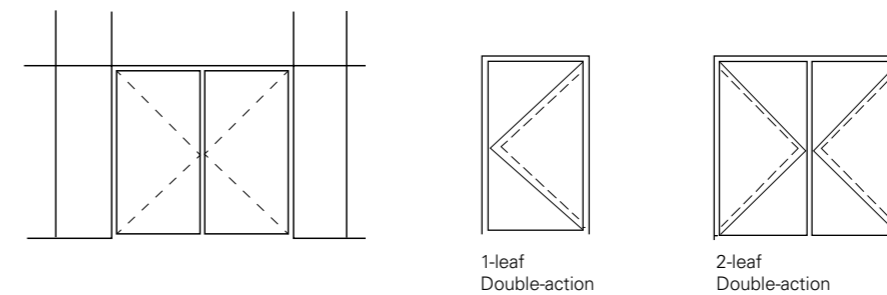
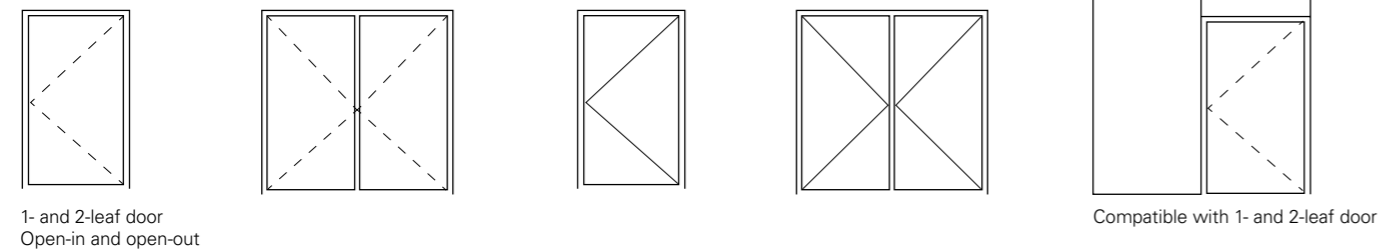
## CROSS-SECTIONS



## PERFORMANCE

	MAXIMUM DIMENSIONS	Up to W x H = 1.10 m x 2.40 m 1-leaf door with recessed split hinges
	MAXIMUM WEIGHT PER LEAF	Up to 120 kg
	THERMAL	No thermal break
	WEATHER PERFORMANCE	Double barrier seal (EPDM gasket) and tubular threshold
	ACCESSIBILITY	Installation without a threshold or with a reduced threshold (< 20 mm)

## CONFIGURATIONS



# REFERENCES



**SINGLE-FAMILY HOME,**  
Abidjan (Ivory Coast)

Architectural practice: A + A  
Client: Private  
Installer: ADS  
Technal solutions used: TOPAZE+ sliding systems,  
TOPAZE windows, TOPAZE doors,  
SAFETYLINE louver windows  
Photography: A + A



**AQUITAINE HOUSE OF ARCHITECTURE,**  
Bordeaux (France)

Architects: Julie Fabre and Mathieu de Marien  
(FABRE / de MARIEN Architectes)  
Client: Ordre des Architectes d'Aquitaine [Aquitaine  
Order of Architects]  
Technal-approved aluminium frame maker: Lafosse SAS  
Technal solutions used: GEODE curtain walling  
and TITANE door  
Photographer: Stéphane Chalmeau



**HOTEL QUEMADO, Al Hoceima (Morocco)**

Architectural practice: Patrick Genard  
Technal solutions used: SOLEAL doors Photographer: Patrick Genard



**HOTEL AGORA, Peñíscola (Spain)**

Architect: Juan Añón (AIC) Technal-approved aluminium frame maker: Forment  
Technal solutions used: TITANE doors Photographer: Wenzel

# FAÇADES

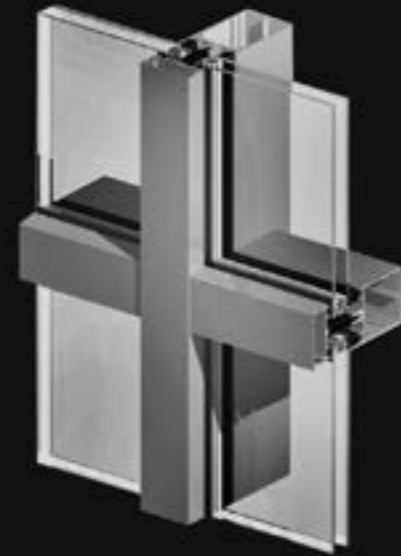
GEODE



# GEODE, creative curtain walling with a visible grid to highlight the geometry of the building

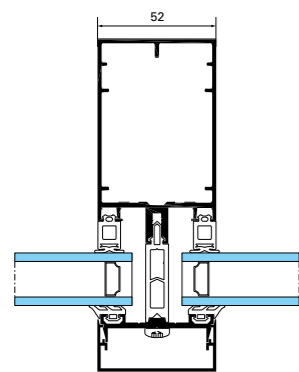
## PRODUCT BENEFITS

- 52 or 62 mm module
- Straight façade or façade inclined up to 20°
- Possibility of incorporating concealed tilt and turn, parallel, top-hung or fire access opening frames.
- Concealed drainage by area
- 6 to 42 mm glazing depending on the module used on the façade
- 62 mm module option to increase the size of the glazing and meet demanding projects in terms of thermal and acoustic performance
- Single glazed curtain walling option

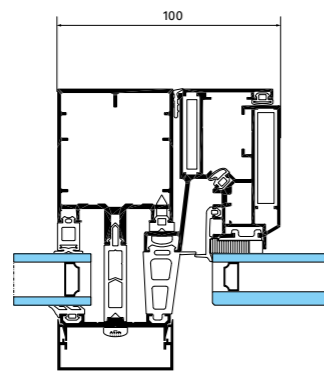


Architects: KPP Architects Photographer: DR Technal

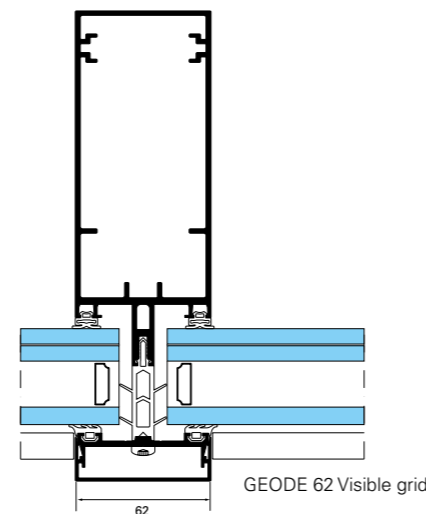
## CROSS-SECTIONS



Fixed visible grid

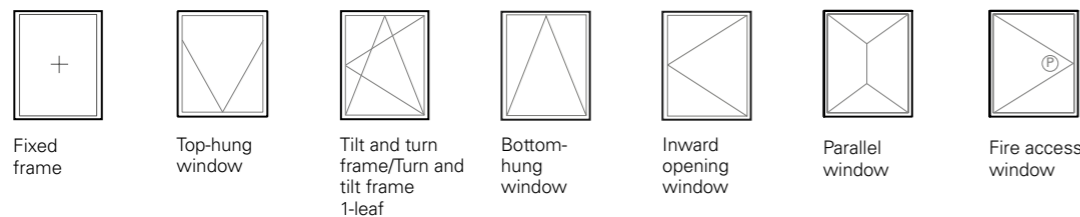


Concealed projecting top-hung opening frame



GEODE 62 Visible grid

## CONFIGURATIONS



## PERFORMANCE

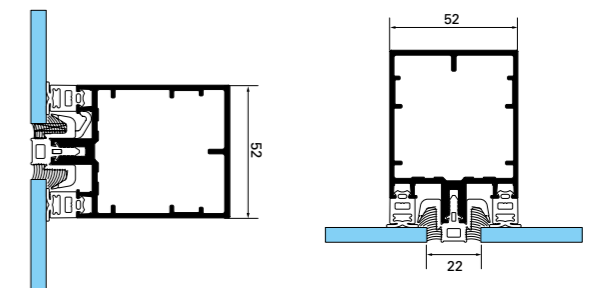
	MAXIMUM WEIGHT PER GLASS BLOCK	300 kg
	THERMAL	Fixed façade with 80% glazing: U <sub>cw</sub> = 1.4 W/m <sup>2</sup> K. with U <sub>g</sub> = 1.1 W/m <sup>2</sup> K.
	FIXED LIGHT WEATHER PERFORMANCE	A4 R7 / Satisfactory results in pressure and vacuum tests 1600 Pa and 2400 Pa (sudden pressure)
	TOP-HUNG OPENING FRAME WEATHER PERFORMANCE	A <sub>3</sub> E <sub>1200</sub> V <sub>C5</sub> *

Test results according to the thermal standard: EN 13947, weather resistance: EN 13830  
\*(A = Air, E = Water, V = Wind)

## GEODE Single glazing

The single glazed MX option for the MX visible grid and Trame has been specially developed for geographical regions in which the climatic conditions do not require advanced thermal performance or the use of double glazing.

- Laminated single glazing from 6 mm to 11 mm available for straight façades or façades inclined up to 10°.
- Concealed top-hung opening frames can be provided for structural sealant glazing from 6 mm to 11 mm.
- The GEODE single glazing system allows Technal's window and door systems to be integrated into curtain walling structures.

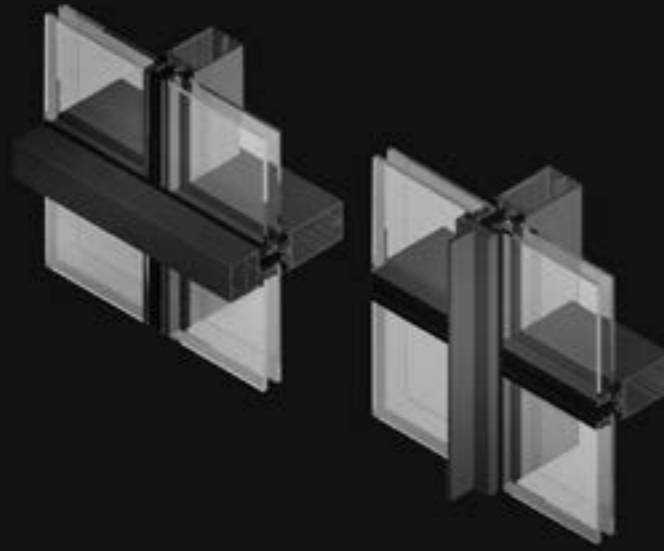


GEODE single glazed window with Horizontal Trame

# GEODE, the trame effect curtain walling to highlight a building's façade

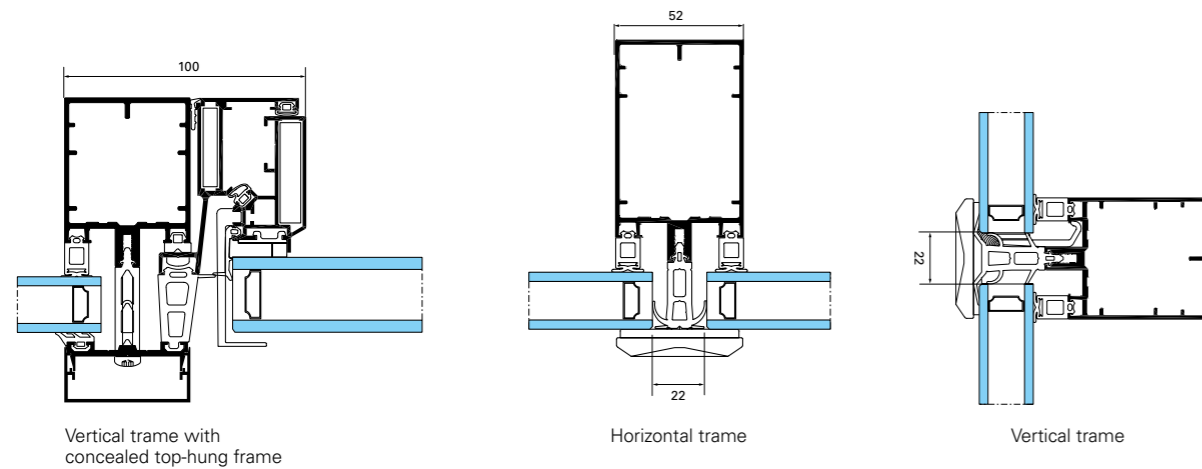
## PRODUCT BENEFITS

- 52 or 62 mm module
- Variety of caps available depending on the type of trame to give depth to the façade
- Straight façade or façade inclined up to 10°
- Possibility of incorporating concealed tilt and turn, parallel, top-hung or fire access opening frames
- Drainage with pressure equaliser
- 6 to 42 mm glazing
- Punctual pressure plate to prevent deformation of the glass
- Dry glazing, no use of putty on site



Architects: AFL Architects Photographer: Shaw & Shaw

## CROSS-SECTIONS

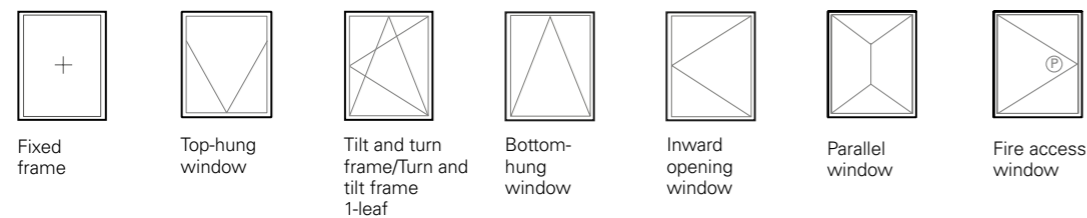


## PERFORMANCE

	MAXIMUM WEIGHT PER GLASS BLOCK	300 kg per transom
	THERMAL	Fixed façade with 80% glazing: U <sub>cw</sub> = 1.6 W/m <sup>2</sup> K. with glazing U <sub>g</sub> = 1.3 W/m <sup>2</sup> k.
	FIXED LIGHT WEATHER PERFORMANCE	A4 R7 / Satisfactory results in pressure and vacuum tests 1600 Pa and 2400 Pa (sudden pressure)
	TOP-HUNG OPENING FRAME WEATHER PERFORMANCE	A4- E <sub>9A</sub> -V <sub>C3</sub> *

Test results according to the thermal standard: EN 13947, weather resistance: EN 13830  
\*(A = Air, E = Water, V = Wind)

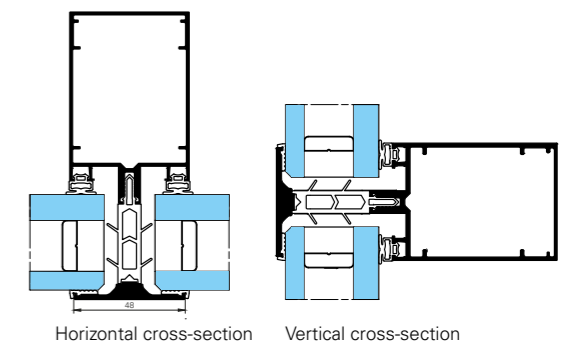
## CONFIGURATIONS



## GEODE Flat cap

The GEODE flat cap uses the same structure as the trame façade; it's an attractive and cost-effective alternative to structural glazing to achieve flush-effect curtain walling.

- 4.5 mm thick black cap/pressure plate on the external glazing.
- Straight wall and structure with convex angles from 90 – 135°.
- Possibility of integrating:
  - 224 or 31 mm concealed opening structural sealant glazing
  - SOLEAL Visible sashes (including fire access frame).
- Possibility of giving the wall a horizontal or vertical trame appearance.



# GEODE, contemporary curtain walling with beading to emphasise the glazing blocks

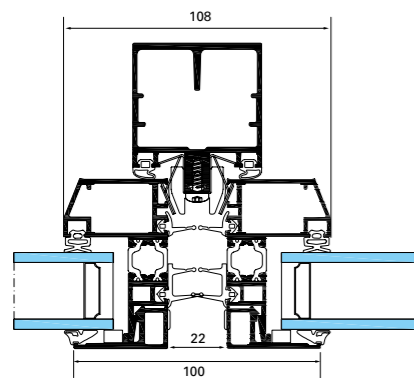
## PRODUCT BENEFITS

- 52 mm module
- GEODE façade with beaded structural glazing  
Glazing beads riveted to the fixed frame for guaranteed additional safety
- Straight façade or façade inclined up to 2°
- Possibility of integrating concealed top-hung, tilt and turn or fire access opening frames
- A patented “hook and toggle” fitting system facilitates the installation of the frames
- Optional reinforced beaded structural glazing up to 36 mm for optimised acoustic and thermal performance
- Infill from 6 to 32 mm
- Dry glazing is mounted onto the frames in the factory and held in place with glazing beads

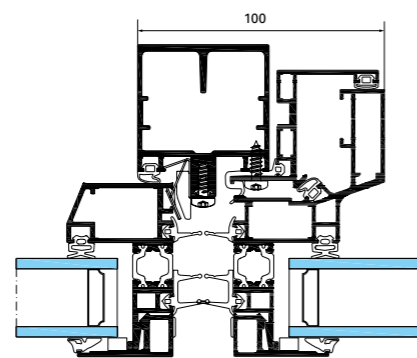


Architects: Brochet Lajus Pueyo Cabinet · Photographer: Abbadie Hervé

## CROSS-SECTIONS



GEODE beaded structural glazing with a transparent fixed section



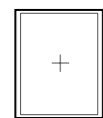
GEODE beaded structural glazing with a top-hung opening frame

## PERFORMANCE

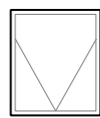
	MAXIMUM WEIGHT PER GLASS BLOCK	100 kg
	THERMAL	Fixed façade with 80% glazing: U <sub>cw</sub> = 1.5 W/m <sup>2</sup> K. with glazing U <sub>g</sub> = 1.1 W/m <sup>2</sup> k.
	FIXED LIGHT WEATHER PERFORMANCE	A4 R7 / Satisfactory results in pressure and vacuum tests 1600 Pa and 2400 Pa (sudden pressure)
	TOP-HUNG OPENING FRAME WEATHER PERFORMANCE	A <sub>4</sub> -E <sub>9A</sub> -V <sub>C3</sub> *

Test results according to the thermal standard: EN 13947, weather resistance: EN 13830  
\*(A = Air, E = Water, V = Wind)

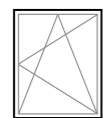
## CONFIGURATIONS



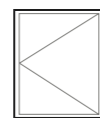
Fixed frame



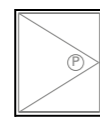
Top-hung window



Tilt and turn frame/Turn and tilt frame 1-leaf



Inward opening window



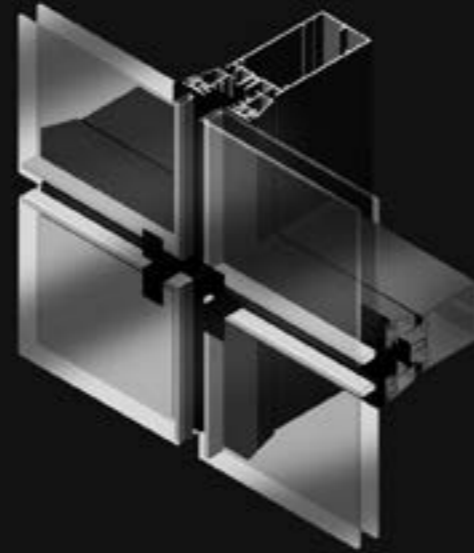
Fire access window



# GEODE, curtain walling with structural sealant glazing to gives the building a flush appearance

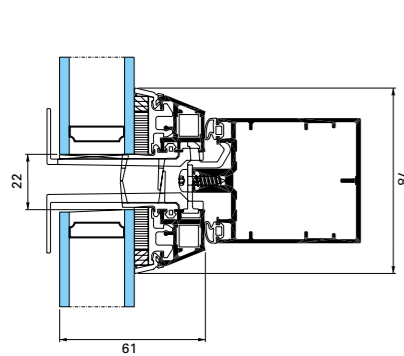
## PRODUCT BENEFITS

- 52 mm module
- 100% glazed wall without externally visible aluminium
- The glass volumes are fixed to the aluminium frames with silicone and shop-fabricated by companies certified according to European standards
- Straight wall or wall inclined up to 2°
- 6, 23 or 31 mm infill or 60 mm insulating panels
- Possibility of integrating concealed top-hung, tilt and turn or fire access opening frames
- Optional reinforced structural sealant glazing up to 34 mm for optimised acoustic and thermal performance

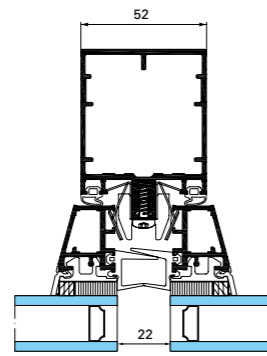


Architects: GIREC Photographer: Xavier Benony

## CROSS-SECTIONS

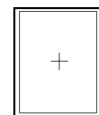


GEODE structural sealant glazing with a fixed horizontal frame

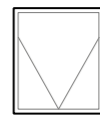


GEODE structural sealant glazing with a fixed vertical frame

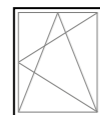
## CONFIGURATIONS



Fixed frame



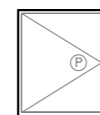
Top-hung window



Tilt and turn frame/Turn and tilt frame 1-leaf



Inward opening window



Fire access window

## PERFORMANCE

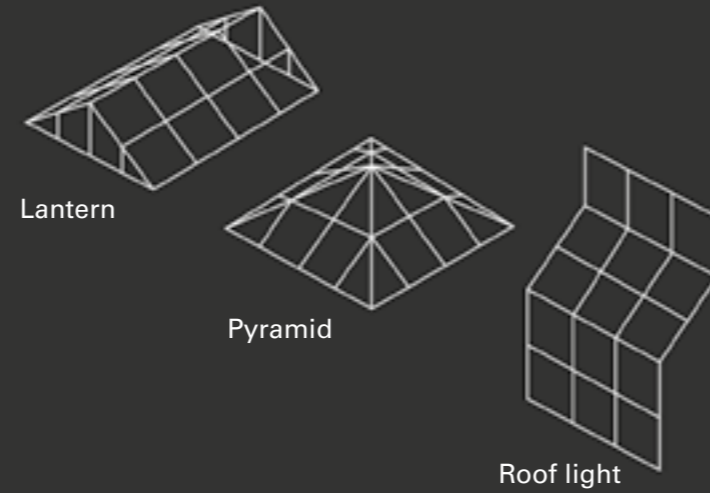
	MAXIMUM WEIGHT PER GLASS BLOCK	80 kg
	THERMAL	Fixed façade with 80% glazing: Ucw = 1.8 W/m²K. with glazing Ug = 1.1 W/m²k.
	FIXED LIGHT WEATHER PERFORMANCE	A4 R7 / Satisfactory results in pressure and vacuum tests 1600 Pa and 2400 Pa (sudden pressure)
	TOP-HUNG OPENING FRAME WEATHER PERFORMANCE	A4- E9A-V C3*

Test results according to the thermal standard: EN 13947, weather resistance: EN 13830  
\*(A = Air, E = Water, V = Wind)

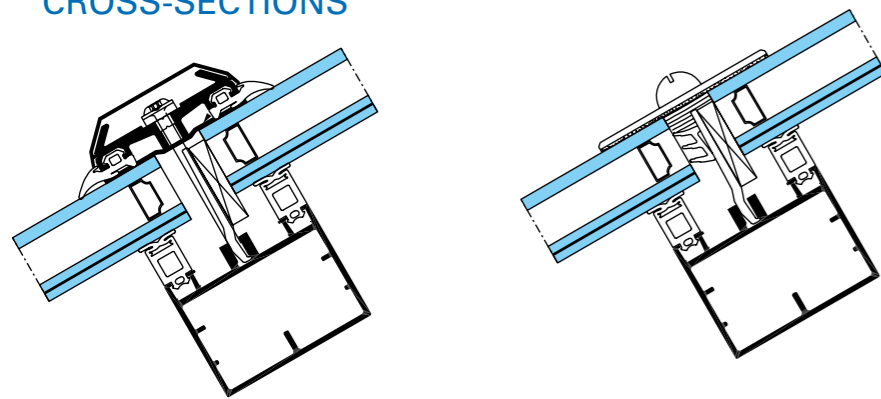
# GEODE sloped glazing for inclined roofs consistent with vertical walls

## PRODUCT BENEFITS

- 2 possible external looks: visible grid or vertical frame
- Water retention management with drainage at the ends of transoms through the glazing bars
- Glazing deformation is minimised thanks to the vertical caps and the silicone gasket
- Possibility of double glazing using structural silicone
- Minimum incline of 5 ° (validated by the CSTB) with double glazing
- The rafters and transoms are square cut and assembled using the penetrating transom principle
- Possibility of integrating an opening frame into the roof

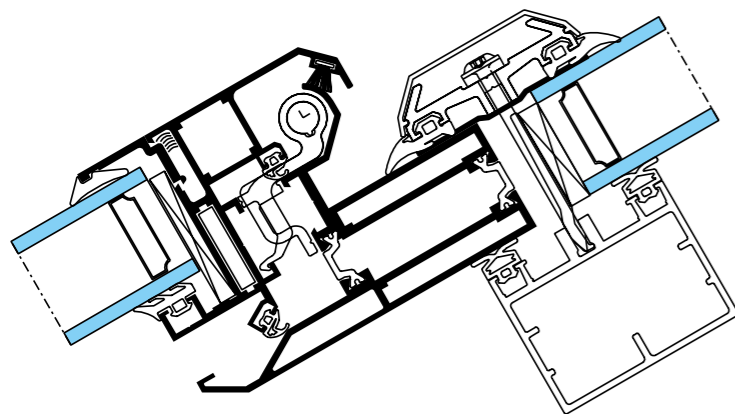


## CROSS-SECTIONS



GEODE visible grid glass roof

GEODE vertical frame glass roof



GEODE roof opening frame

Architect: Nathalie Larrade - Photographer: Monthiers V.

# REFERENCES



MYRIAD DE SANA HOTEL, Lisbon (Portugal)

Architectural practice: Nuno Leónidas Arquitectos (NLA) Manufacturer installer: EDIMETAL  
 Technal solutions used: GEODE façades and TOPAZE windows Photography: Sana Hotels



ÉVASION AUDITORIUM, Ambarès and Lagrave (France)

Architects: Laurent Portejoie, Paul Marion, Frédéric Neau, Jean-Christophe Masnada  
 Client: Mairie d'Ambarès and Lagrave Technal-approved aluminium frame maker: Miroiterie Lafosse  
 Technal solutions used: GEODE façade and TOPAZE sliding system Photographer: Arthur Pequin



UNIVERSITY COLLEGE OF TECHNOLOGY (UCTS), Sarawak (Malaysia)

Architect: Hii Puong Ching – Akimedia Group Manufacturer installer: Sincere Aluminium  
 Technal solutions used: GEODE curtain walling, TITANE doors, SUNEAL brise-soleil and TOPAZE windows Photography: DR Technal



SAMBIL SHOPPING CENTRE, Saint Domingue (Dominican Republic)

Architects: David Gabay Technal solutions used: GEODE glass roof Photography: DR Technal

# SOLAR PROTECTION AND BALUSTRADING

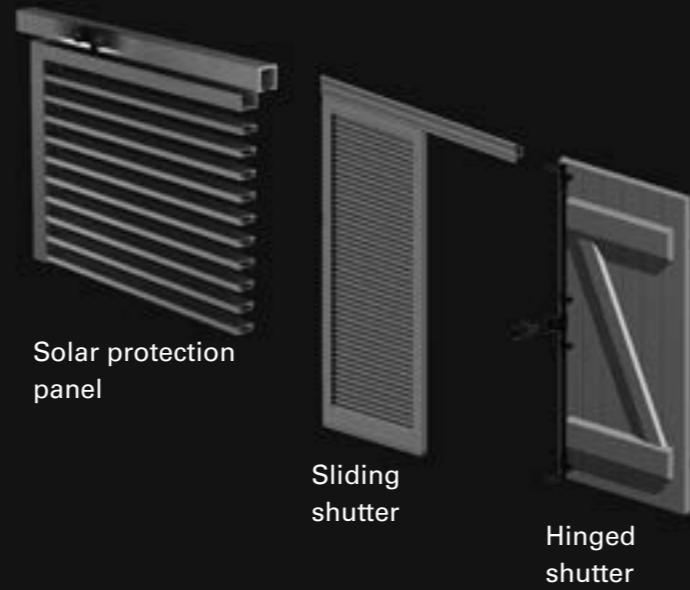
NOTEAL · SUNEAL · GYPSE



# NOTEAL, light and shade protection, a complete range of panels and shutters

## PRODUCT BENEFITS

- Contemporary solar protection panels and roller and hinged shutters
- Designer solar protection with natural ventilation and enhanced security
- A range of infills: fixed or moveable louvres, solid or combination, full-height or with a transom
- All installation scenarios are taken into account: wall or lintel mounted
- Option of a motor concealed in a top panel is available for sliding shutters

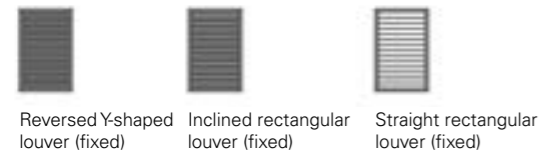


Architects: Carlos Ferrater, Lucía Ferrater and Xavier Martí | Photographer: Sergio Padura

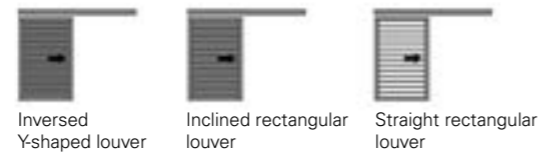
## CONFIGURATIONS

### SOLAR PROTECTION PANELS

#### Fixed

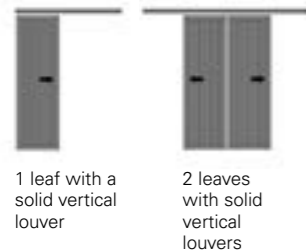


#### Slider

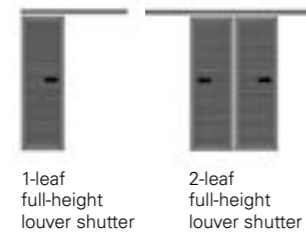


### SLIDING SHUTTER

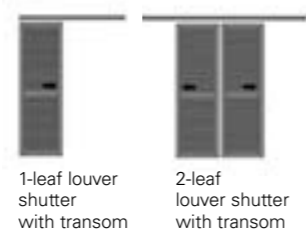
#### Solid vertical blade



#### Full-height louver shutter



#### Louvre blind with transom



#### Combination (solid + vertical)



## PERFORMANCE

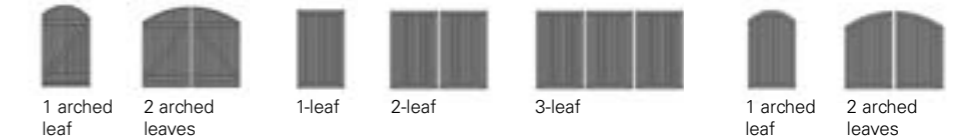
	MAXIMUM DIMENSIONS	Up to 2.4 m high and 1.4 m wide per leaf
	WIND RESISTANCE	Wind resistance: class 6

### HINGED SHUTTER

#### Bar and brace



#### Solid vertical louver



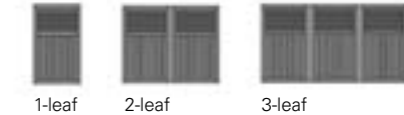
#### Full-height louver shutter



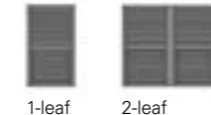
#### Louvres with transom



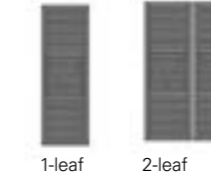
#### Combination (louvres + solid blades)



#### "Niçoise" style in the lower section (window)



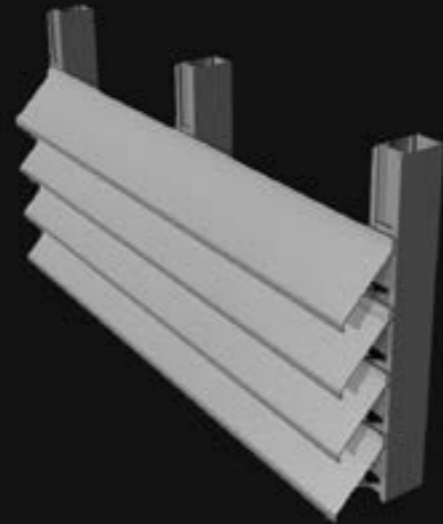
#### "Niçoise" style in the middle section (patio door)



# SUNEAL, the multi-purpose brise-soleil to guarantee optimum natural light

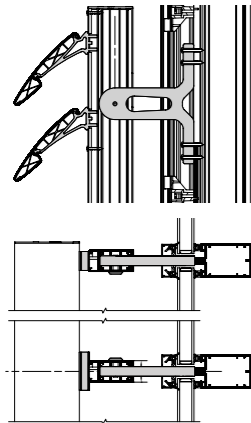
## PRODUCT BENEFITS

- Vertical or horizontal, fixed or adjustable brise-soleil
- Fifteen blades available in different sizes and designs
- Motorisation option available for maximum solar gain
- Fully compatible with all GEODE façades via an independent frame and as a wall covering with blades and louvers

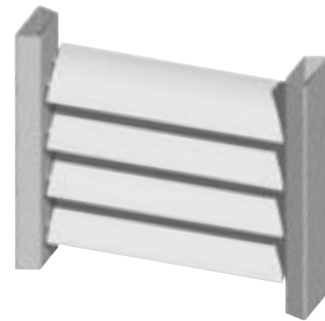


Architects: Espagno Milani Architectes Photographer: Sylvain Mille

## INSTALLATION



Compatible with GEODE curtain walling



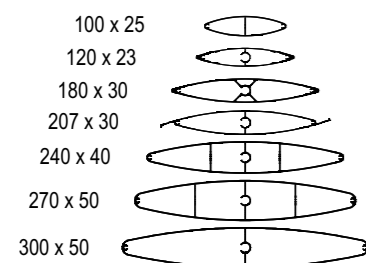
Between supports



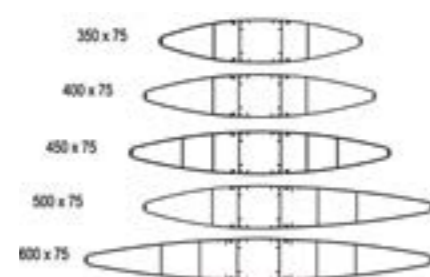
Continuous blades

## BRISE-SOLEIL BLADES

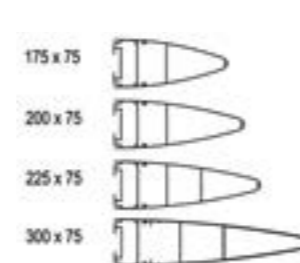
### Monobloc



### Composite



### Semi-elliptical



## PERFORMANCE

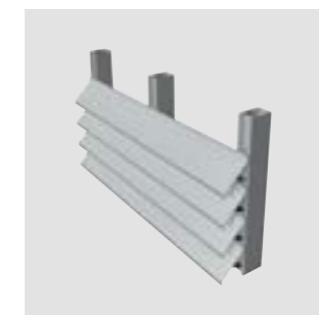
	BLADE DIMENSIONS	100 to 600 mm depending on the configuration
	WIND RESISTANCE	Progressive speed of air flow up to 160 km/h Maintained for 18 min. Rapid increase to 210 km/h
	ORIENTATION	0°, 15°, 30°, 45°, 60°

Tests performed at the CSTB

## SPECIAL BLADES



Rectangular blades  
(300 mm x 40 mm)



100 and 115 mm  
blades and louvers

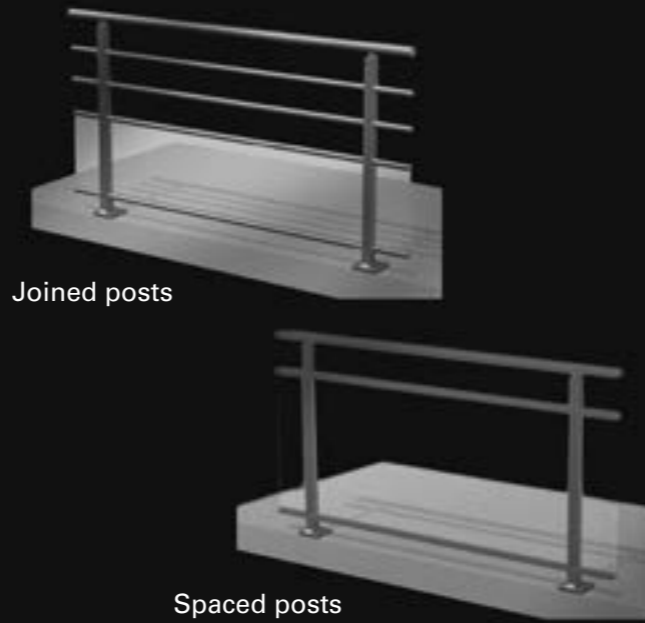


Perforated sheet metal  
for large sizes

# GYPSE, the double post architectural balustrade with minimalist lines

## PRODUCT BENEFITS

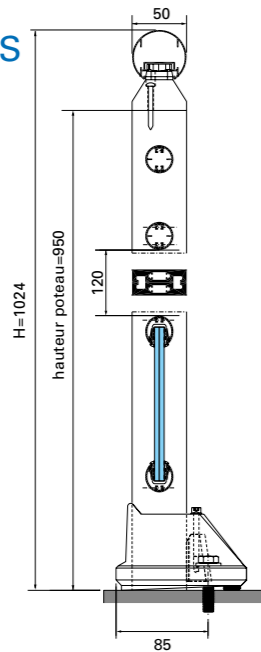
- Industrial design: contiguous or spaced posts, flat or round midrails for models with or without infills
- Variety of materials: aluminium, stainless steel, wood, glass, composite panels, decorative sheet metal
- Wide range of infills: glass, sheet metal, stainless steel rods or cables, St Andrew's cross, with or without a midrail
- Corner bracket for a 90° corner plate
- Available as a balcony separator and swimming pool barrier
- Possibility of raked balustrades from 0° to 38° for stairs
- 80 test reports
- Variety of different installation options tailored to each project: slab nose, on a slab, etc.



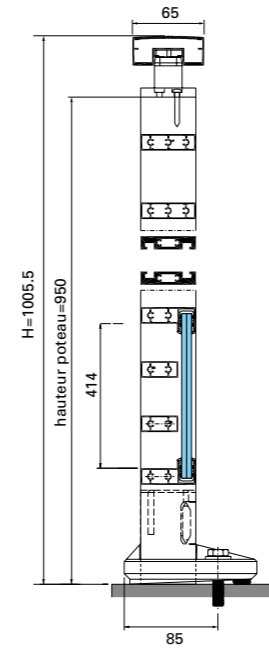
Photography: DRTechnal

## CROSS-SECTIONS

Joined posts  
Round midrail and glass bottom section infill  
Round handrail



Spaced posts  
Handrail and full-height rectangular midrails and glass bottom section infill



## LEGAL RESTRICTIONS

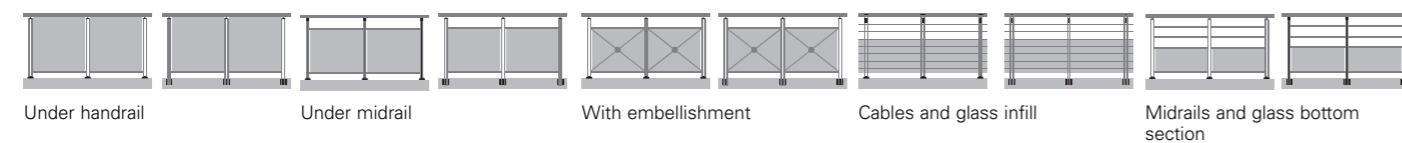
	Private place	Public place		Private place	Public place
	1600 mm	930 mm		1600 mm	930 mm
	1600 mm	930 mm		1600 mm	930 mm
	1800 mm	1550 mm		1600 mm	930 mm
	1600 mm	930 mm			

Scope of use = maximum distance between posts

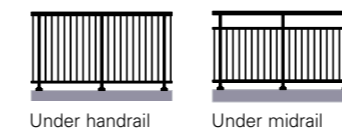
## CONFIGURATIONS

Examples of raked or straight balustrade configurations - Installation on a slab or slab nose

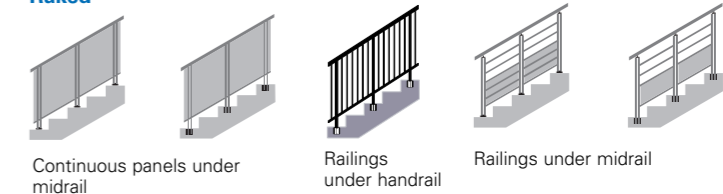
### Straight - continuous panels



### Straight - railings



### Raked



# GYPSE, the single post traditional balustrade with minimalist lines

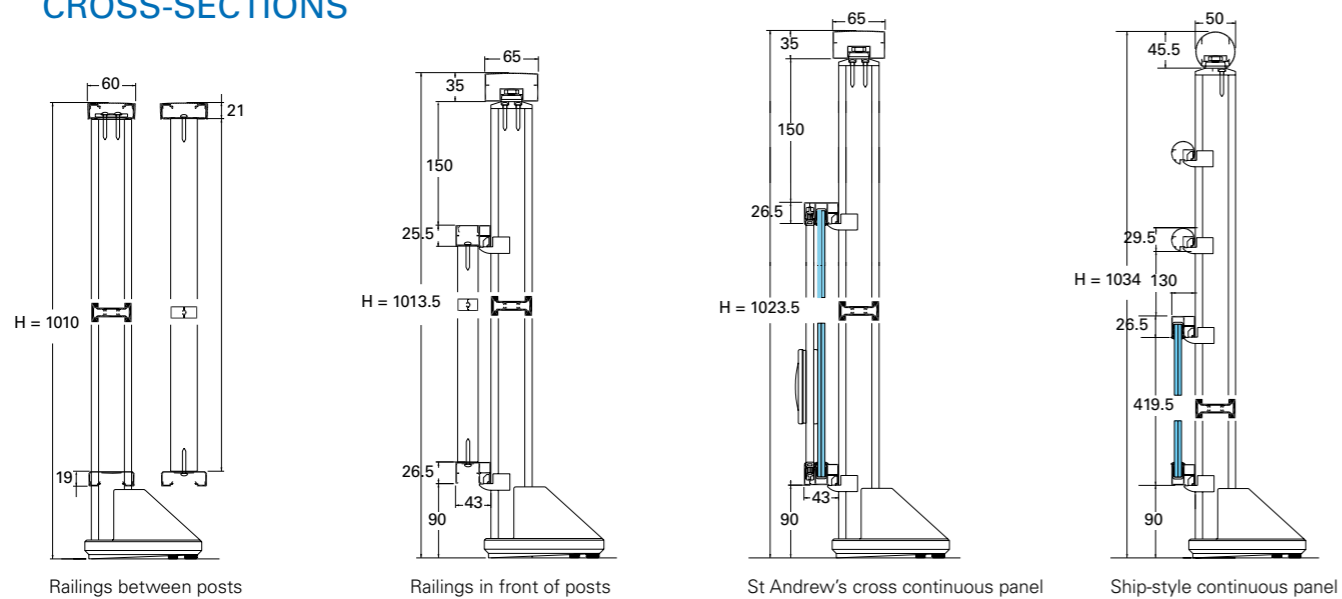
## PRODUCT BENEFITS

- Multiple combinations of components and a variety of materials
- Sleek design:
  - Single symmetrical post 50 x 24 mm
  - Discreet fixings
  - Various handrail designs
- 90° corner plate with a single post
- Wide variety of infills: railings, continuous panels beneath a handrail, continuous panels with a St Andrew's cross or an "steamship" version
- Variety of different installation options to meet the needs of each project: slab nose, on a slab, etc.
- Possibility of raked balustrades from 0° to 38° for stairs
- Adjustable feet
- Bars to be screwed or crimped
- 70 test reports



Photographer: V. Bigeard

## CROSS-SECTIONS



## LEGAL RESTRICTIONS

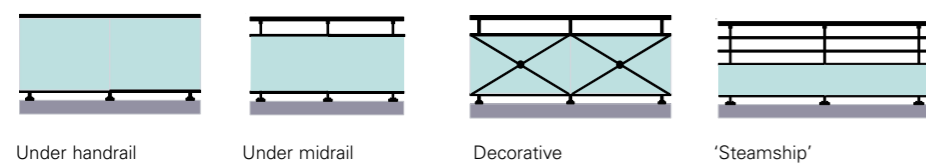
	PRIVATE PLACE		PUBLIC PLACE	
	Infill (glass, sheet metal)	Railings	Infill (glass, sheet metal)	Railings
	1600 mm	1599 mm	985 mm	984 mm
	1800 mm	1800 mm	1800 mm	1800 mm
	1600 mm	1599 mm	985 mm	984 mm
	1600 mm	1540 mm	985 mm	980 mm

Scope of use = maximum distance between posts

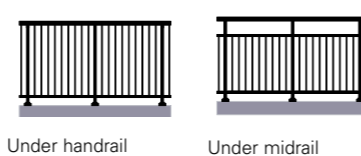
## CONFIGURATIONS

Examples of straight or raked guardrail installations

### Straight - continuous panels



### Straight - railings



### Raked





# REFERENCES



COLLECTIVE HOUSING, Barcelona (Spain)

Architects: Carlos Ferrater, Lucía Ferrater and Xavier Martí Galí (OAB)  
Client: Metro 3  
Technal-approved aluminium frame maker: Talleres Valeriano Montón  
Technal solutions used: NOTEAL shutters  
Photographer: Alejo Bagué



OFFICE PARK EXPO, Lisbon (Portugal)

Architects: Nuno Leónidas and Frederico Valsassina  
Technal solutions used: SUNEAL brise-soleil  
Photography: DR Technal



MÉTRONUM AUDITORIUM, Toulouse (France)

Architectural practice: GGR Architectes Client: Toulouse Town Hall - Oppidea  
Technal-approved aluminium frame maker: Labastère Technal solutions used: SOLEAL frame and SUNEAL brise-soleil Photographers: Thierry Schneider and Sylvain Mille



GOSIER TOWN HALL (Guadeloupe)

Client: Véronique Bigeard Technal solutions used: GYPSE single post balustrade  
Photographer: Véronique Bigeard

# SECURITY

COBALT



# COBALT, the security solution

## PRODUCT BENEFITS

- Single or double row of armour-plating integrated into the fixed or opening frame
- Adaptable armour-plating with steel or aluminium profiles

The sliding system:

- 2-track 150 mm fixed frame for 2- or 3-leaf sliders
- Infill from 39 to 61 mm
- Closure via pull handles, central key lock or multipoint lateral lock

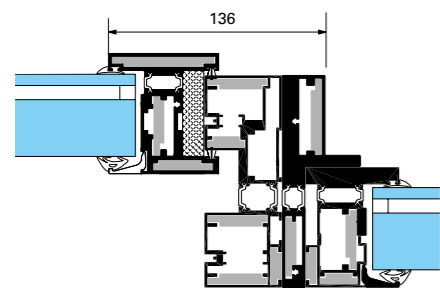
The door:

- Movement via 3-part hinges.
- Infill from 17 to 66 mm

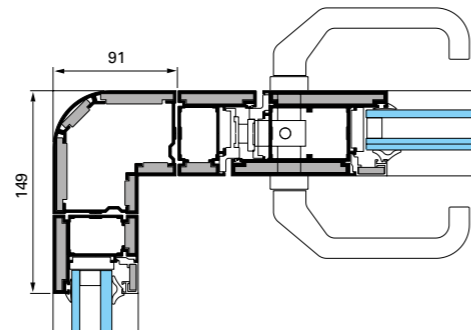


Photography: DRTechnal

## CROSS-SECTIONS



Horizontal cross-section of a slider



Horizontal cross-section of a door

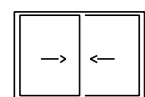
## PERFORMANCE

	Slider	Door
DIMENSIONS	MINIMUM: W x H = 0.49 m x 0.85 m	MAXIMUM: W x H = 1.20 m x 2.35 m
MAXIMUM HEIGHT	Up to 300 kg per opening frame	Up to 240 kg per opening frame
WEATHER PERFORMANCE	A <sub>3</sub> E <sub>7A</sub> V <sub>A5</sub> * 2-leaf armour-plated leaves W x H = 1.51 m x 1.31 m	
SECURITY	FB3, FB4, FB5, FB6 resistance class in accordance with the standards NF 1522 and 1523	FB2, FB3, FB4, FB5, FSG resistance class in accordance with the standards NF 1522 and 1523

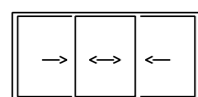
Weather resistance according to certificate CEBTP E213.3.070/1  
\*(A = Air, E = Water, V = Wind)

## CONFIGURATIONS

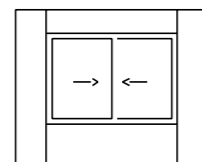
### Slider



2-leaf



3-leaf, 2-track



2 composite leaves

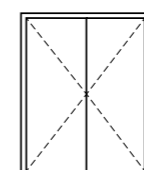
### Door



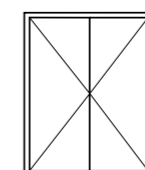
Open-out door



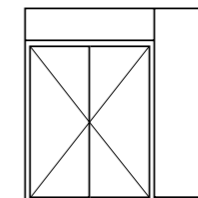
Open-in door



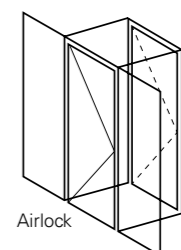
2-leaf open-out door



2-leaf open-in door



2-leaf door with fixed side and top light



Airlock

# OFFICE AND SHOP FITTINGS

TECHNAL SYSTEM - OPALE - OFFICE AND SHOP FITTINGS



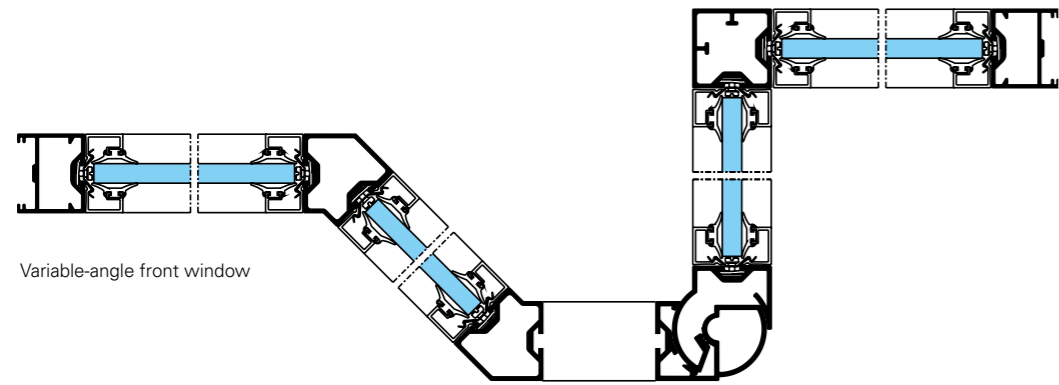
# TECHNAL SYSTEM, modular internal and external office and shop fitting solutions

## PRODUCT BENEFITS

- Simple and versatile
- Straight or curved  
A modular system that accommodates all design features: front window, partition, low table, furniture, workbench, etc.
- Possibility of various infills (4 to 76,5 mm)
- Possibility of hinged and sliding frames for internal or external use.

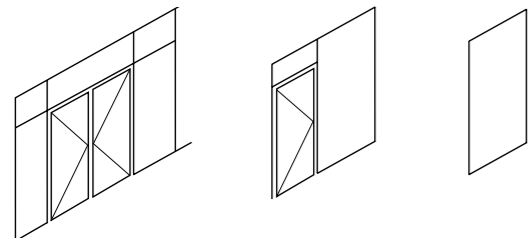


## CROSS-SECTIONS

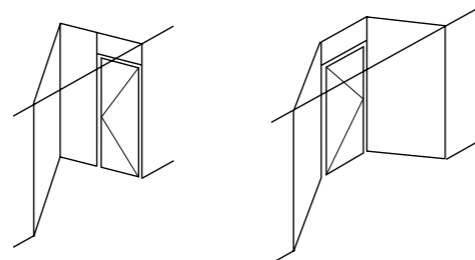


## CONFIGURATIONS

### Shop windows



### Faceted façades



# OPALE, internal partition system with multiple configurations

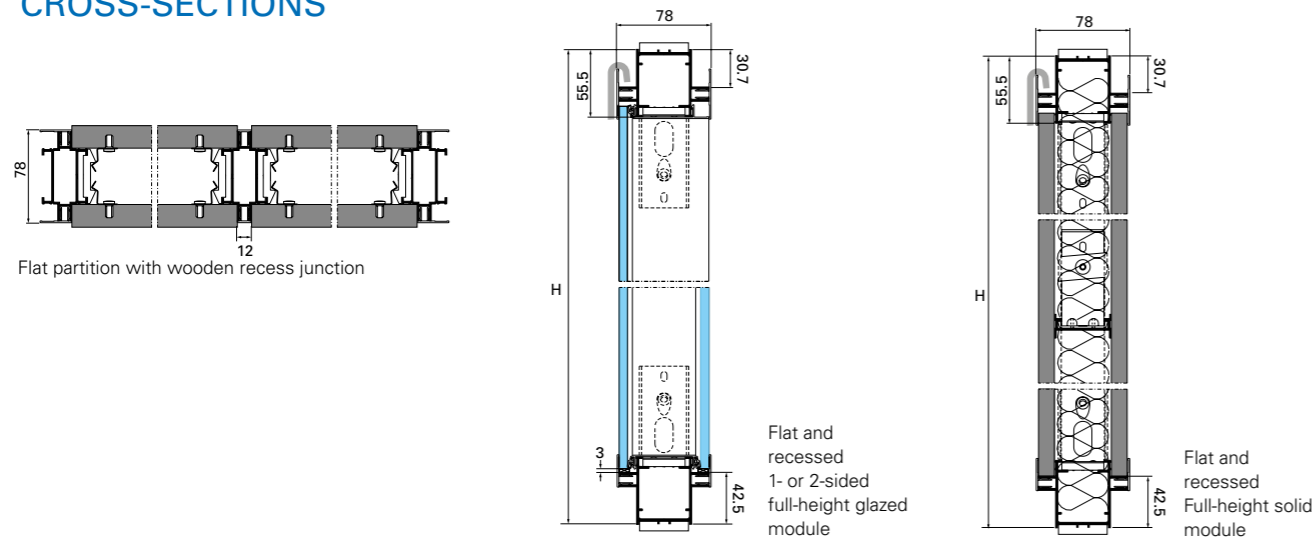
## PRODUCT BENEFITS

- 3 types of configurations: Standard partition, with a narrow rail or recessed junction
- Framed partitions or glazed panels fixed side by side for a sleek design
- Wide variety of infills
- Possibility of integrating: glass safety door (6 to 8 mm), wooden doors (40 mm), aluminium framed doors, full-access hinged doors or sliders
- Vertical or horizontal frames which can be customised with different trims
- Fire resistance: Schott flame guard test on OPALE structural glazing system (PF 30)
- Moveable and removable partition: CER.FF. C.07-433R.



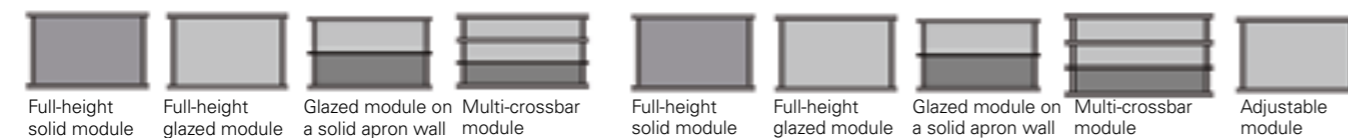
Photography: DR Technal

## CROSS-SECTIONS



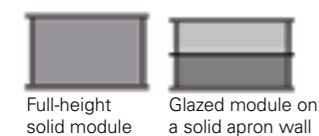
## CONFIGURATIONS

### Standard partition



### Flat recessed partition

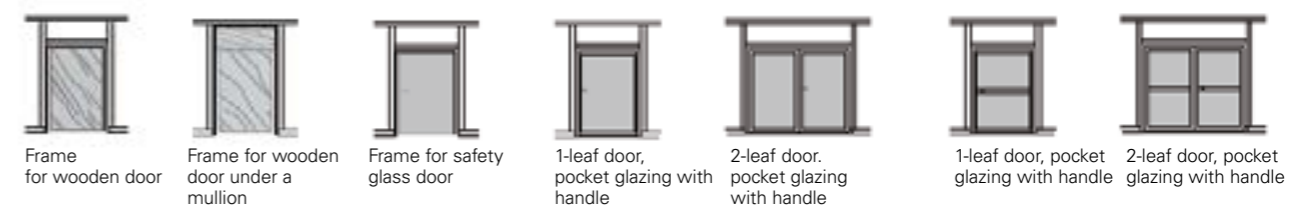
### Flat partition with wooden recess junction



## PERFORMANCE

	<b>MAXIMUM WEIGHT PER LEAF</b>	Up to 100 kg Hinged wooden door
	<b>ACOUSTIC</b>	-42 dB Full-height glazed partition 44.2 CER.FF. C.07-433
	<b>SECURITY</b>	With a soft body shock (bag of 50 daN with 300 J of energy applied to the centre of the solid and glazed partition modules). CER.FF. C.07-433
		With a soft body shock (bag of 50 daN with 400 J of energy applied to the centre of the solid and glazed partition modules). European Technical Approval
		With a rigid body shock (1 kg ball, 10 J of energy, <math>\varnothing</math> 20 imprint, <math>< 2</math> mm deep). CER.FF. C.07-433 / European Technical Approval

### Hinged doors



### Full-access sliding door

Full-access sliding doors, 1- and 2-leaf without fixed top light



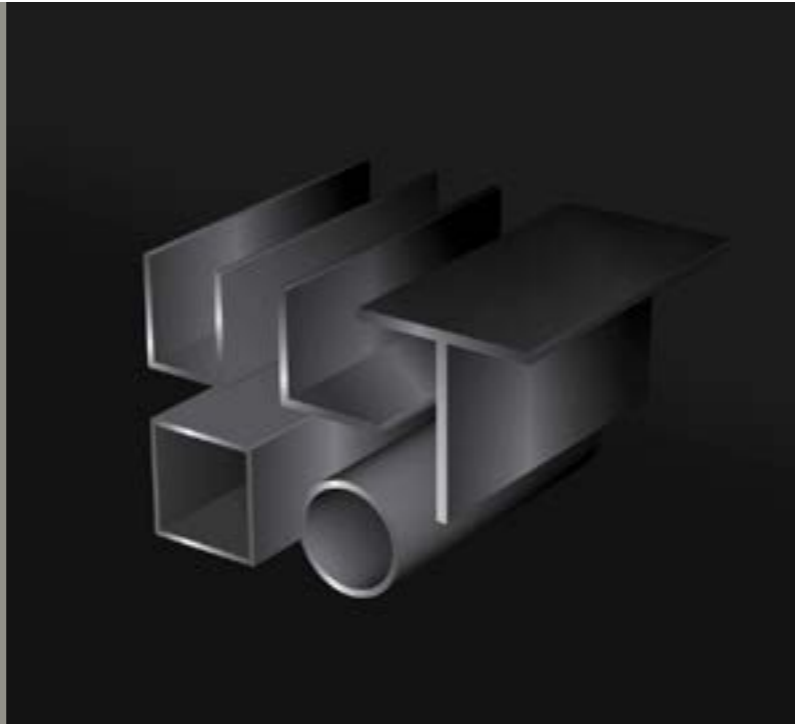
Full-access sliding doors, 1- and 2-leaf with fixed top light



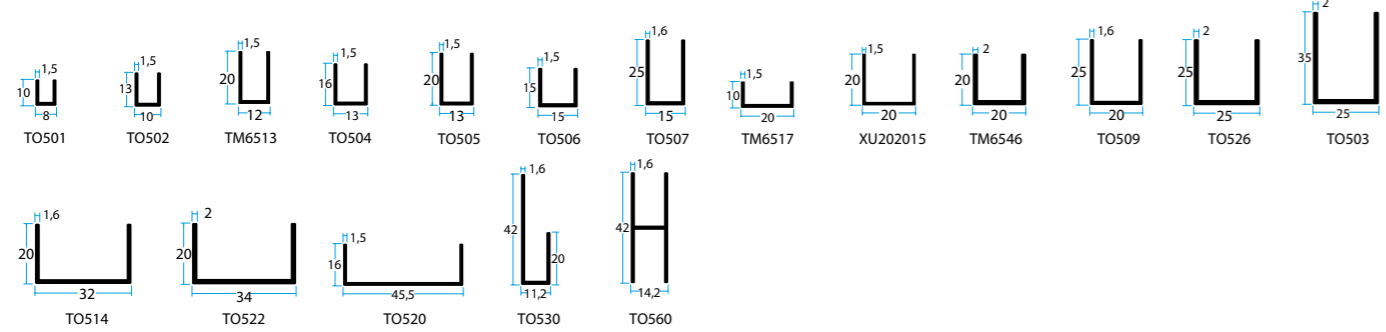
# SHOP AND OFFICE FITTING, standard ULT profiles

## PRODUCT BENEFITS

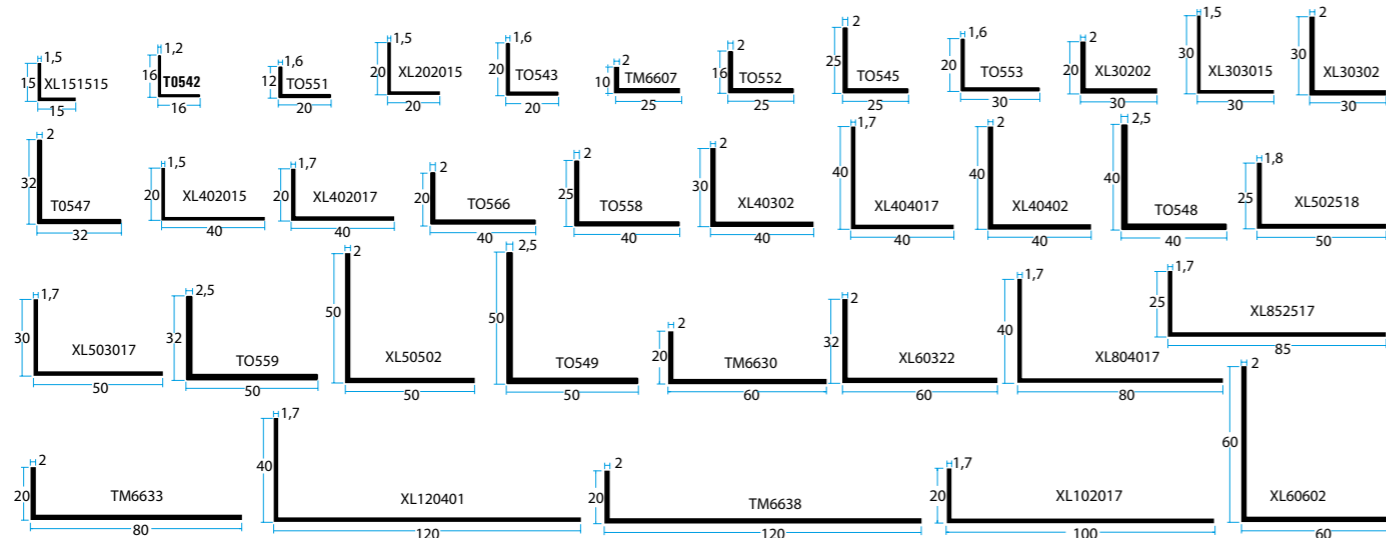
- Over 100 bend-free aluminium profiles, available in all Technal colours



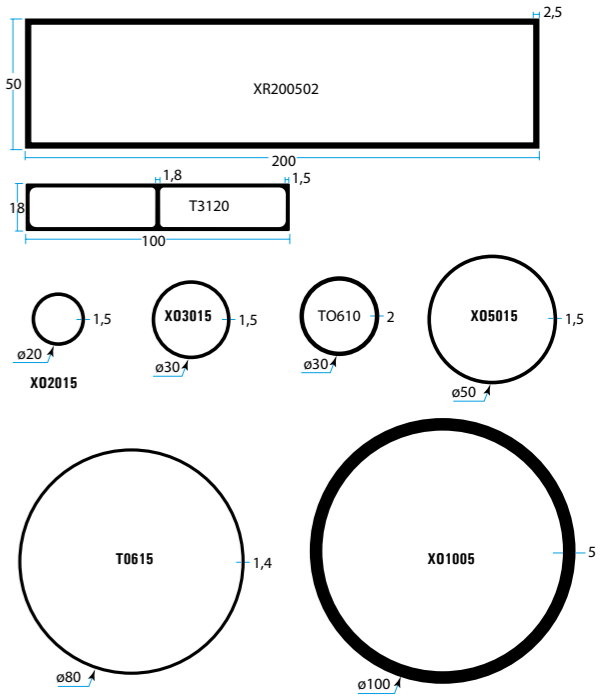
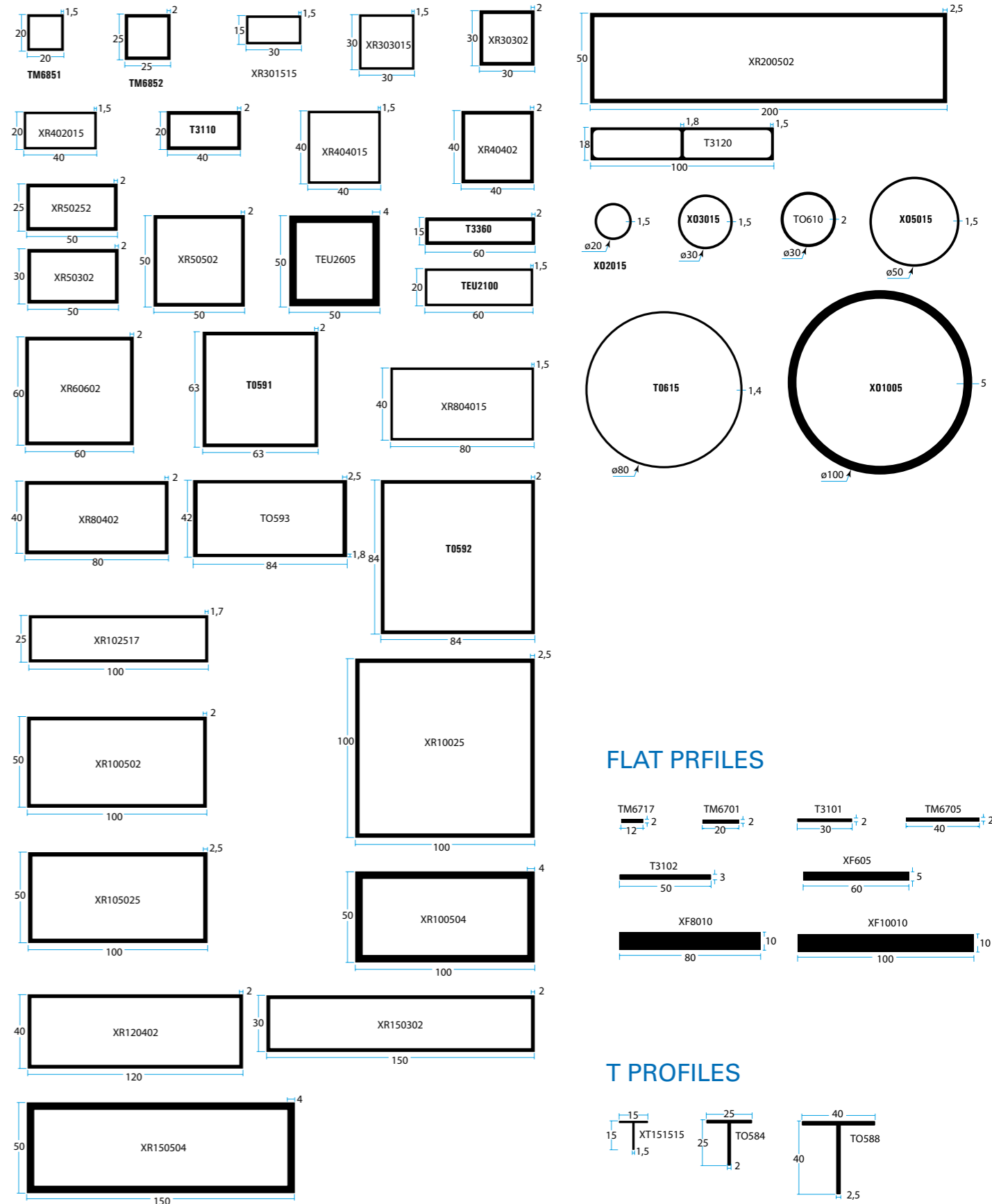
## U PROFILES



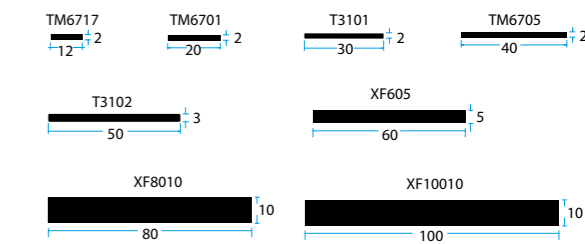
## L PROFILES



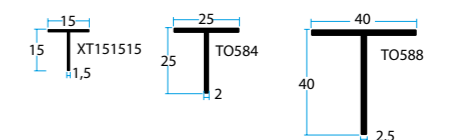
## TUBULAR PROFILES



## FLAT PROFILES



## T PROFILES



# REFERENCES



MASSIMO DUTTI STORE  
Photography: DR Technal



Photographer: Xavier Boymond



Architect: Cabinet Dalmassa-Grazian  
Photographer: Serge Demailly



LA CAIXA BANK  
Photographer: Wenzel

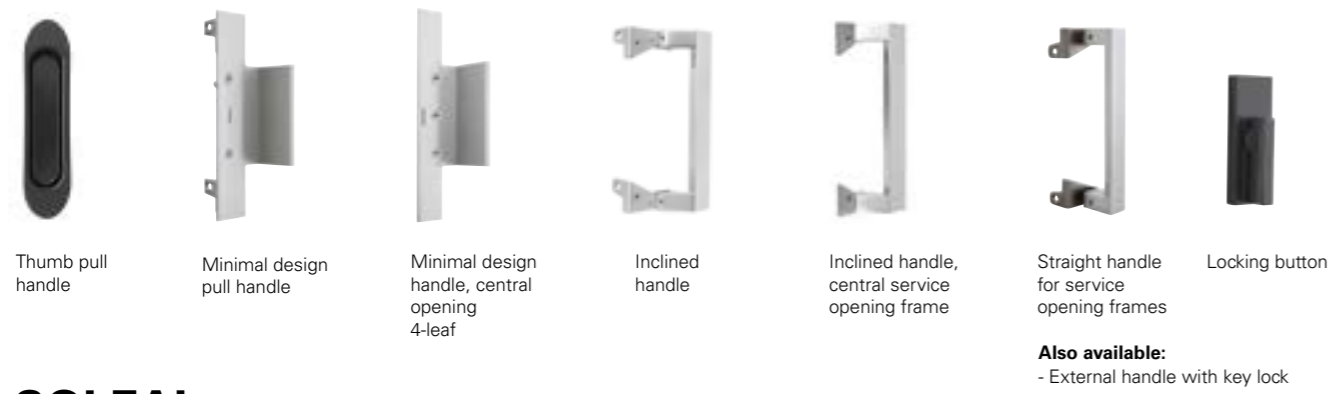


HANDLES



# Sliding systems

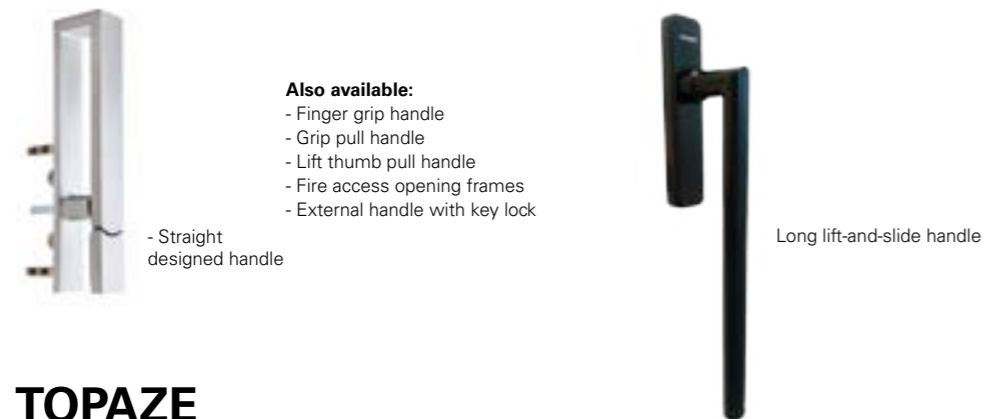
## LUMEAL



## SOLEAL



## GALENE

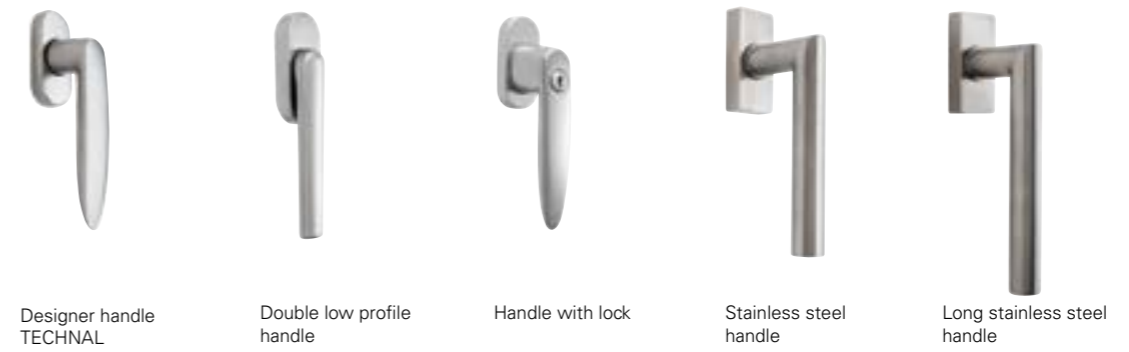


## TOPAZE



# Windows

## SOLEAL



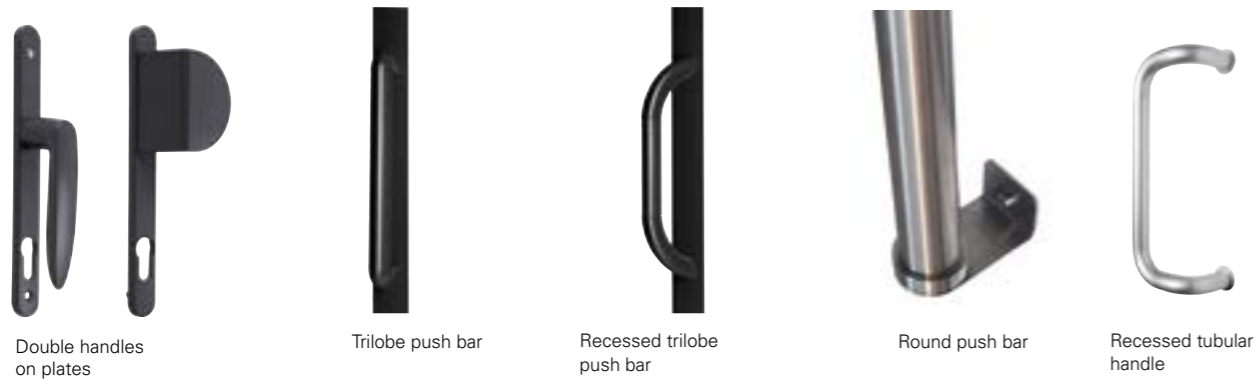
## TOPAZE



## SAFETYLINE

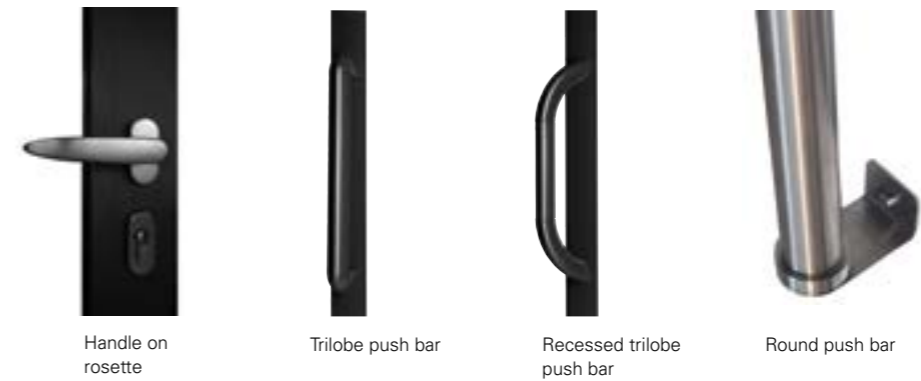


### SOLEAL



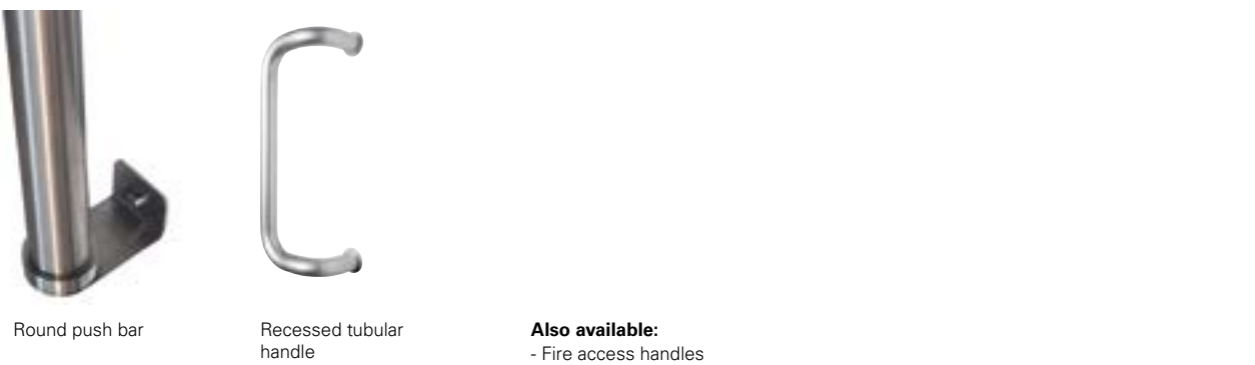
\* Available with a single or double handle

### TOPAZE



**Also available:**  
- Flat pad

### TITANE



# Technal throughout the world



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