

V I T R O C S A

THE MINIMALIST WINDOW



TECHNICAL BROCHURE

SLIDING

Fixed or sliding, the width of the vertical profile is 18 mm and the maximum surface per pane is 18 m². The panes can be moved using just a few grams of thrust, either manually or using a motor. The system is ideal for very big projects and allows for several different options:

CURVED

The curved application allows a radius of 3 m for mobile elements and 1.5 m for fixed. This application is only available with anodized treatment to guarantee the precision of the curve.

INVISIBLE FRAME

This application removes the need for an internal or external architectural enclosure. It uses 32 or 44 mm double or triple glazing for sliding glazed surfaces up to 18 m².





POCKET

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

OPENING ANGLE

This solution makes it possible to create open angles for vertical elements. All combinations of rails are possible, for example a combination of 2 and 3 rails.

MOSQUITO NET

We offer several solutions for insect-related problems. 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 stud.



PIVOTING

In fixed or pivoting options, the width of the vertical profile is 18 mm.
Locking and sealing assured by a mobile rack blade or cylinder with key.





GUILLOTINE

The guillotine frames mean that almost boundless heights can be reached, whilst retaining the same quality and aesthetic criteria as other products. Perfectly balanced, the moveable panes (maximum 500 kg per glass) can be manipulated with just a few grams of thrust, either manually or motorised. They can operate in one of two ways:

- a system with two identical glass panes which counter-balance one another;
- a counterweight system on the side (integrated into the finishes) which enable an infinite range of configurations.

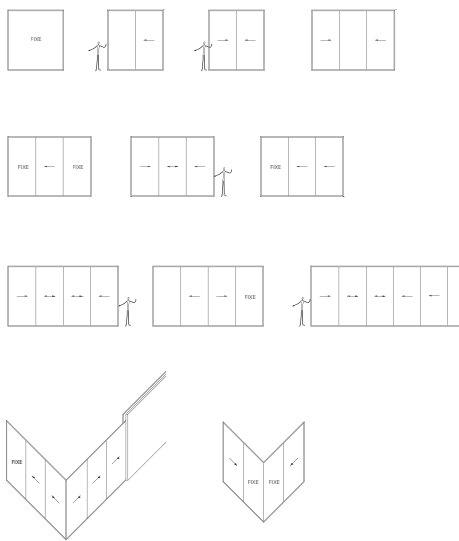
TURNABLE CORNER

Our new 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 frees up surface and corner space by enabling the panes to be stored in a dedicated area. The glass panel can be dimensioned up to a surface area of 6 m² with a weight of 250 kg.

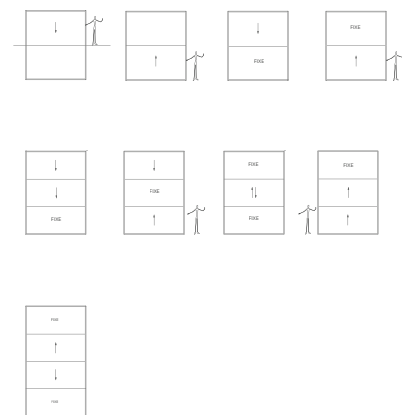


VITROCSA SOLUTIONS

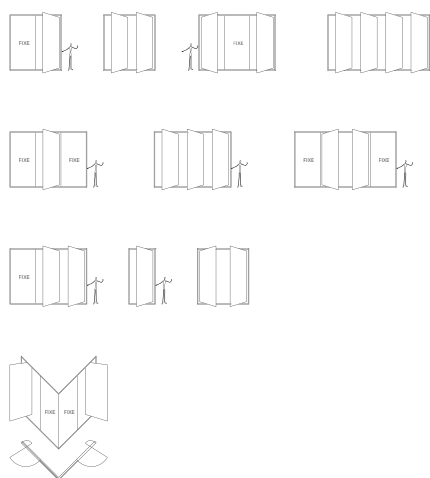
SLIDING



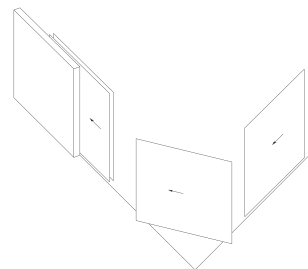
GUILLOTINE



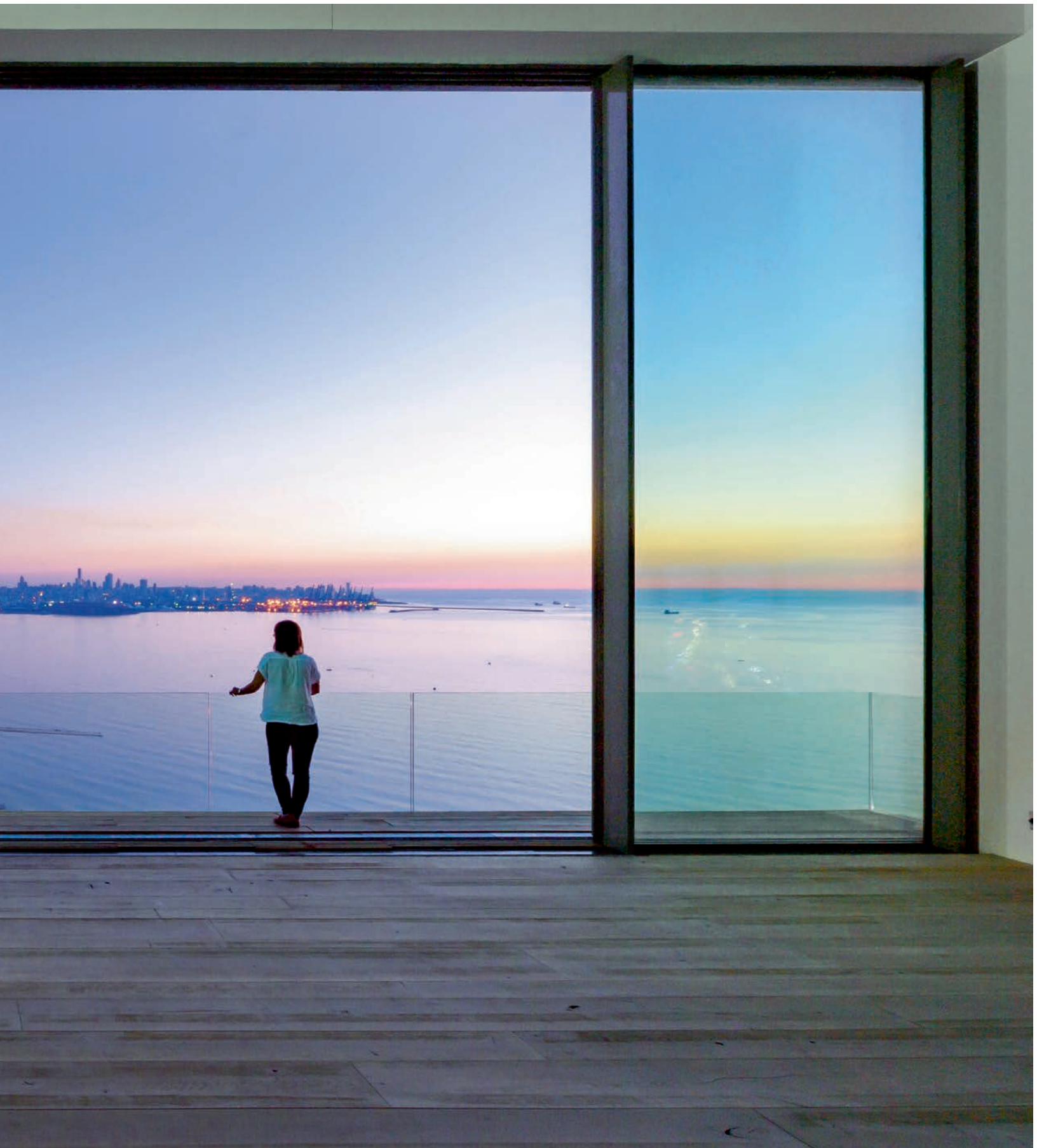
PIVOTING



TURNABLE CORNER







TH+ RANGE

Using 32 or 44 mm double or triple glazing, the Vitrocsa TH+ range is for sliding window surfaces of up to 18 m². The excellent insulating properties of the profiles, in combination with the glass, enable current low energy consumption standards to be met.

SPECIFICATIONS

Rail + Frames

Embedded and concealed in the floor, wall and ceiling
Frame just 140 mm wide for a birail (mono: 64 mm + 12 mm seal)
Saline treatment specially adapted for coastal projects

Vertical connection

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

Glazing

32 mm or 44 mm
Panel size up to 18 m² (6 x 3.21 m) vertical or horizontal

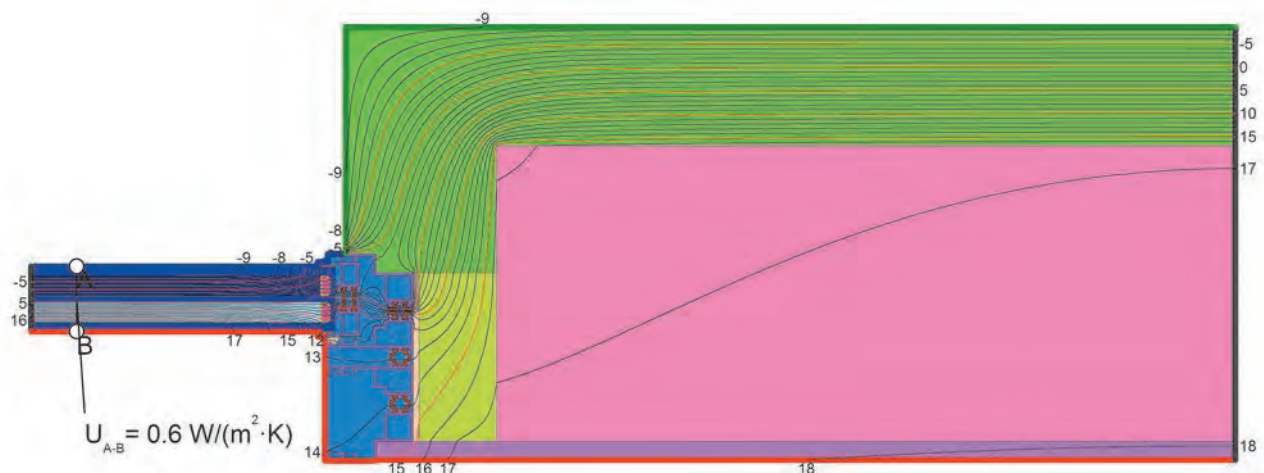
Closure mechanism

Standard closure mechanisms (029, 035, 055)
Two-point closure button
Cylinder
Range of options for electric closure
Alarms

Configuration

Standard sliding frame (up to 18 m²)
Sliding invisible frame (up to 18 m²)
Curved (anodised treatment only)
Pivoting (up to 12 m²)
Guillotine (up to 500 kg per pane)
Turnable Corner (up to 250 kg per pane, 6 m²)
Fixed (up to 18 m²)
Opening angle
Pocket
Motorisation
Mosquito net

THERMAL CROSS SECTION



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)	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)
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



3001 RANGE

The Vitrocsa 3001 range allows for sliding window surfaces of up to 6 m² with 26 mm double glazing.

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. The roller mechanism and sealing system work perfectly, provided that the window has been assembled in line with good industry practices.

SPECIFICATIONS

Rail + Frames

Embedded and concealed in the floor, wall and ceiling
Frame just 99.5 mm wide for a birail (mono: 45 mm + 9.5 mm seal)
Saline treatment specially adapted for coastal projects

Vertical connection

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

Glazing

26 mm
Panel size up to 6 m²

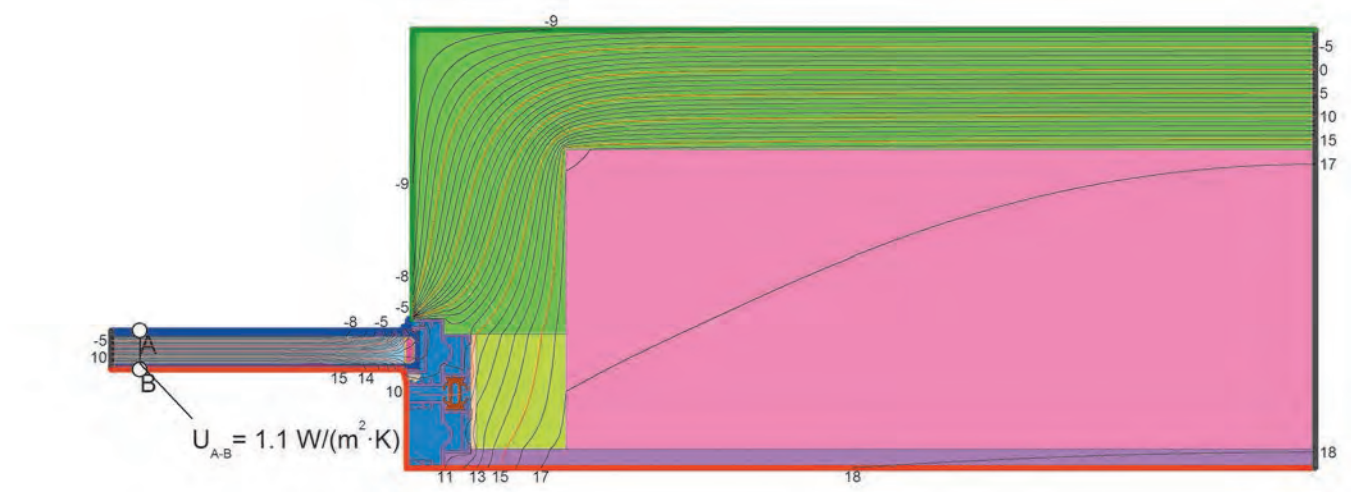
Closure mechanism

Standard closure mechanisms (029, 035, 055)
Cylinder
Range of options for electric closure
Alarms

Configuration

Standard sliding (up to 6 m²)
Pivoting (up to 6 m²)
Guillotine (up to 6 m²)
Fixed (up to 9 m²)
Opening angle
Pocket
Motorisation
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)





SWIMMS RANGE

The profile assembly system enables a range of glazing thicknesses to be used: 10-12 mm or 16-20 mm. This range is ideal for hot countries or internal partitions.

SPECIFICATIONS

Rail + Frames

Embedded and concealed in the floor, wall and ceiling
Frame just 64 mm wide for a birail (mono: 32 mm)
Saline treatment specially adapted for coastal projects

Vertical connection

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

Glazing

10 to 20 mm (single-glazing)

Closure mechanism

Two-point closure button
Cylinder
Range of options for electric closure
Switch, alarms

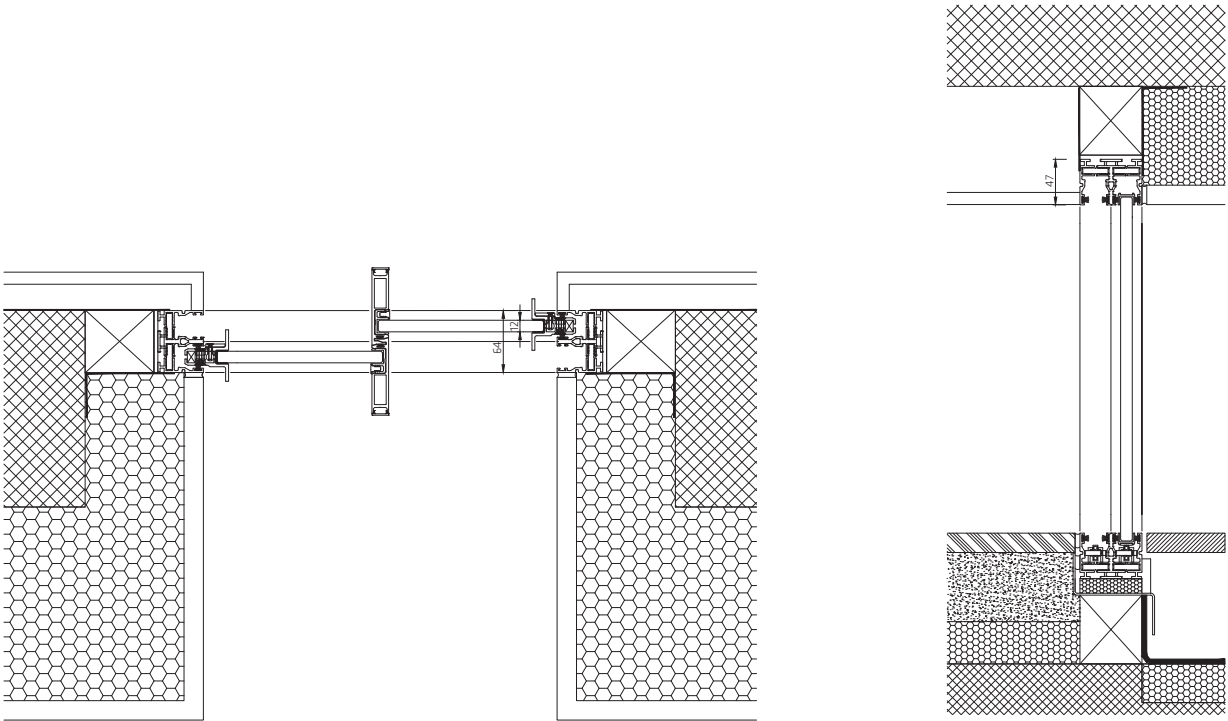
Configuration

Standard sliding
Opening angle
Pocket

TESTS

SWIMMS 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 7A
Wind resistance	EN 12211 (test) EN 12210 (classification)	Class C3

MAIN CROSS SECTIONS



V32 RANGE

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

SPECIFICATIONS

Rail + Frames

Embedded and concealed in the floor, wall and ceiling
Frame just 124 mm wide for a birail (mono: 56 mm + 12 mm seal)
Saline treatment specially adapted for coastal projects

Vertical connection

23 mm
Reinforced for very windy locations or installation at high altitudes
Optimised heat retention with fibreglass towers

Glazing

32 mm
Up to 12 m² (4 x 3 m), vertical or horizontal

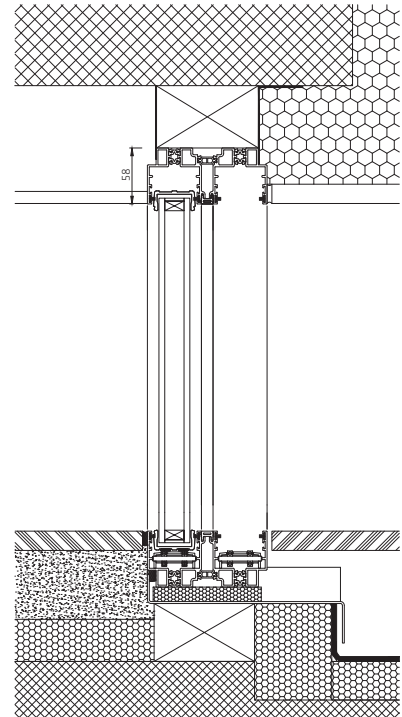
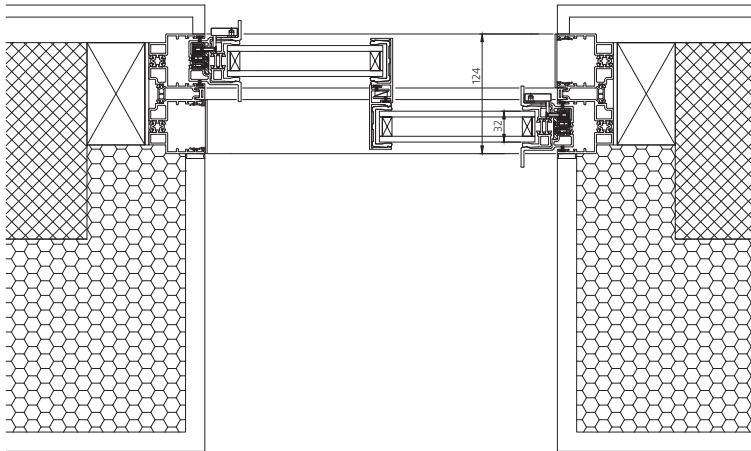
Closure mechanism

Two-point closure button
Cylinder
Range of options for electric closure
Alarms

Configuration

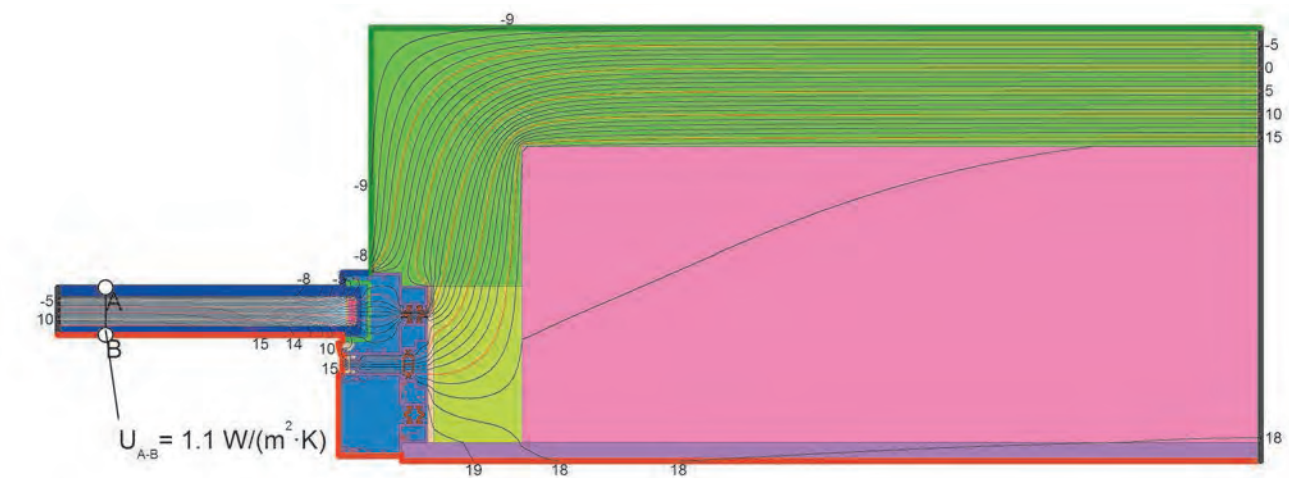
Sliding (up to 12 m²)
Fixed (up to 12 m²)
Opening angle
Pocket

MAIN CROSS SECTIONS



CALCULATION OF THE U VALUE

according to EN ISO 10077-1 and 2 standards



V56 RANGE

The range is currently in development and allows infinite glazing surfaces using 56 mm thick double or triple glazing. This new range represents an evolution of our current sliding windows. The Vitrocsa V56 window has been developed to keep the same mechanical characteristics of the Vitrocsa systems which have proven their worth for 25 years.

SPECIFICATIONS

Rail + Frames

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

Vertical connection

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

Glazing

56 mm in double or triple glazing

Closure mechanism

Standard two points

Configuration

Standard sliding
Opening angle
Pocket

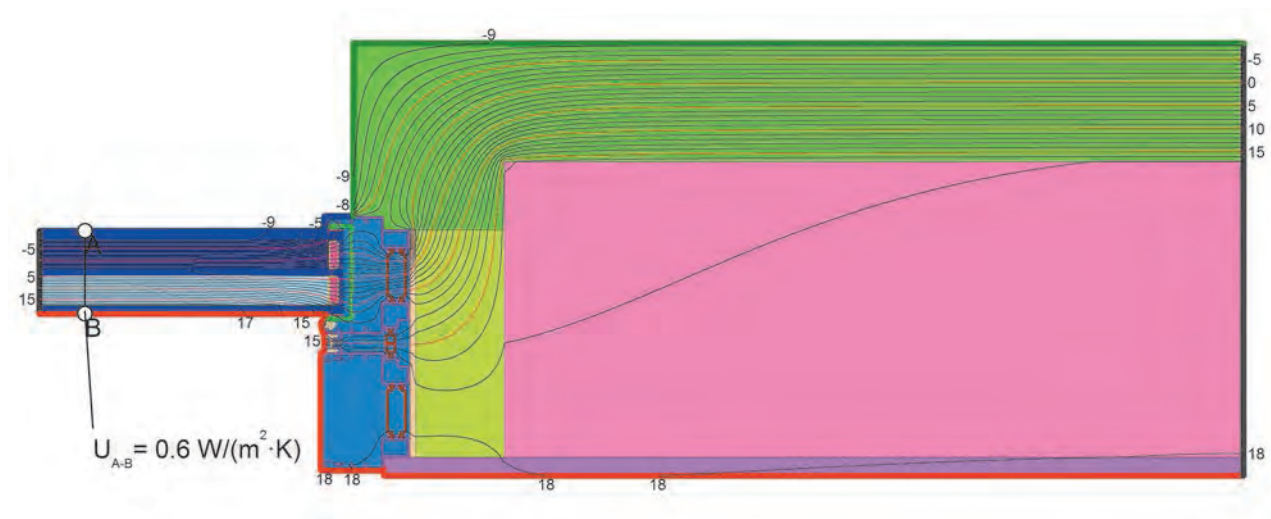
TESTS

The expected results of these investigative tests are given in the table below

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)

PERFORMANCE

Uw calculation: EN 10077
 Thermal insulation value: $U_w 0.78 \text{ W/m}^2\text{K}$
 Insulation glass: 56 mm



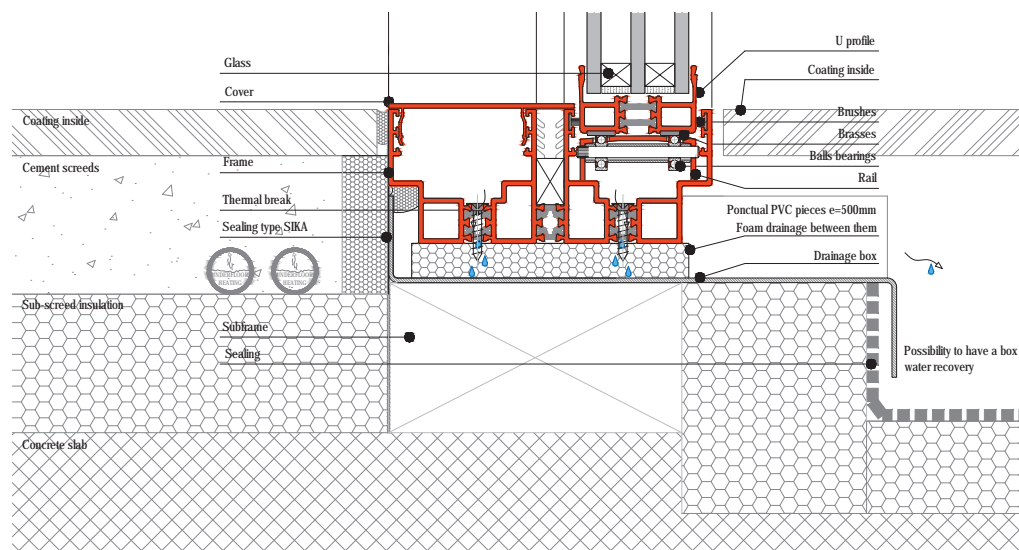


FINISHES

With an anodised 25 micron natural or coloured aluminium alloy structure, the thermolacquered version is available in an infinite choice of colours.

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 concrete 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).

MOTORISATION

In accordance with our philosophy, we developed a motorisation system for all the Vitrocsa 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 of our Vitrocsa frame and only requires a height of 12 cm.

The maximum driving force is 180 N for a maximum weight of 1,200 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.

For safety, the system stops if there is an obstacle. The motorisation system is also available for the curved and guillotine solutions.

SAFETY

It is essential for us to meet the requirements and expectations of our clients by offering them the highest level of safety. Our product meets the highest standards such as RC2. Various additional components are available to meet other safety requirements:

- Alarm directly integrated into our system
- Control of the closed leaf position
- Glass breakage detector
- Special burglary-resistant glass



CREDITS

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