



VITROCSA

THE ORIGINAL MINIMALIST WINDOW

WHERE  
INDOORS  
AND  
OUTDOORS  
BECOME  
ONE





## *INVENTOR OF THE MODERN MINIMALIST WINDOW*

There can be no technological revolution without pioneers. Although not well-known to the general public, there is no doubt that Éric Joray became one of them when he invented the modern minimalist window.

In 1992, a unique range of solutions dedicated to frameless windows with the narrowest visual barriers in the world was born. Since then, Vitrocsa has been exporting its systems to more than 60 countries in five continents, ensuring their current position as global bestsellers.

In 2023, Éric sadly passed away. His innovative and creative spirit will continue to be honoured by a loyal team that has carried the torch for nearly 10 years.

## *SWISS LABEL*

Vitrocsa is an official member of SWISS LABEL, a recognised symbol of quality, safety and reliability for over a century. All of its micromechanical systems and solutions are designed in the Swiss town of Saint-Aubin-Sauges by technicians trained to watch-making standards.





Vitrocsa archive

### 1989

Éric Joray created the company Orchidées Constructions SA.

### 1992

Éric Joray invented Vitrocsa, the modern minimalist window.

### 1993

First Vitrocsa window installed in a villa designed by the architect Andrea Bassi, close to the city of Geneva.



Project by Andrea Bassi

### 1994

Éric Joray registered the Vitrocsa trademark and the first patent for the sliding system.

### 2000

Multiple new builds designed around Vitrocsa 3001 windows.

### 2001

The first prototype of the Vitrocsa 3001 pivoting window was developed.



Vitrocsa archive

### 2002

The firm entered the European market with the Braga stadium in Portugal for the Euro 2004 football championship. Development of the guillotine solution.

### 2004

Between 2004 and 2006, new markets opened up: Russia, Australia, Israel, India, Canada and the USA.



Vitrocsa Headquarters



Project in Lebanon

### 2007

Launch of the Vitrocsa TH+ range, offering excellent insulating properties.

### 2008

Between 2008 and 2010, Vitrocsa exported to the Middle East.

### 2011

Development of the invisible frame with two tracks.



Invisible frame with two tracks

### 2018

Development of the Vitrocsa V44 range.

### 2019

Acquisition of a Tornos turning machine and a machine for crimping heat-insulated profiles.

### 2021

Launch of the invisible frame on a thermally-insulated track and acquisition of a test bench.



The Curved application

### 2016

Vitrocsa became the owner of the watchmaking building located in Saint-Aubin-Sauges, employing about twenty staff. Worldwide, the brand's partners selling and installing the range of products exceeded 500 people.

### 2017

Launch of the Vitrocsa V56 range allowing infinite glazing surfaces.



Machine for crimping heat-insulated profiles

### 2014

Launch of the Vitrocsa V32 range, with thermal reinforcement.

### 2015

Éric Joray gradually passed the baton to his team. A team of five people was formed with a view to taking over the company (management buy-out).



The five associates

### 2022

Development of the motorised Turnable Corner and motorised Curved.

### 2023

Éric Joray passes away, leaving behind an innovative and inspiring legacy.

### 2024

Vitrocsa begins construction of a new building for its head office.



*CREATIVITY AND INNOVATION COMBINED FOR  
MAXIMUM TRANSPARENCY*

An essential component of any building, the window must open up the view and let as much light as possible into the structure.

Vitrocsa makes this ideal an achievable goal.





# SYSTEMS

To better meet the needs of its customers, Vitrocsa has developed several systems which can be adapted to each individual and each situation. We assess the environment and composition of your building, then offer you the perfect solution.

Your patented new windows are then produced in Switzerland and installed by one of our trained and experienced partners.



# SLI

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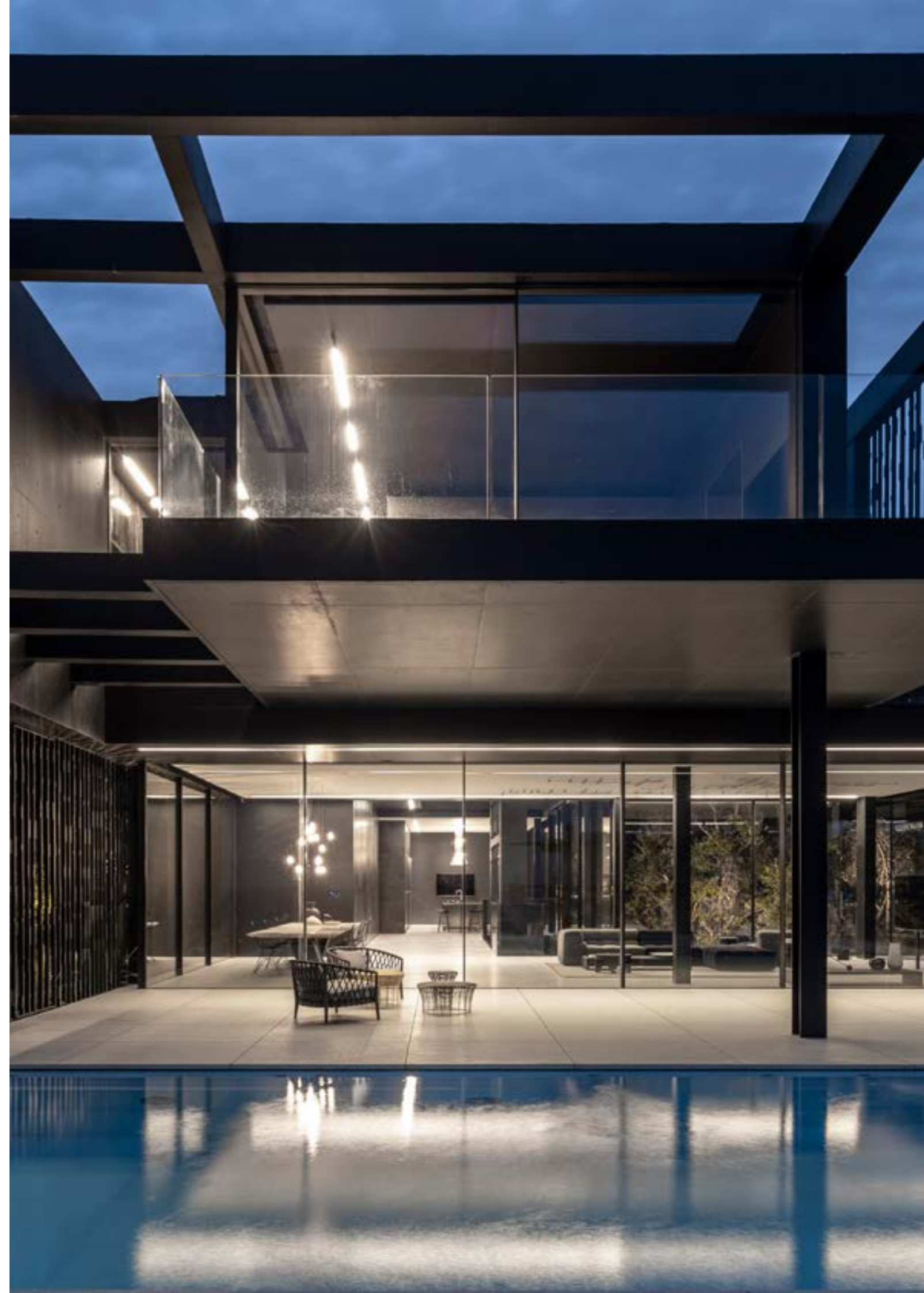
Fixed or sliding execution with ultra-thin profiles and a maximum surface area per panel of over 20 m<sup>2</sup>.

The panels can be moved with minimal force, either manually or using a motor.

The system is ideal for very big projects and allows for a variety of applications.

# DING

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2.



1.

### 1. INVISIBLE FRAME WITH ONE OR TWO TRACKS

With this version, the architectural barrier between inside and out is removed completely. There is the option of double or triple glazing, either 32 to 56 mm, and sliding window surface areas of up to 20 m<sup>2</sup>. The principle is based on concealing the frame underneath the floor covering.

### 2. POCKET

It is possible to conceal one or more sliding panels in a closed and isolated space.

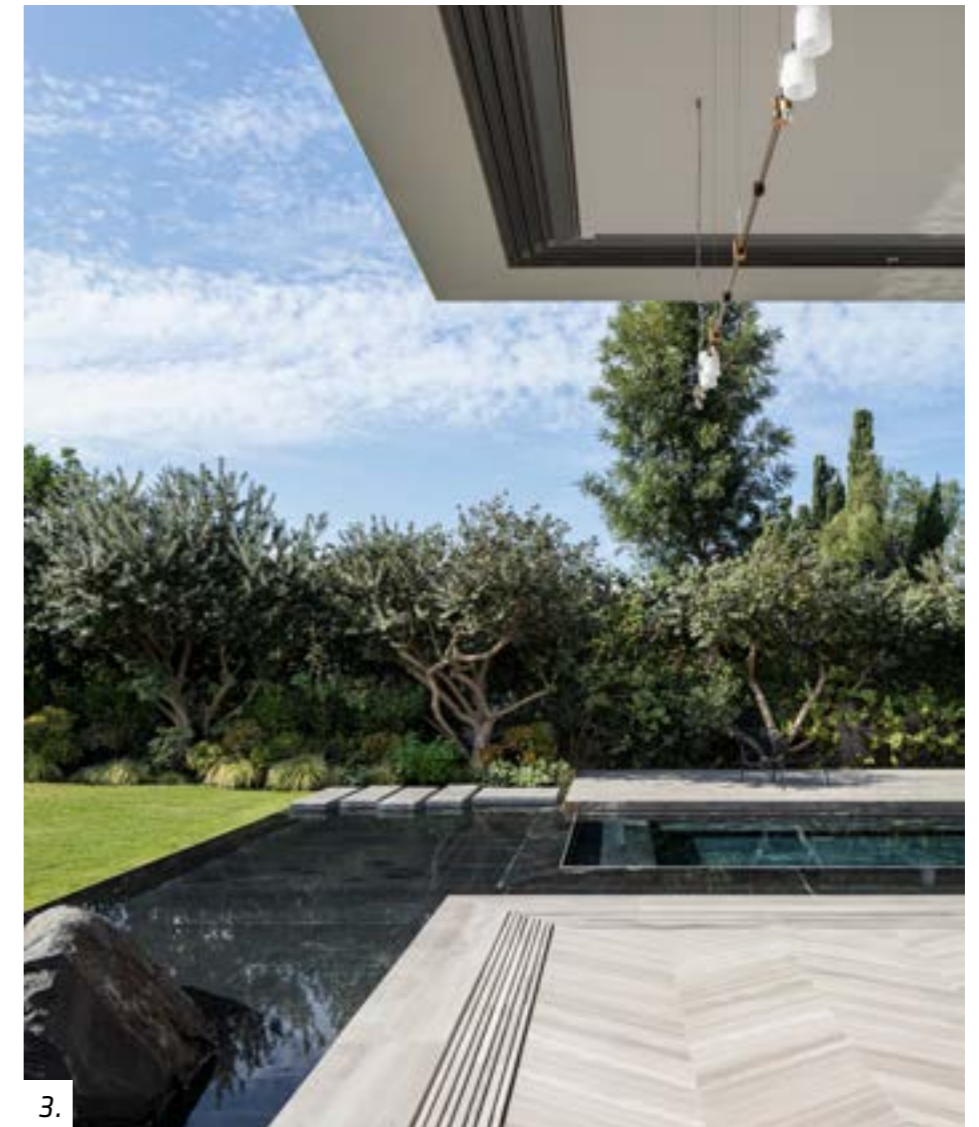


### 3. OPEN ANGLE

With this solution, the corner is freed from any jambs. All combinations of rails are possible.

### 4. MOSQUITO NET

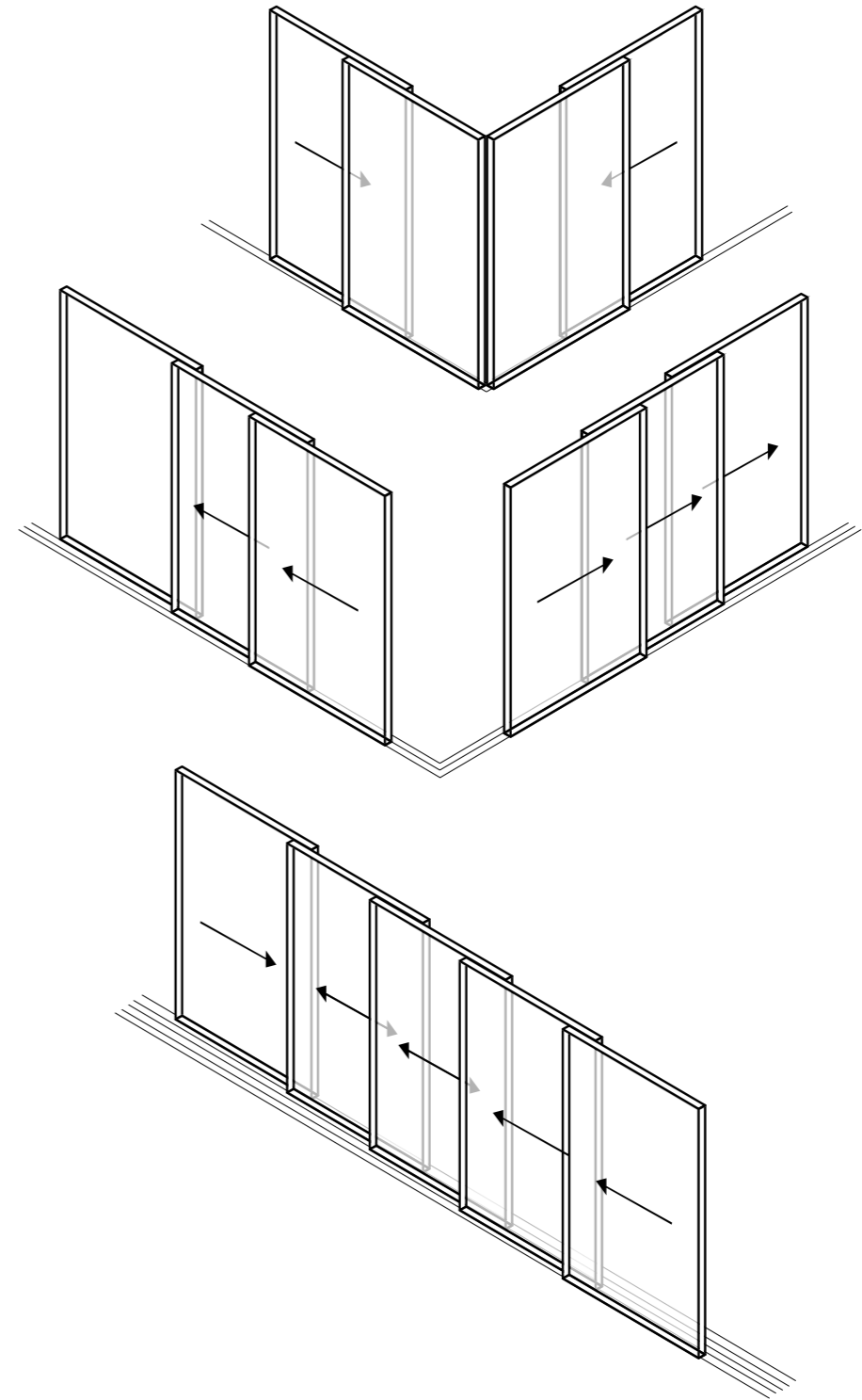
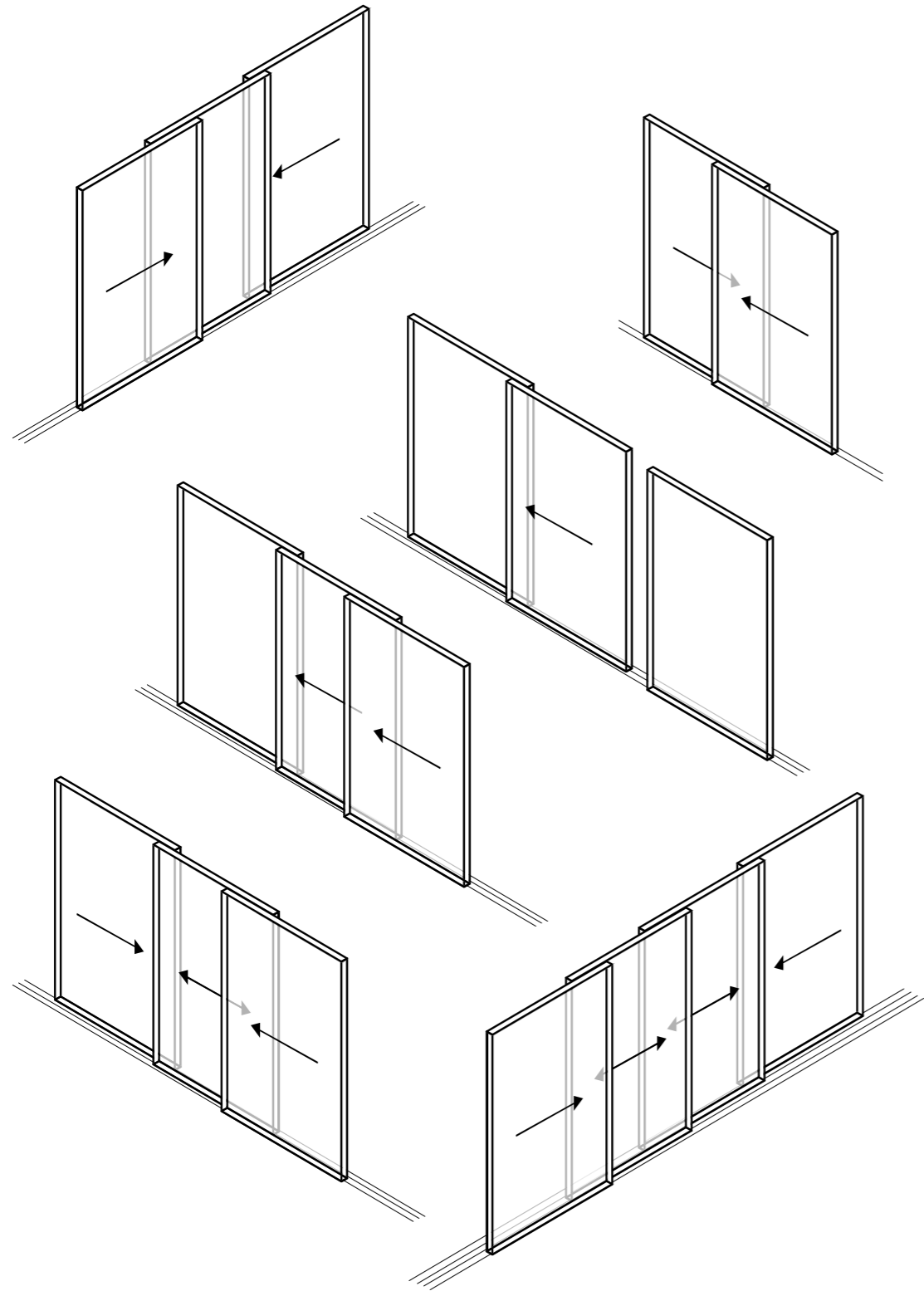
Several options are available to counter the issues posed by insects. It is possible to add a rail allowing a mosquito net to be inserted, or a folding canvas to be concealed, offering coverage of 80 cm in the vertical jamb.



3.







# CUR

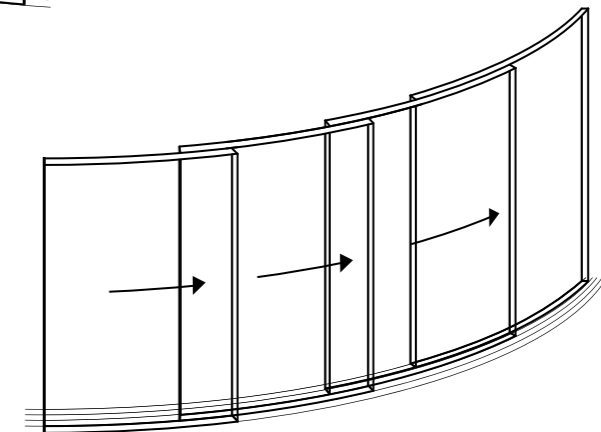
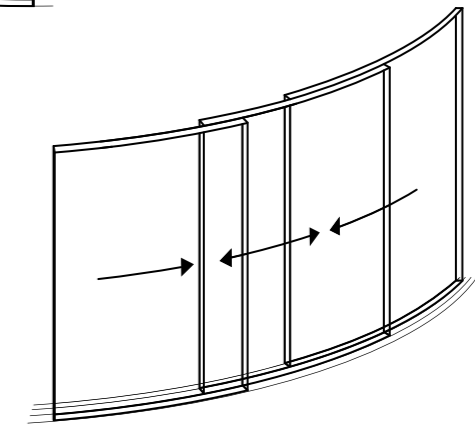
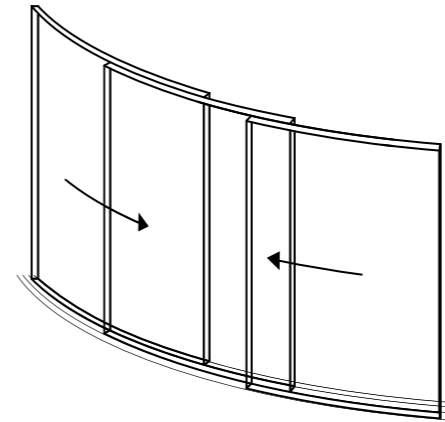
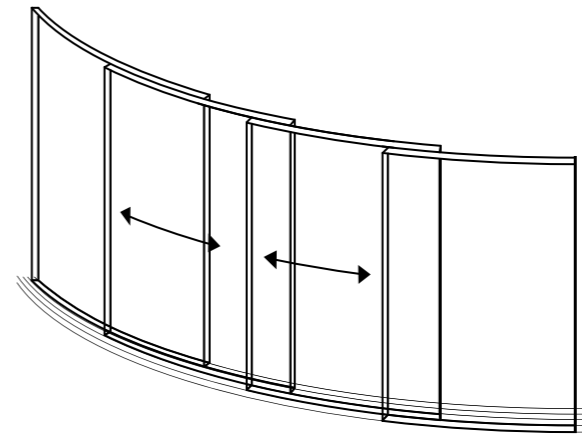
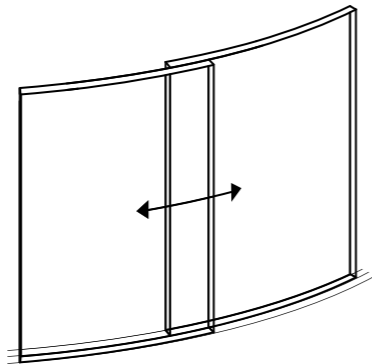
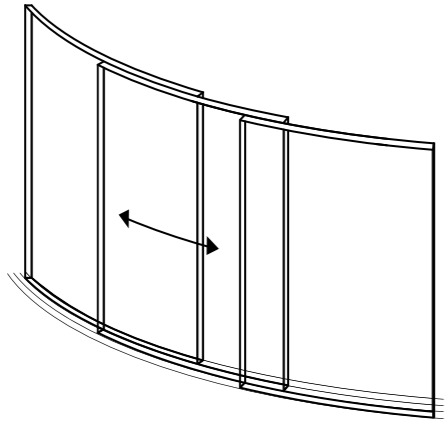
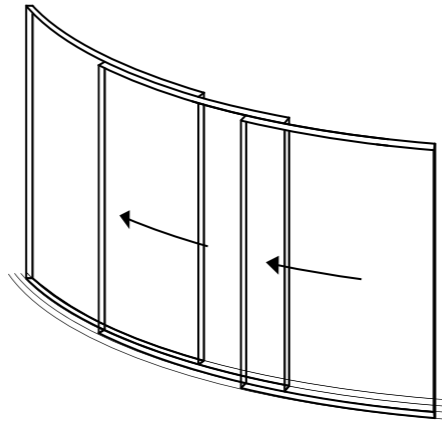
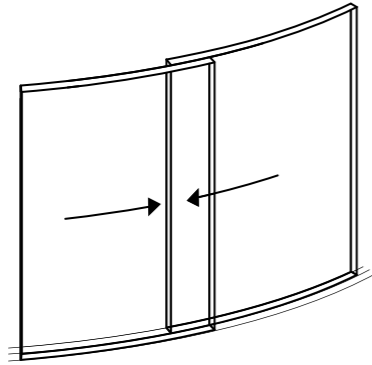
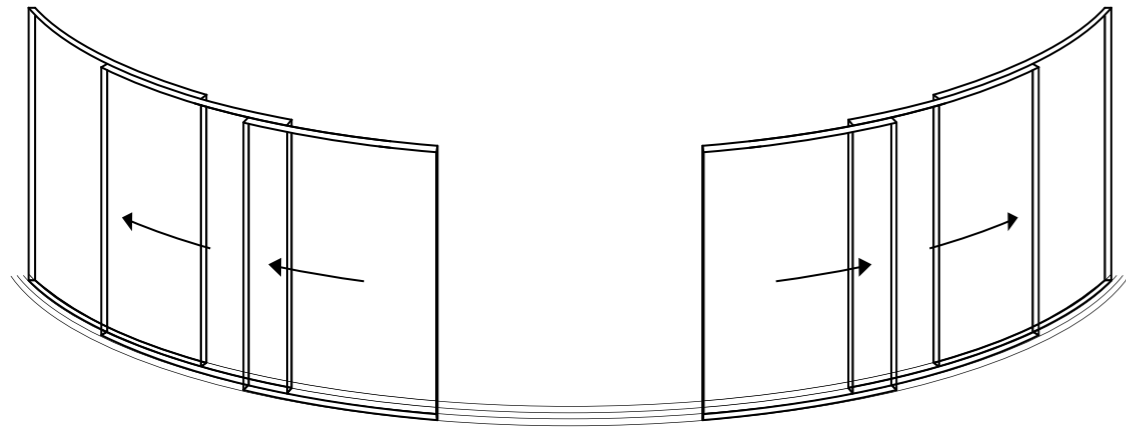
The curved window system was developed using the same principle as the sliding window.

It can be made in a sliding version with a minimum radius of 3 m and in a fixed version with a minimum radius of 1.5 m.

# VED







# PIVO

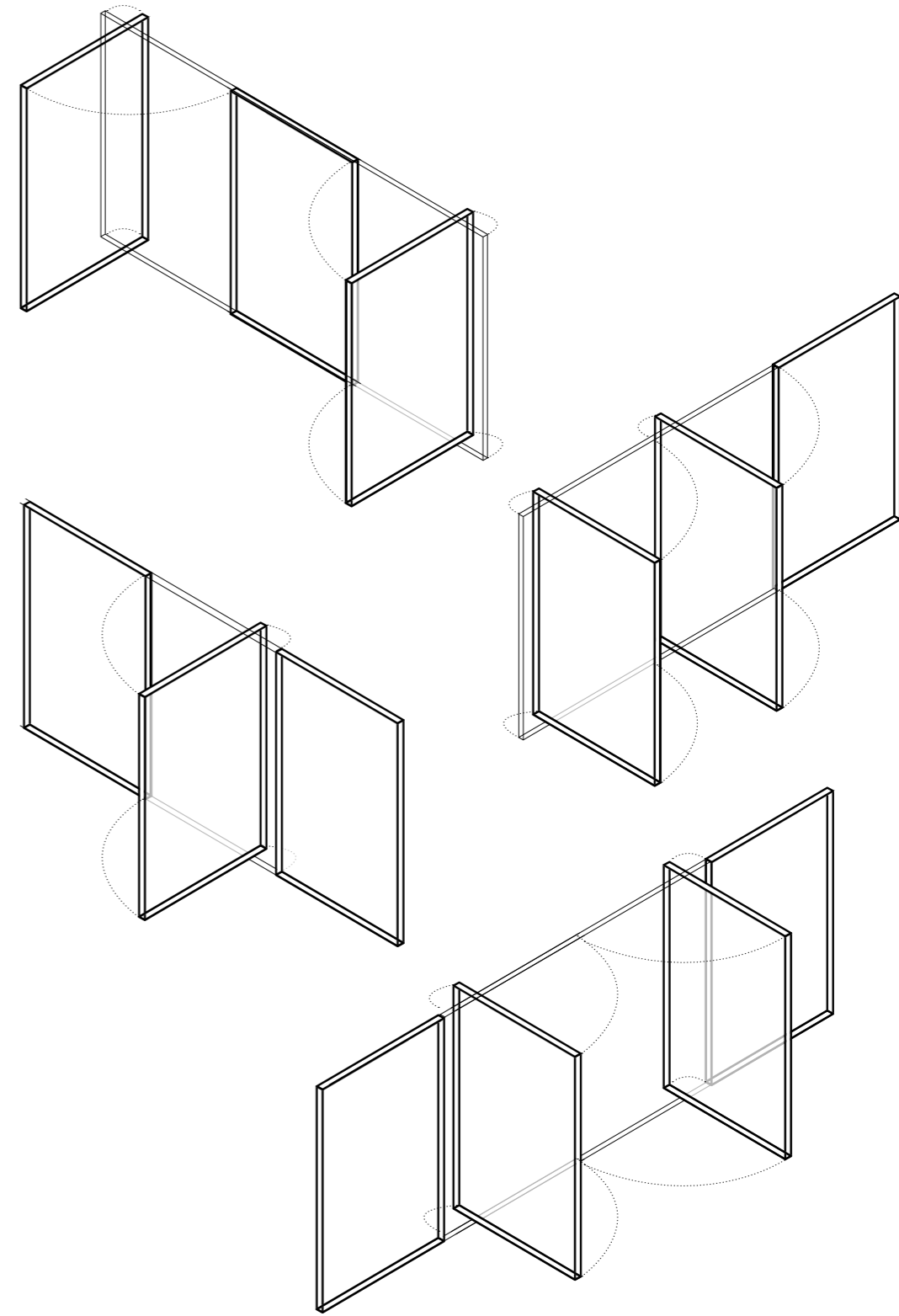
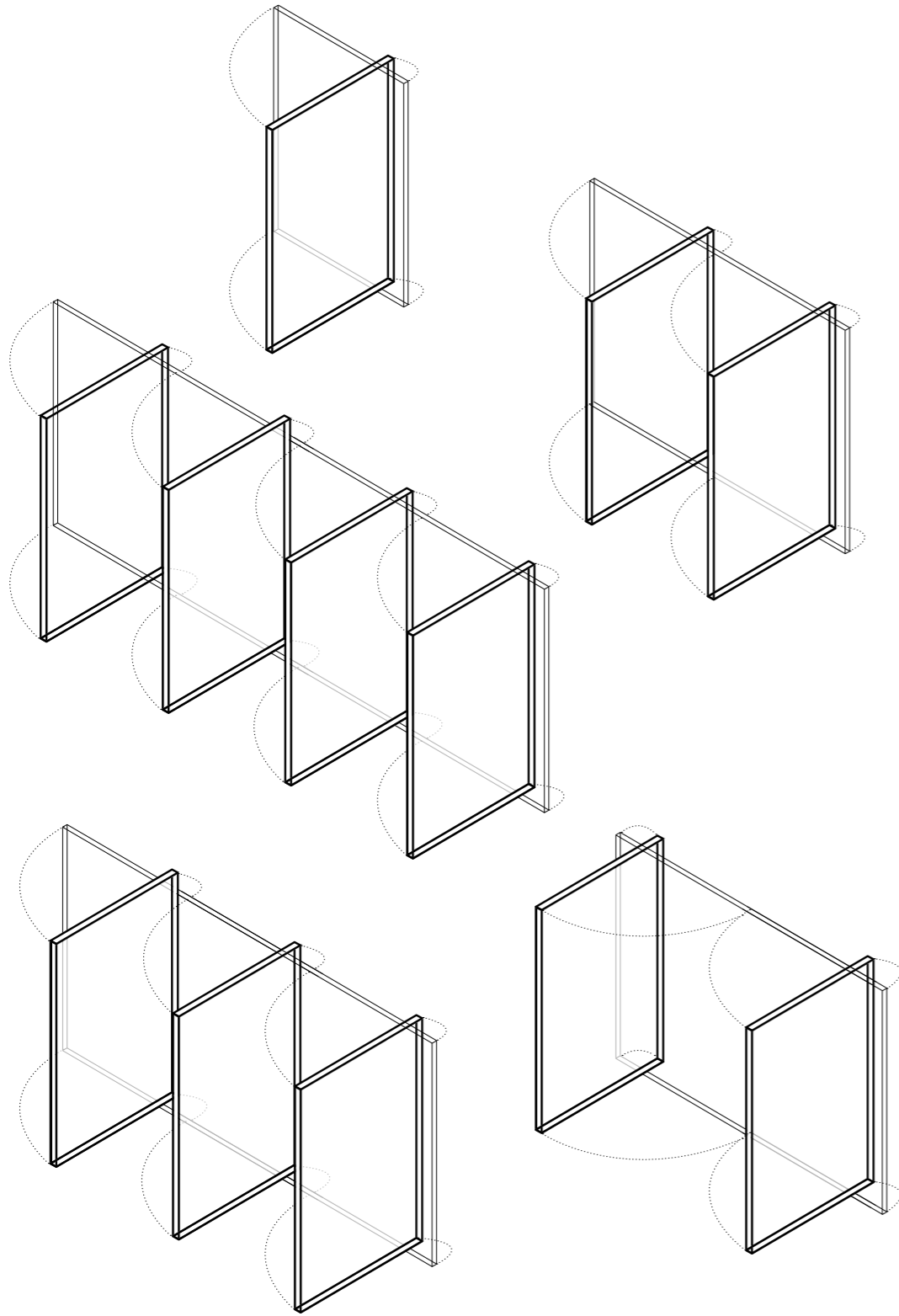
The Pivoting system has been developed specifically to conceal highly precise mechanisms, using similar methods to those employed in watchmaking.

The surface area of the pivoting panel can be up to 12 m<sup>2</sup> and 600 kg

# TING







# GUIL

Guillotine frames enable almost boundless heights to be reached, whilst retaining the same quality and aesthetic criteria as other products. Each panel can support a maximum weight of 500 kg or 1000 kg on request.

Perfectly balanced, the moveable panels can be manipulated with just a few grams of thrust, either manually or using a motor.

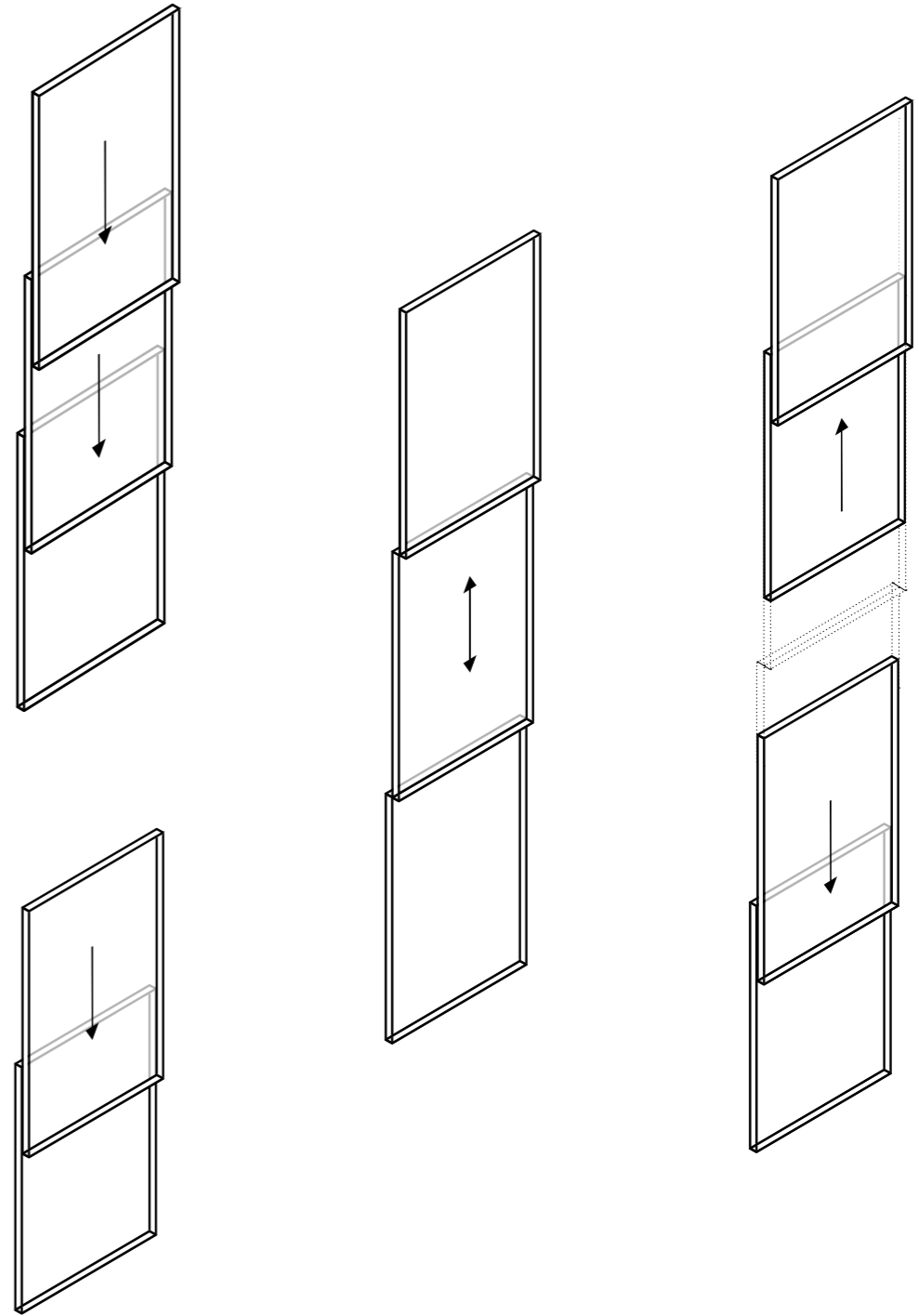
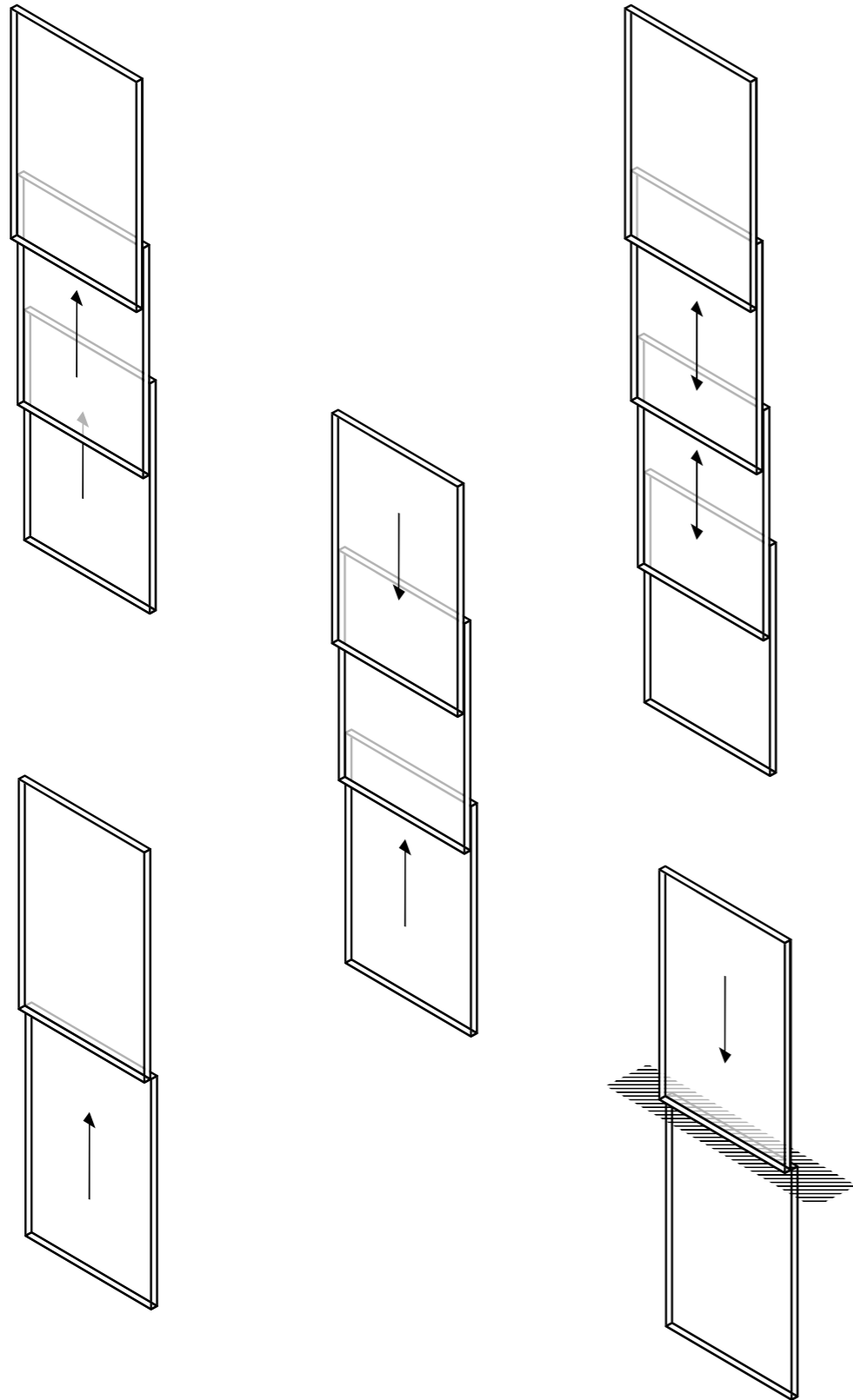
They can operate in one of two ways:

- a system with two identical panels which counterbalance one another;
- a counterweight system on the side (integrated into the finishes) which opens up an infinite range of configurations.

# LOTINE







# TURN

The Turnable Corner system has been developed to optimise space by using a roller principle which completely frees up the glazed components.

This major architectural solution creates space along the surfaces and corners by enabling the glazing to be stored in a dedicated area. The surface area of the glass panels can be up to 6 m<sup>2</sup>, and they can weigh up to 250 kg.

# CORNER

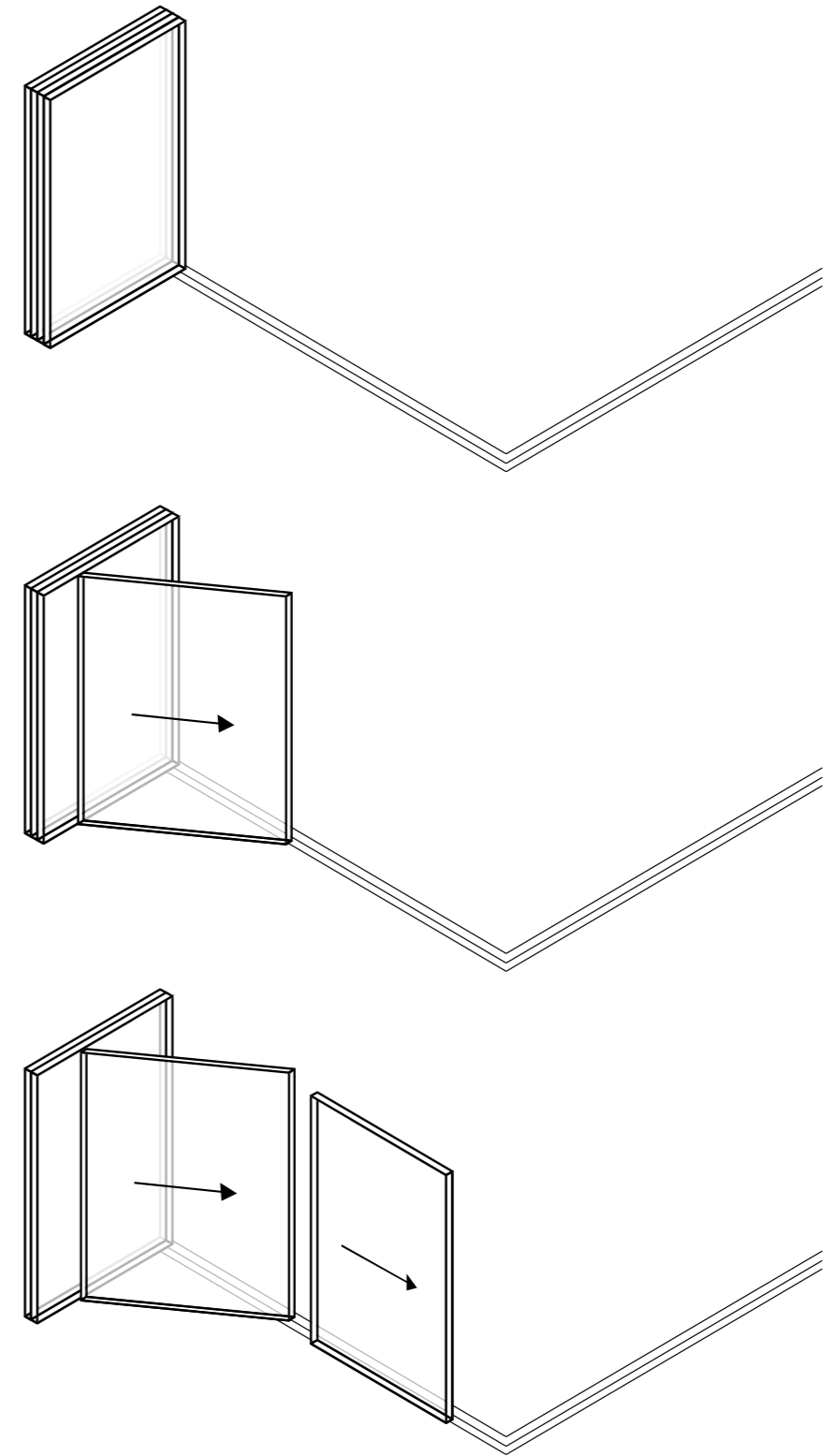
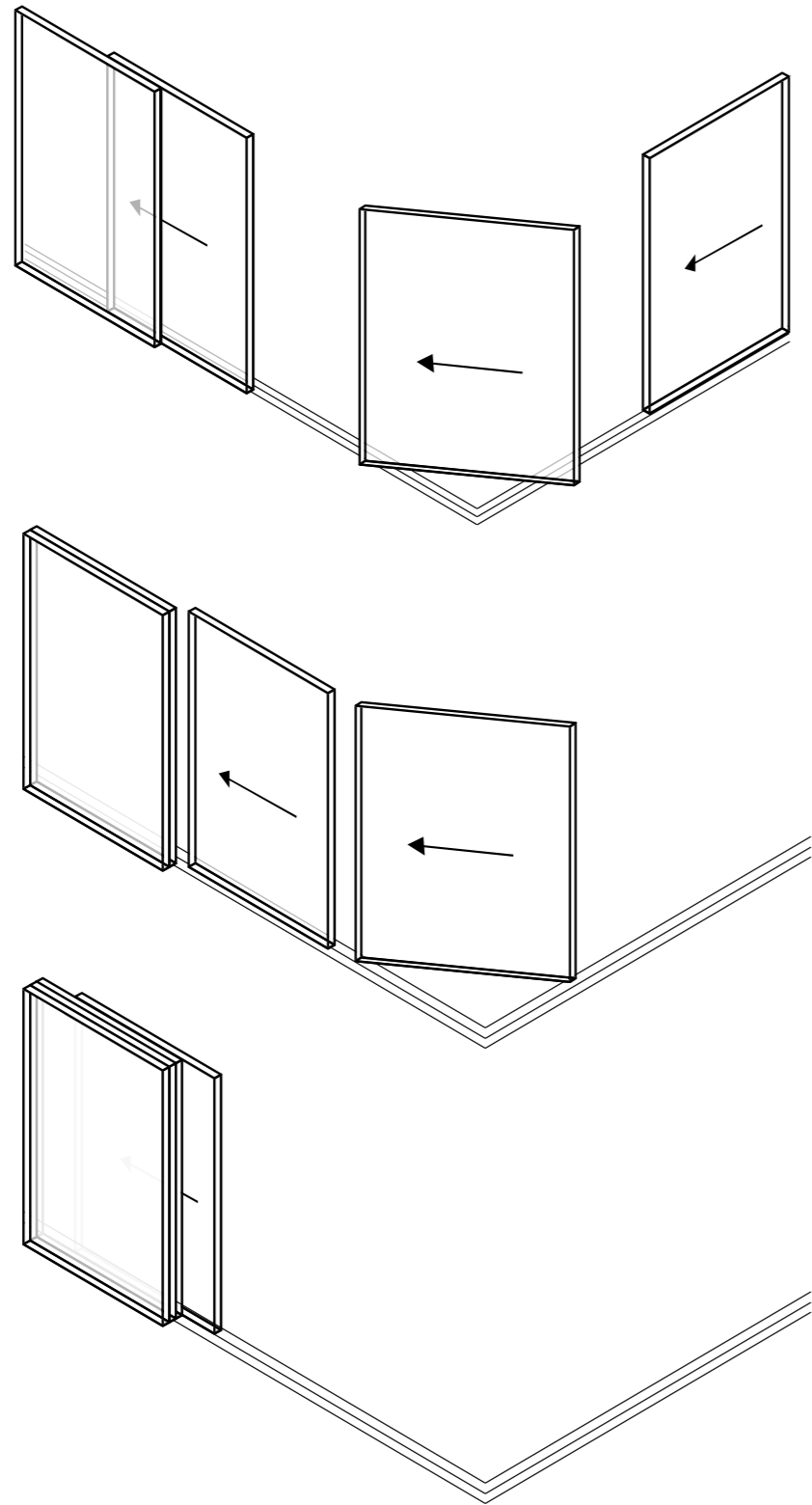
ABLE







TURNABLE CORNER



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# TECHNICAL DATA

Vitrocsa systems are available in several ranges to suit the installation conditions of your projects.

VITROCSA RANGE  
**V56**

52

• SLIDING

• PIVOTING

• GUILLOTINE



## SPECIFICATIONS

The Vitrocsa V56 range features infinite glazed surfaces and has been developed with the same mechanical characteristics as the Vitrocsa systems that have been proving their worth since 1992.

### FRAMES

Embedded and concealed in the floor, wall and ceiling  
Saline treatment specially adapted for coastal projects

### GLAZING

56 mm in double or triple glazing

### DIMENSIONS BY SYSTEM

Sliding standard: over 20 m<sup>2</sup>  
Sliding with invisible frame with two tracks: over 20 m<sup>2</sup>  
Pivoting: up to 12 m<sup>2</sup> and up to 600 kg per panel  
Guillotine: up to 1000 kg per panel  
Fixed: over 20 m<sup>2</sup>

### VERTICAL INTERLOCK

25 mm  
Reinforced for very windy locations or installation at high altitudes

### LOCK MECHANISM

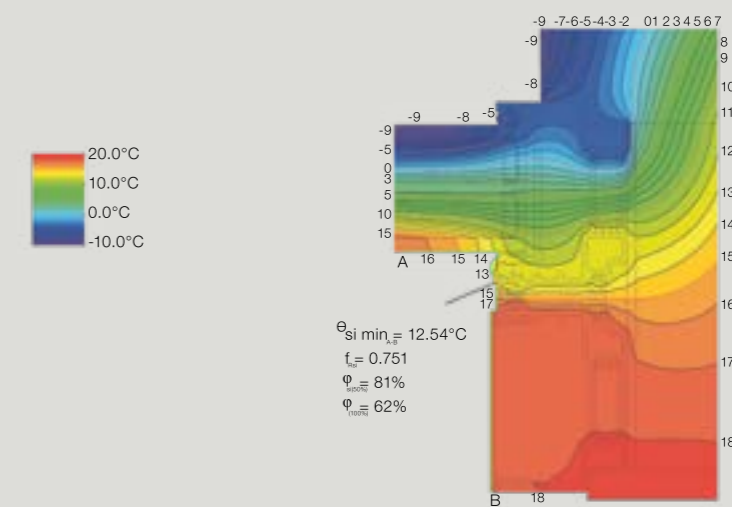
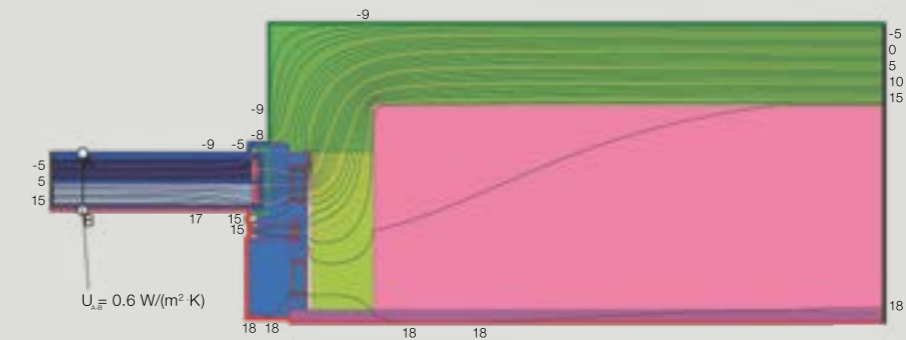
Two-point closure button (092)  
Three-point closure button (092)

### APPLICATIONS

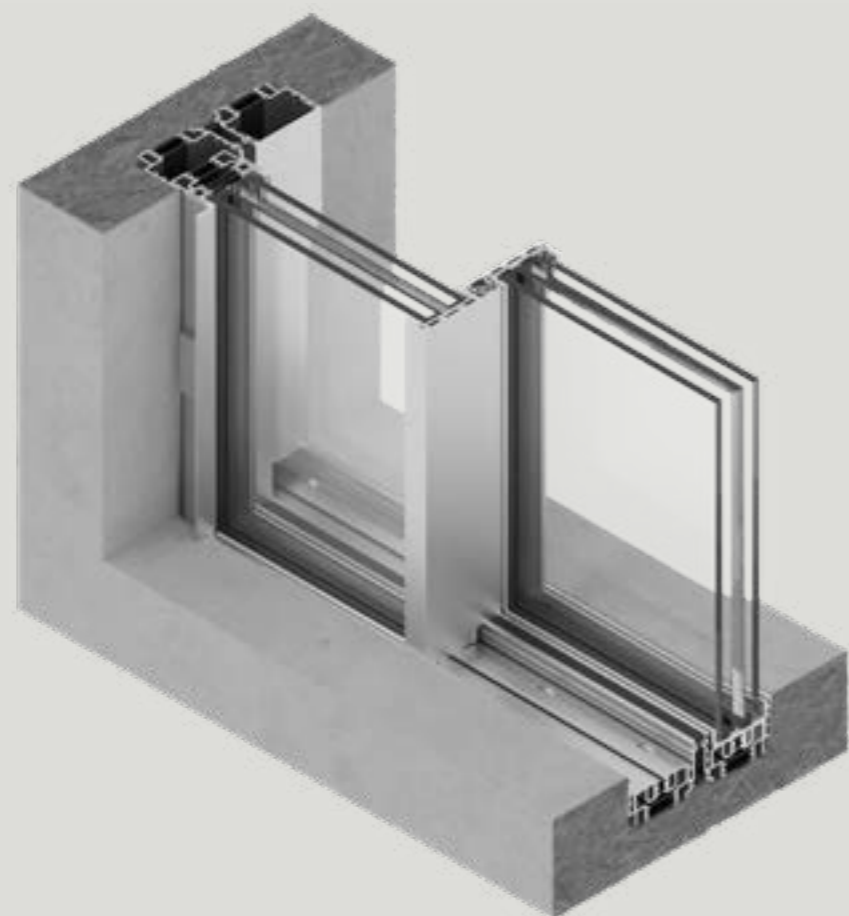
Open angle  
Pocket  
Motorisation  
Mosquito net

## THERMAL CROSS SECTION

Uw calculation: EN 10077  
Thermal insulation value: Uw 0.78 W/m2K  
Insulating glass: 56 mm



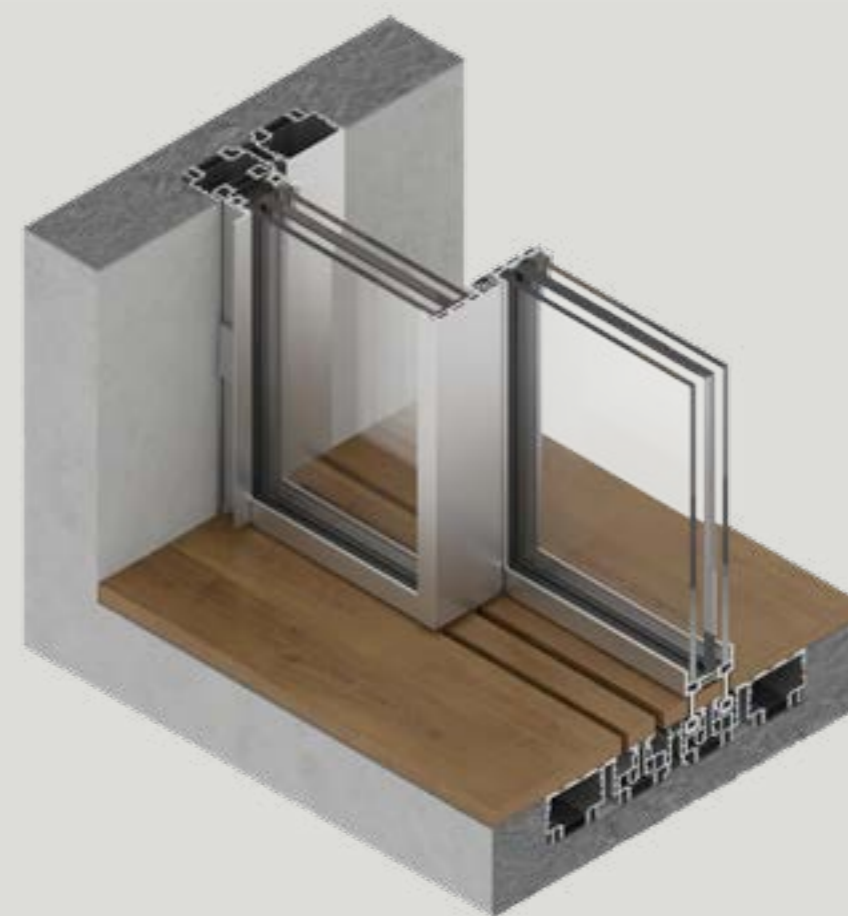
MAIN CROSS SECTIONS



56

GAMME V56 SLIDING

MAIN CROSS SECTIONS



57

GAMME V56 SLIDING WITH INVISIBLE FRAME



## TESTS

V56 SLIDING-FIXED	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 4
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 9A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Class B5
Repeated opening/closing	EN 1191 (test) EN 12400 (classification)	Class 3 (20'000 cycles)
Resistance to a vertical load	EN 14608 (test) EN 13115 (classification)	Class 3 (600 N)

VITROCSA RANGE  
**TH+**

• SLIDING

• CURVED

• PIVOTING

• GUILLOTINE

• TURNABLE CORNER



## SPECIFICATIONS

The excellent insulating properties of the profiles, in combination with the glass, enable current low energy consumption standards to be met.

### FRAMES

Embedded and concealed in the floor, wall and ceiling

Birail frames: 140 mm wide

Monorail frames: 64 mm + 12 mm seal

Saline treatment specially adapted for coastal projects

### GLAZING

32 mm or 44 mm

### DIMENSIONS BY SYSTEM

Sliding standard: over 20 m<sup>2</sup>

Sliding with invisible frame with two tracks: over 20 m<sup>2</sup>

Curved: dimensions depending on configuration sliding: minimum radius 3 m - fixed: minimum radius of 1.5 m

Pivoting: up to 12 m<sup>2</sup> and up to 600 kg per panel

Guillotine: up to 500 kg per panel

Turnable Corner: up to 6 m<sup>2</sup> and up to 250 kg per panel

Fixed: over 20 m<sup>2</sup>

### VERTICAL INTERLOCK

22 mm

Reinforced for very windy locations or installation at high altitudes

### LOCK MECHANISM

One-point closure button (029, 035, 055)

Two-point closure button (092)

Three-point closure button (092)

Cylinder

Range of options for electric closure

Alarms

### APPLICATIONS

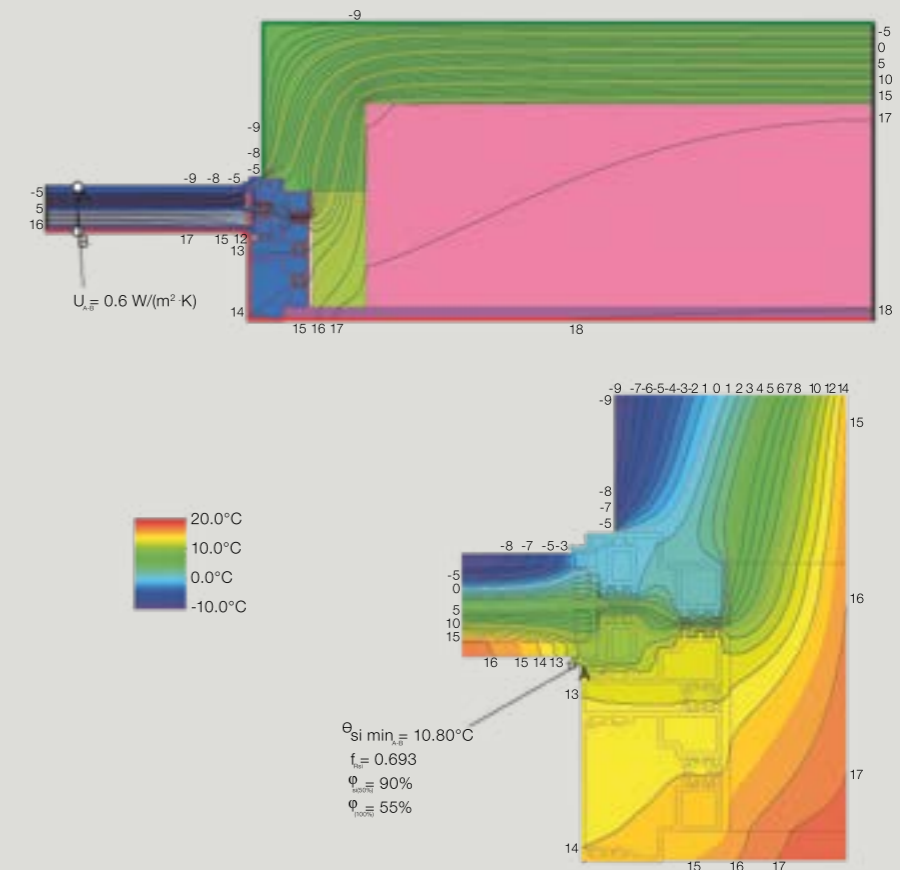
Open angle

Pocket

Motorisation

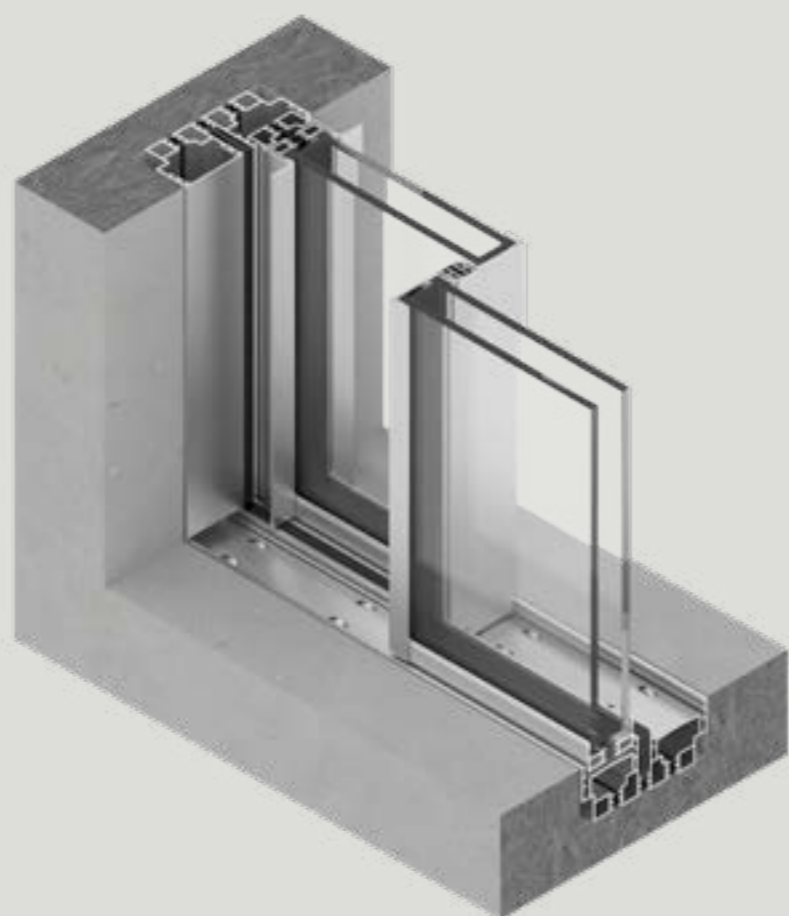
Mosquito net

## THERMAL CROSS SECTION



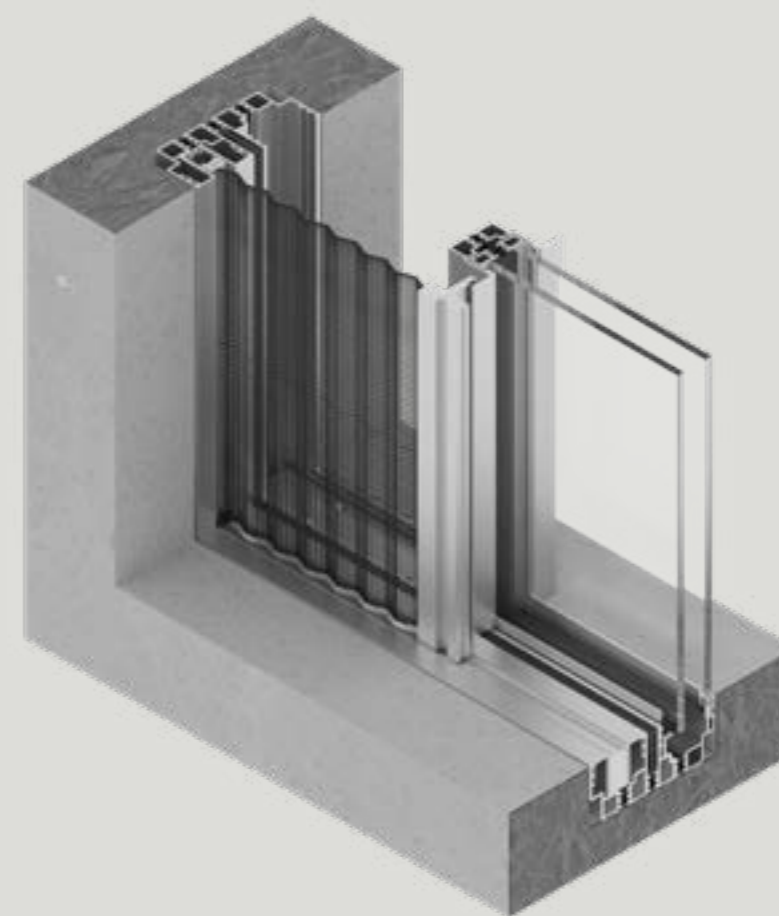
MAIN CROSS SECTIONS

64



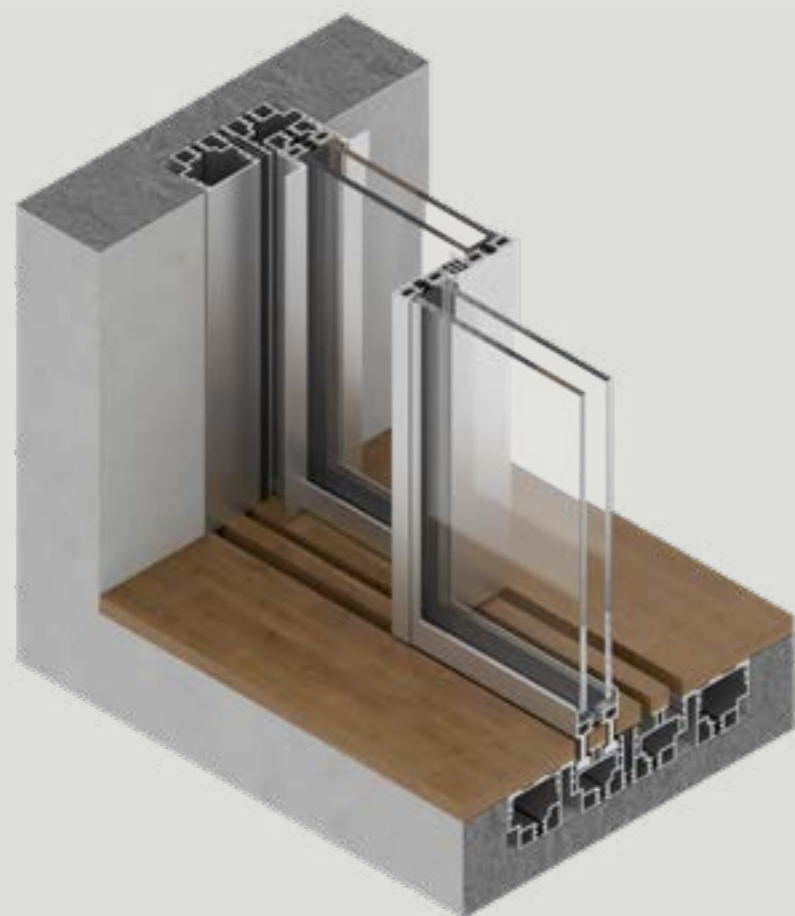
TH+ RANGE SLIDING

65



TH+ RANGE SLIDING WITH MOSQUITO NET

MAIN CROSS SECTIONS



99

TH+ RANGE SLIDING WITH INVISIBLE FRAME



67

TH+ RANGE CURVED WITH INVISIBLE FRAME

## TESTS

TH+ SLIDING-FIXED	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 3
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 8A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Clase B5
Repeated opening/closing	EN 1191 (test) EN 12400 (classification)	Class 3 (20,000 cycles)
Resistance to a vertical load	EN 14608 (test) EN 13115 (classification)	Class 3 (600 N)
Resistance to break-ins	EN 1628 to 1630 (test) EN 1630 (classification)	WK2/RC2 (resistance class 2)

TH+ SLIDING-FIXED MINERGIE	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 4
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 9A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Class B3
Behaviour in different climates	EN 13420 (test)	There is no classification
Calculation of the Uw value and isotherms	EN ISO 10077-1, 2	Uw 0,97 W/(m²K)

TH+ INVISIBLE FRAME	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 3
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 7A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Class C3

TH+ SLIDING-SLIDING	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air-borne noise insulation (measured in the laboratory) Glass: vPh 5/0,76/5 - 16 - vF5 total thickness: 31.8 mm	EN ISO 10140 (2010)	36 dB

TH+ GUILLOTINE	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 3
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 9A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Class C2/B3/4A

TH+ PIVOTING	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 3
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 8A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Class C3/B4

TH+ TURNABLE CORNER	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 1 (150 Pa)
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 4A

VITROCSA RANGE  
**V32**

70

• SLIDING



## SPECIFICATIONS

The V32 range has thermal reinforcement and a glass fibre profile. This range is designed for standard fixed or sliding openings.

### FRAMES

Embedded and concealed in the floor, wall and ceiling

Birail frames: 124 mm wide

Monorail frames : 56 mm + 12 mm seal

Saline treatment specially adapted for coastal projects

### GLAZING

32 mm

### DIMENSIONS BY SYSTEM

Sliding: up to 12 m<sup>2</sup>

Sliding with invisible frame with one track: up to 12 m<sup>2</sup>

Fixed: up to 12 m<sup>2</sup>

### VERTICAL INTERLOCK

23 mm

Reinforced for very windy locations or installation at high altitudes

Optimised heat retention with fibreglass towers

### LOCK MECHANISM

Two-point closure button (092)

Cylinder

Range of options for electric closure

Alarms

### APPLICATION

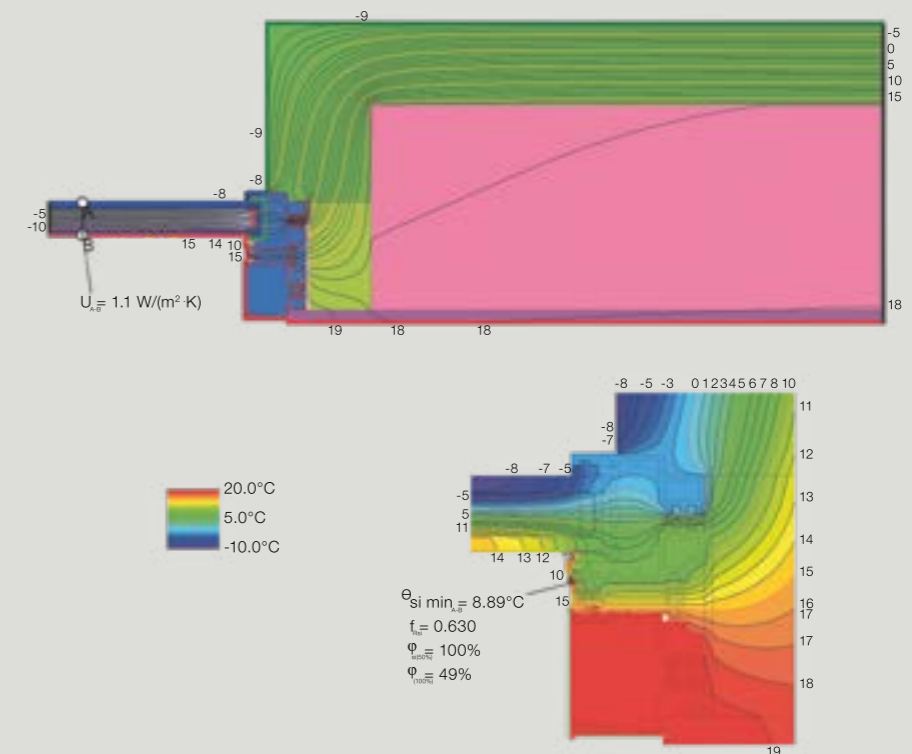
Open angle

Pocket

Mosquito net

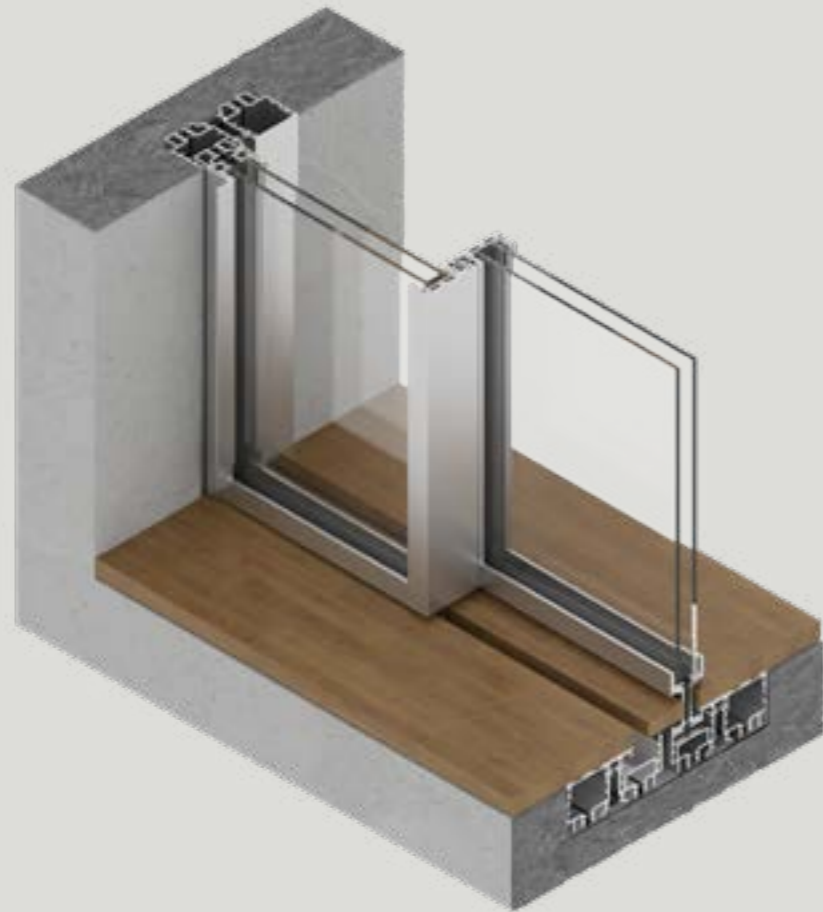
## THERMAL CROSS SECTION

Calculation of the U value according to EN ISO 10077-1 and 2 standards



MAIN CROSS SECTIONS

74



V32 RANGE SLIDING WITH INVISIBLE FRAME



75

V32 RANGE SLIDING WITH INVISIBLE FRAME

VITROCSA RANGE  
**3001**

• SLIDING

• PIVOTING

• GUILLOTINE



## SPECIFICATIONS

The first Vitrocsa 3001 window was developed at the start of the 1990s. With the experience we now have, we can guarantee that this system presents no hidden defects.

### FRAMES

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Embedded and concealed in the floor, wall and ceiling

Birail frames: 99.5 mm wide

Monorail frames: 45 mm + 9.5 mm seal

Saline treatment specially adapted for coastal projects

### VERTICAL INTERLOCK

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18,5 mm

Reinforced for very windy locations or installation at high altitudes

### GLAZING

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12 to 26 mm

### LOCK MECHANISM

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One-point closure button (029, 035, 055)

Two-point closure button (092)

Cylinder

Range of options for electric closure

Alarms

### DIMENSIONS PER SYSTEM

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Sliding: up to 6 m<sup>2</sup>

Pivoting: up to 3 m<sup>2</sup>

Guillotine: up to 180 kg per panel

Fixed: up to 9 m<sup>2</sup> and 3<sup>o</sup> mm thick

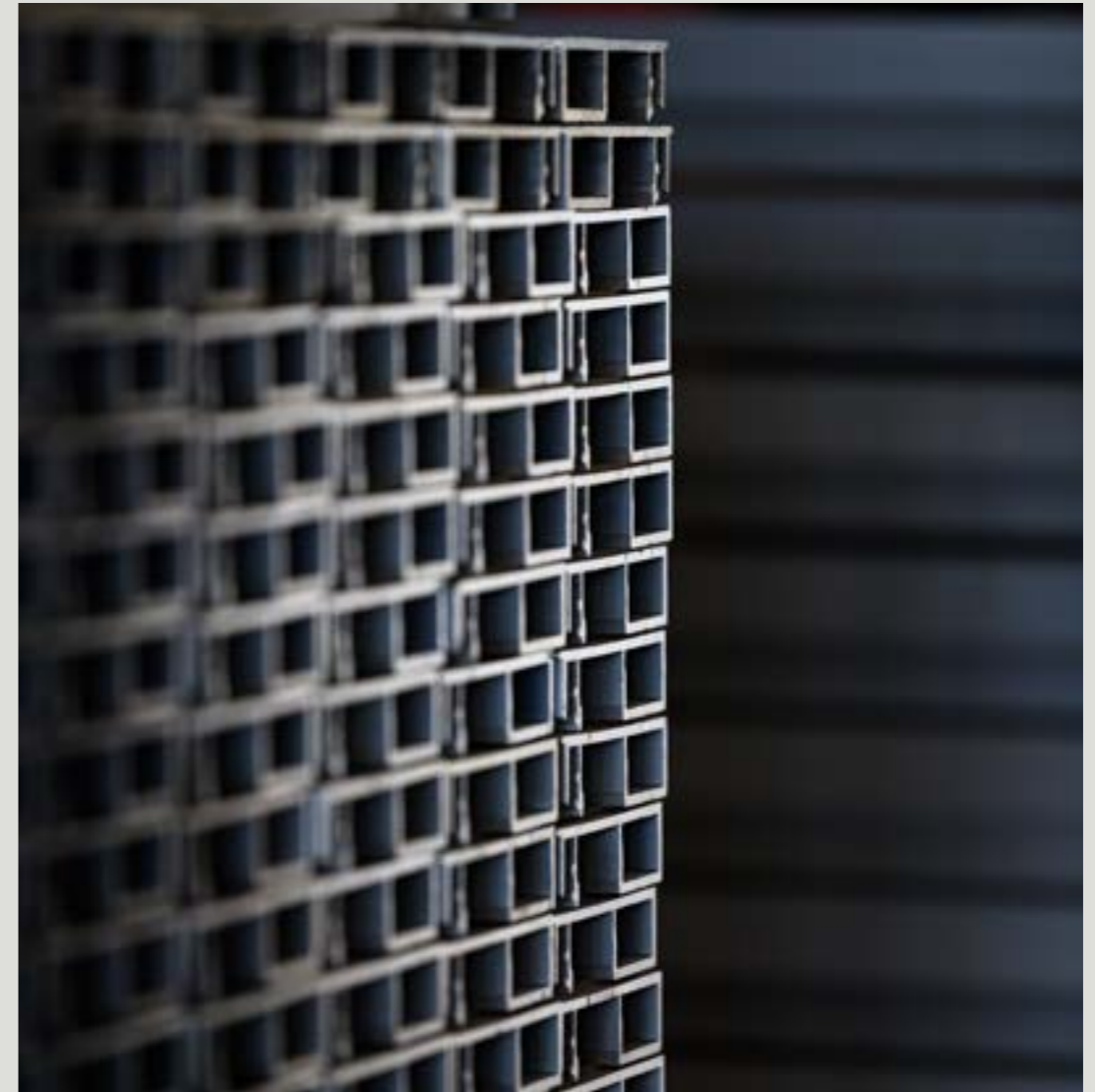
### APPLICATIONS

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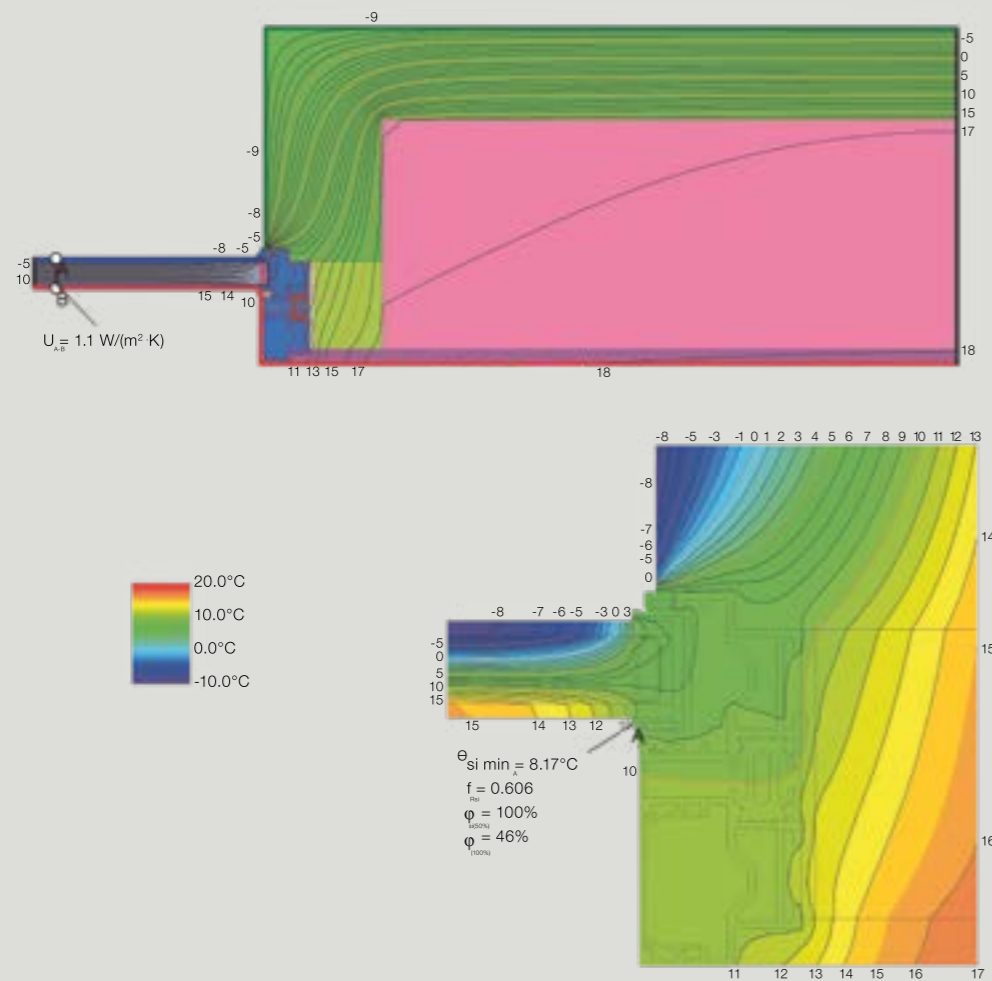
Open angle

Pocket

Mosquito net



## THERMAL CROSS SECTION

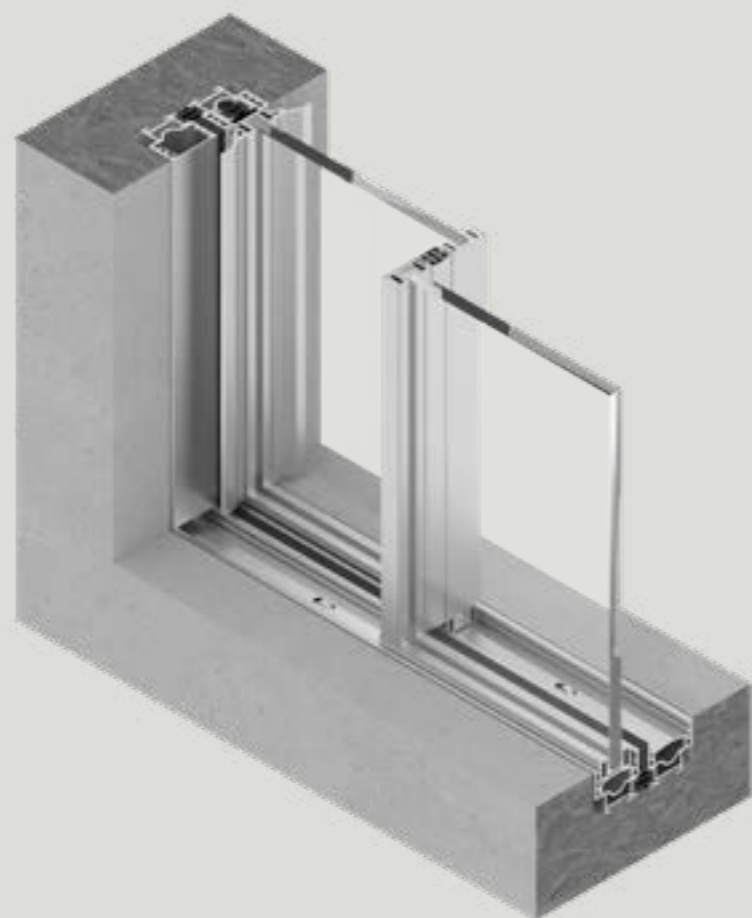


## TESTS

3001 SLIDING-FIXED	STANDARDS (TEST AND CLASSIFICATION)	CLASSIFICATION
Air permeability	EN 1026 (test) EN 12207 (classification)	Class 4
Water permeability	EN 1027 (test) EN 12208 (classification)	Class 7A
Repeated opening/closing	EN 1191 (test) EN 12400 (classification)	Class 3 (20,000 cycles)
Resistance to a vertical load	EN 14608 (test) EN 13115 (classification)	Class 3 (600 N)
Resistance to break-ins	EN 1628 to 1630 (test) EN 1630 (classification)	WK2/RC2 (resistance class 2)

MAIN CROSS SECTIONS

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3001 RANGE SLIDING



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3001 RANGE SLIDING

# FURTHER INFORMATION

• SLIDING

• CURVED

• PIVOTING

• GUILLOTINE

• TURNABLE CORNER



### **DRAINAGE CHAMBER**

The frames drain vertically, with the rainwater being collected in a stainless steel chamber. This chamber is equipped with drainage foam to protect against the pressure of the wind. It also houses PVC support components which distribute the loads ( weight of the glazing ) across the structure.

### **TESTS**

To clearly demonstrate the properties of the Vitrocsa window, we have conducted standardised tests in an accredited laboratory (SWISS TESTING SERVICE NUMBER STS 317). Since 2021, we have acquired a test bench capable of accommodating windows of up to 35 m<sup>2</sup>, which enables us to test their resistance to wind pressure, as well as checking water and air tightness more thoroughly.

### **MOTORISATION**

In accordance with our philosophy, we developed a motorisation system for all the TH+ guillotine and sliding systems which allows integration into the architectural design with minimum interference, with a simplified and very quiet opening.

The motorisation system is fully hidden in the top part in a 12 cm high frame.

The maximum driving force is 180 N for a maximum weight of 1'600 kg per motor. The maximum motion speed is 167 mm/s-1 and slows when a second leaf is driven. It has an automatic electrical closure which is compatible with all home automation opening systems: electronic lock, push button, badge reader, etc. Our system is undergoing constant development, and new options will be available soon.

To ensure complete safety, the system stops as soon as an obstacle is detected. The motorisation system is also available for the curved solution.

### **FINISH**

Each Vitrocsa system has a 25-micron anodised aluminium 6060 alloy structure, available in a natural finish or in an infinite range of powder-coated colours.

### **RC2 STANDARDS**

It is vital for us to meet the requirements and expectations of our clients while offering them the highest level of safety and security. Our systems meet the highest standards, such as RC2. Various additional components are available to meet other safety requirements:

- Alarm directly integrated into the system
- Monitoring of the closed pane position
- Glass breakage detector
- Special anti-intrusion glass



