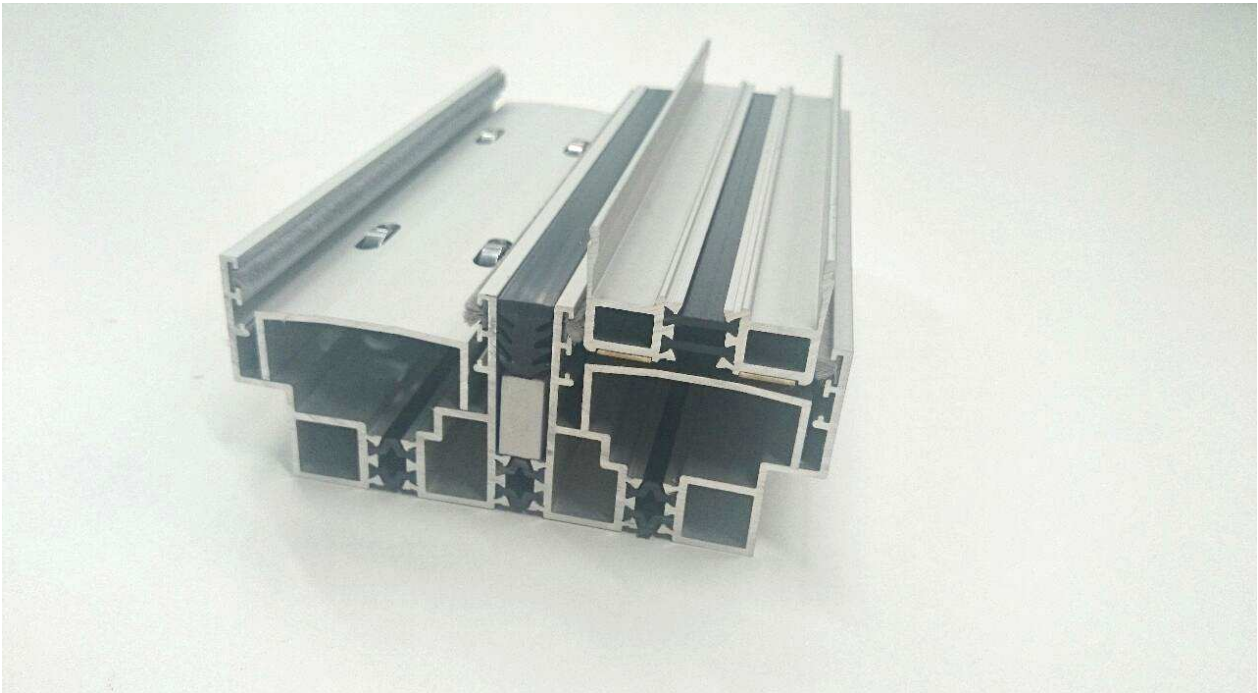


## TH+ Range

### Product information

Using 32 or 44 mm double or triple glazing, the Vitrocsa TH+ range allows for sliding window surfaces of up to 18 m<sup>2</sup>.

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 (birails; monorail: 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 m<sup>2</sup> (6x3.21 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

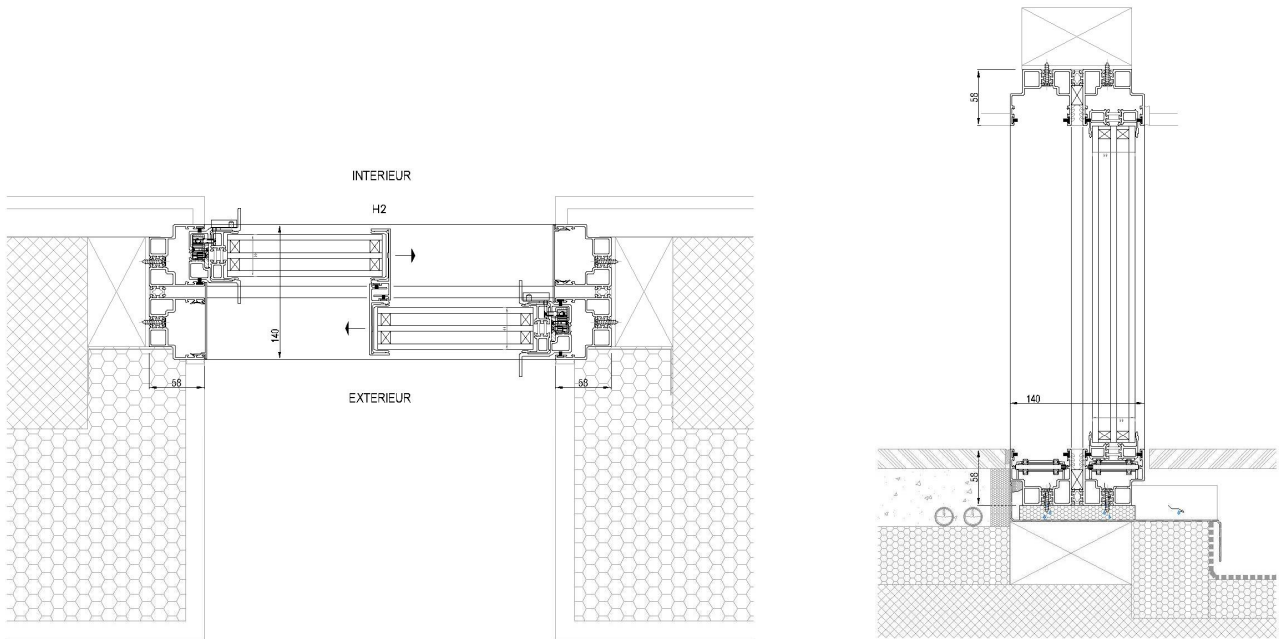
Standard sliding (up to 18 m<sup>2</sup>)  
 Sliding invisible frame (up to 18 m<sup>2</sup>)  
 Curved (anodised version only)  
 Pivoting (up to 12 m<sup>2</sup>)  
 Guillotine (up to 500 kg per pane)  
 Turnable corner (up to 250 kg per pane, 6 m<sup>2</sup>)  
 Fixed (up to 18 m<sup>2</sup>)  
 Opening angle  
 Pocket  
 Motorisation  
 Mosquito net

### Finishes

Natural or coloured 25-micron anodised aluminium alloy, version with thermal varnish in a very wide range 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.



To clearly demonstrate the properties of the VITROCSA – TH+ window, we have conducted standardised tests in an accredited laboratory (SWISS TESTING SERVICE NUMBER STS 317).

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

Test type, approx. 2500/2500 mm <b>TH+ fixed-sliding</b>	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)

Test type, approx. 3400/2388 mm <b>MINERGIE TH+ fixed-sliding</b>	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 value $U_w$ and isotherms	EN ISO 10077-1, -2	$U_w$ 0.97 W/(m <sup>2</sup> K)

Test type, approx. 2970/2586 mm <b>TH+ invisible wall</b>	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

Type of acoustic tests, approx. 1900/2520 mm <b>TH+ sliding-sliding</b>	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

Test type, approx. 2970/2586 mm <b>TH+ guillotine</b>	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

Test type, approx. 2970/2580 mm <b>TH+ pivoting</b>	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

Test type, approx. 2320/2264 mm <b>TH+ turnable corner</b>	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

### Thermal cross section

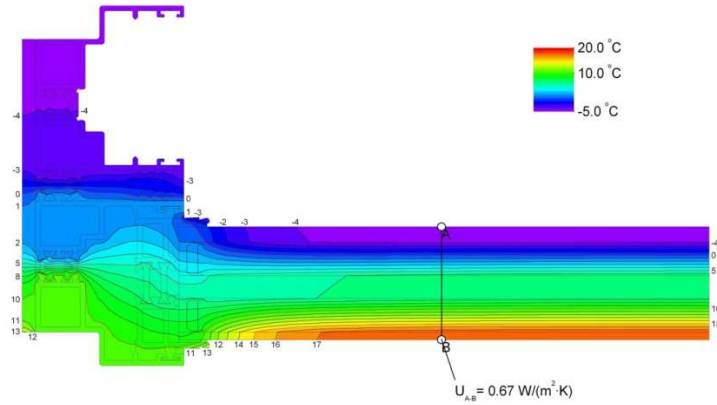


Image 1: isotherms for the side detail of the VITROCSA - TH+ frame