



Technal photography

SOLEAL

UNIVERSAL SLIDER





SOLEAL slider: a benchmark product for any project



Architect: Anthony Vienne

A new generation of sliders

The SOLEAL slider's intrinsic qualities make it a new benchmark product on the market thanks to its many applications and options.

Whether it's a new build or renovation, from the simplest to the most complex project, the SOLEAL slider offers a suitable solution every time.

A broad evolving range

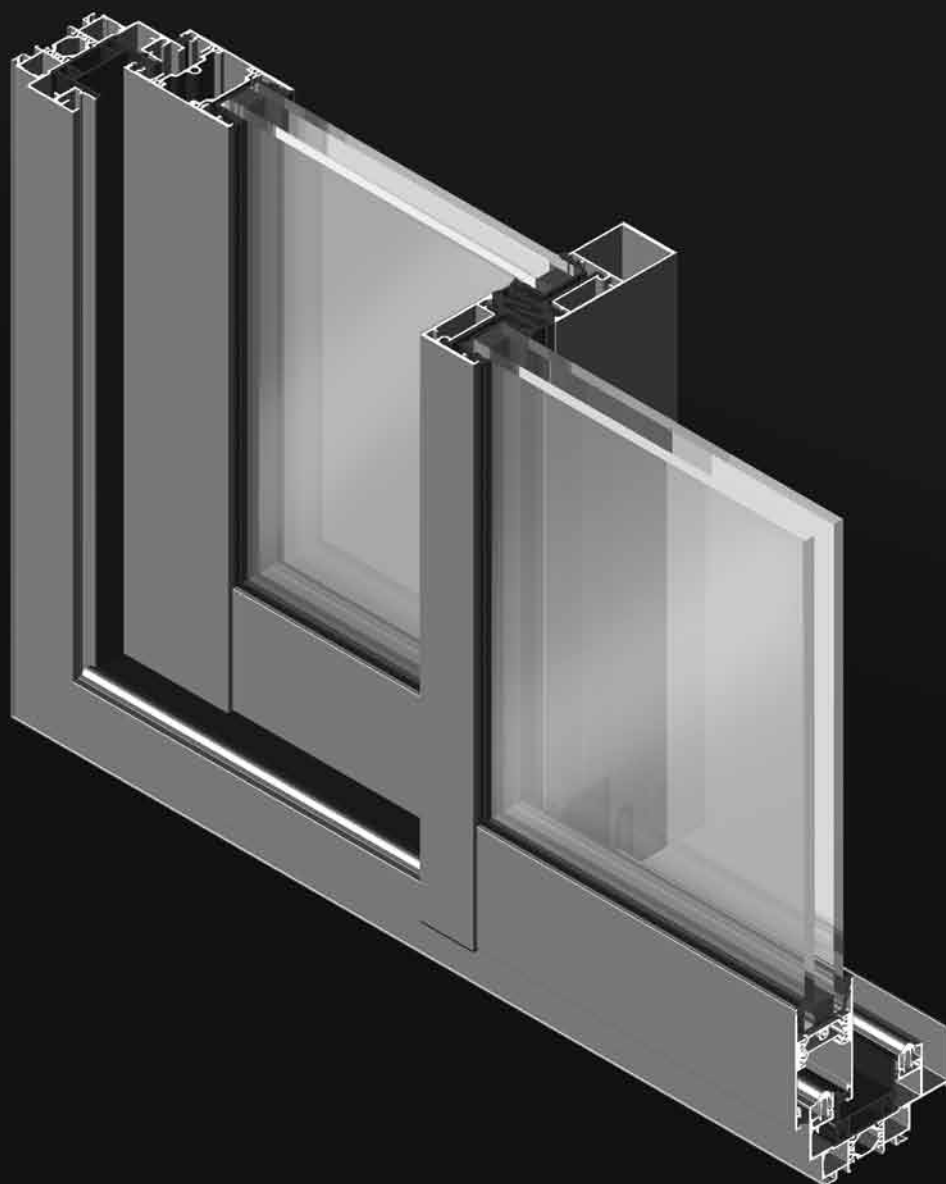
The SOLEAL range is available in many applications: 2 to 4 tracks, from sliding-sash pocket window to 3-track composite pocket window frames. All applications are available with concealed drainage and with or without a disabled access threshold.

The SOLEAL slider is based on a 55 mm module with a 20 mm thermal break. The installation and cladding environments are the same as for SOLEAL casements and doors.

A straight cut version completes the basic range. Designed around a 65 mm module with a 40 mm thermal break and slender aluminium frames, this version offers a high level of thermal performance.



SOLEAL, universal slider



Key innovations and features

Large sizes

- The design is suitable for large sizes, taking greater advantage of available daylight
- Sizes up to W 4,3 m x H 2,6 m with high inertia mullions in a 2-leaf frame with a maximum weight of 200 kg per leaf

Thermal, weather and acoustic performance

- SOLEAL sliders are designed to follow changes in the market: French 2012 standard, air permeability criteria for low consumption buildings, and acoustic requirements

Multiple applications

- 2, 3 and 4 tracks
- Composite frames and pocket windows
- Special frame for direct surface fitting to existing joinery
- Cladding (flashings, sills and architraves) as for SOLEAL doors and windows

Two opening frame versions

- Flat faced 24, 26 and 28 mm glazing
- Wider channel for 30 and 32 mm glazing

Aesthetic design

- Simple form and slender frames
- Discreet operating mechanism
- Minimalist-style strip reinforcer which may be enhanced with decorative profiles (Technal patent)
- Concealed drainage with invisible water evacuation for all applications

Accessibility

- Special ease of access facility for all applications

Locking mechanisms

- Multiple combinations available with or without 1 to 4-point key-operated locking







SOLEAL: refined aesthetic design

Straight, modern lines

- Fine, discreet lines contributing to the window's performance, with an emphasis on natural light (visible frames reduced to 103 mm around the edge, 33 mm on central mullions and 136 on 4-leaf central meeting stile)
- Detailed design allowing concealed drainage for all applications
- Minimalist-style strip reinforcers: may be enhanced with a decorative profile (Technal patent) in polished anodised finish



Ext. detail: upper frame/opening sash section (103 mm)



Ext. detail: lower section concealed drainage



Ext. detail: central mullion (33 mm)



Locking mechanisms

A variety of locking options available, from 1 to 4 locking points, with or without locking



Pull handle on service opening sash



Thumb pull on semi-fixed opening sash



Straight handle on service opening sash



Pull handle for strip reinforced mullion



Same handle for both window and door

SOLEAL

55-module slider

Wide range

- Fixed frames with 2, 3 and 4 tracks with or without infill channels fitted with 20 mm thermal break
- Special fixed frames
 - Face mounting for renovation applications
 - With integral architrave for new build
 - For continuous strip
 - For integration into composite glazing

Weather Performance

- Optimised air permeability meeting low consumption building criteria for all applications, both in domestic and commercial buildings
- Values obtained: 1.65 m³/(h.m2)* at 100 Pa

*2-leaf slider: dimensions W 3.0 m x H 2.5 m

Thermal Performance

- Optimised heat loss values
- 55 mm module base version:
Uw up to 1.4 W/m².°K, Sw: 0.45 and TLw: 0.59*

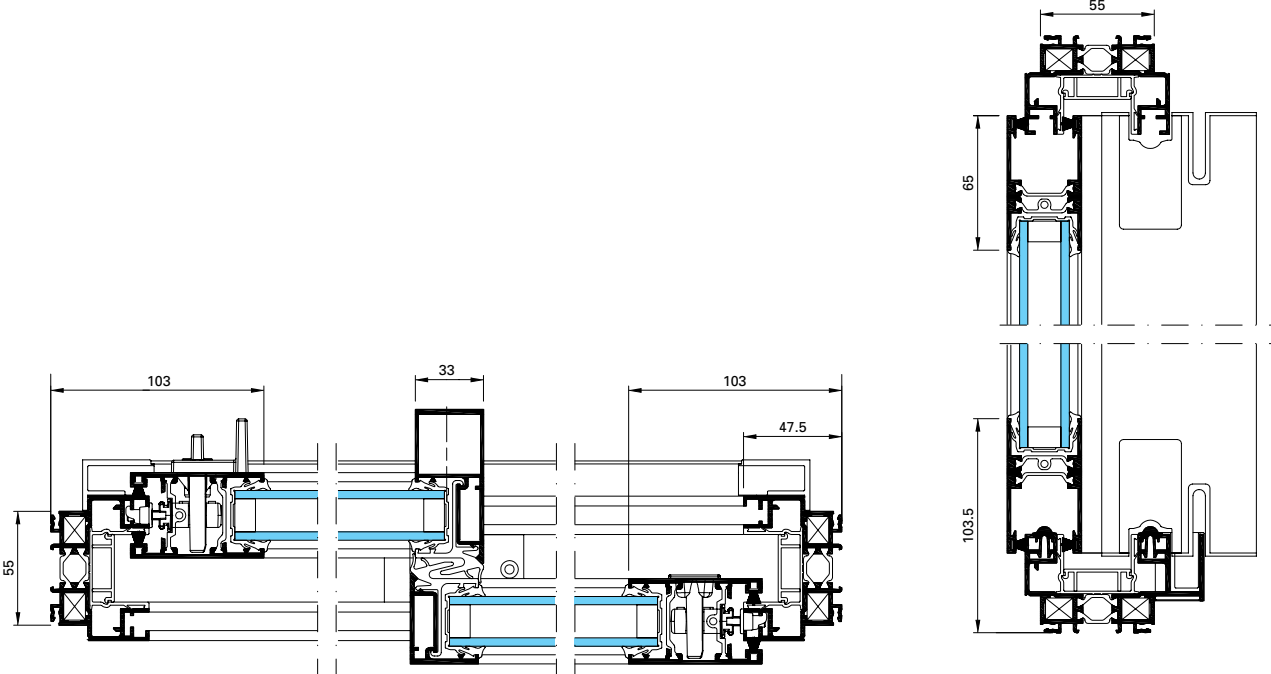
* These values are obtained with double glazing rated at 1.0 W/m² °K and insulating spacer measuring W 4.3 m x H 2.6 m



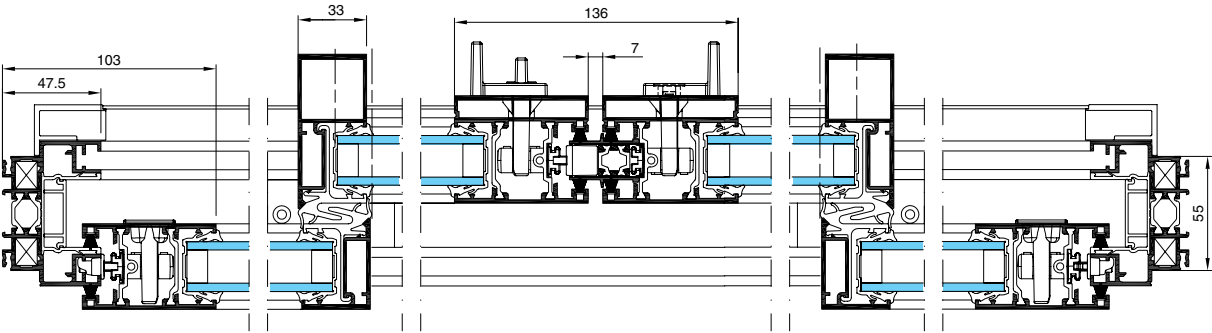
Sections



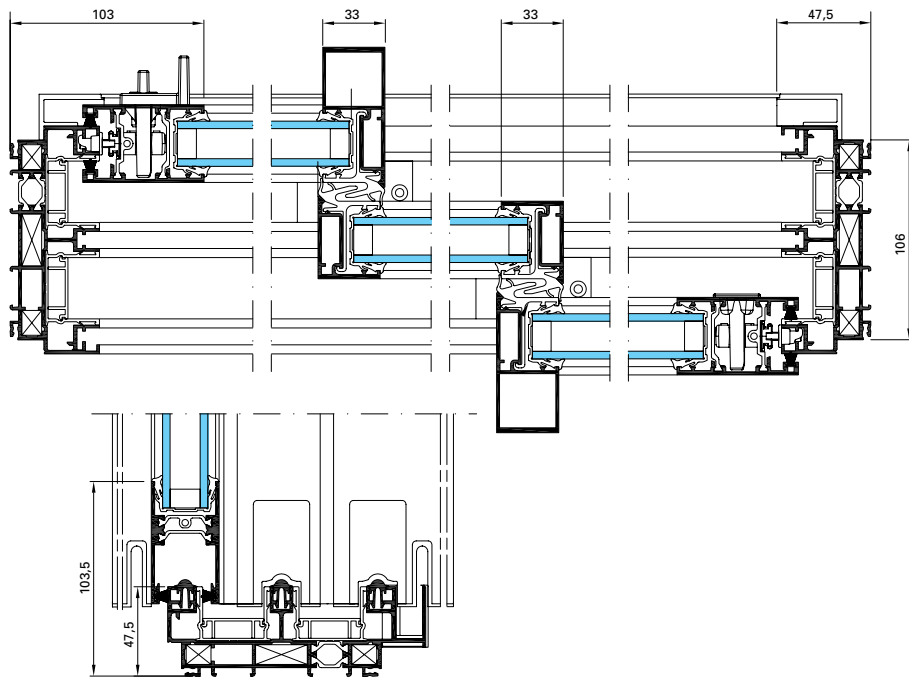
2-leaf - 2-track



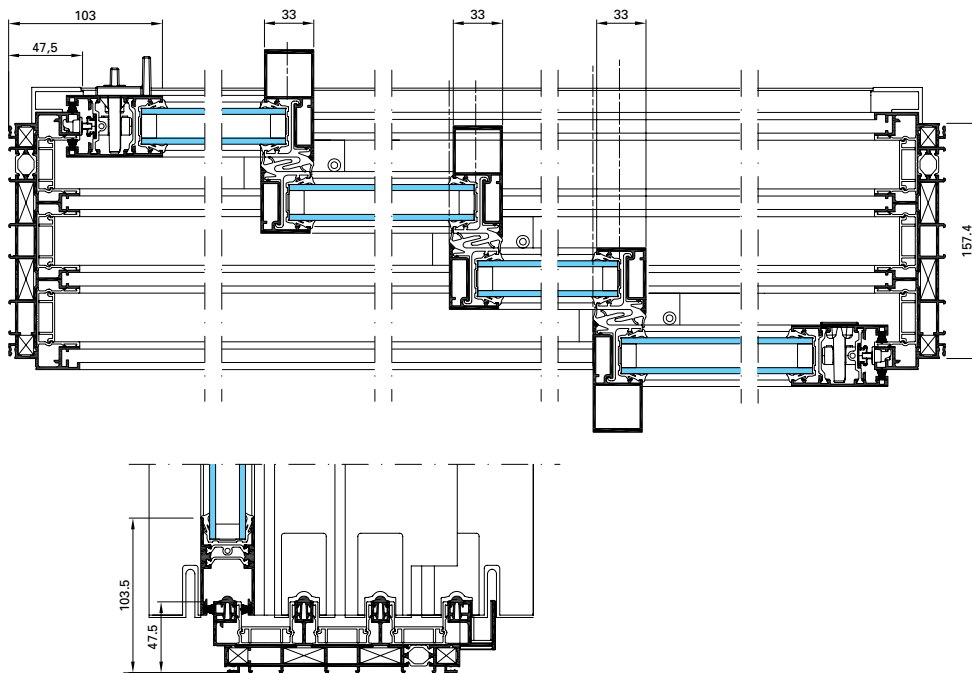
4-leaf - 2-track



3-leaf - 3-track



4-leaf - 4-track



SOLEAL

55-module slider

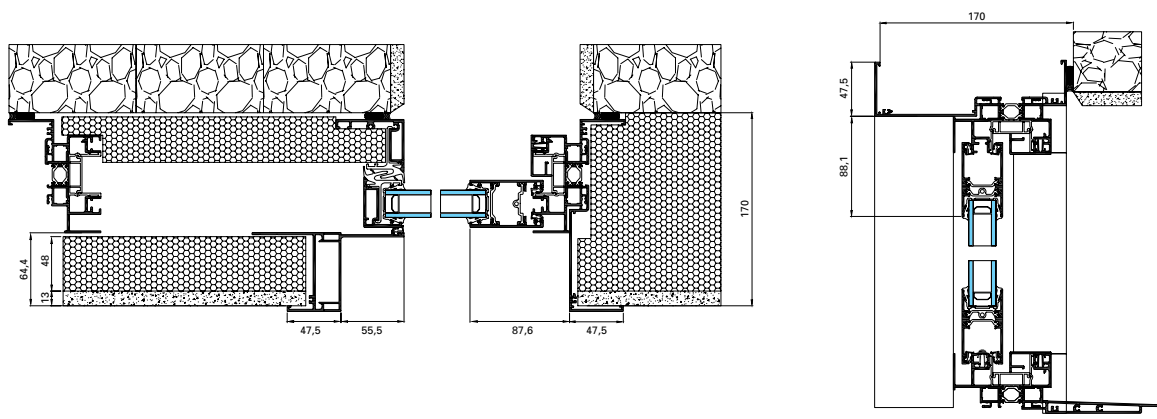


Pocket windows

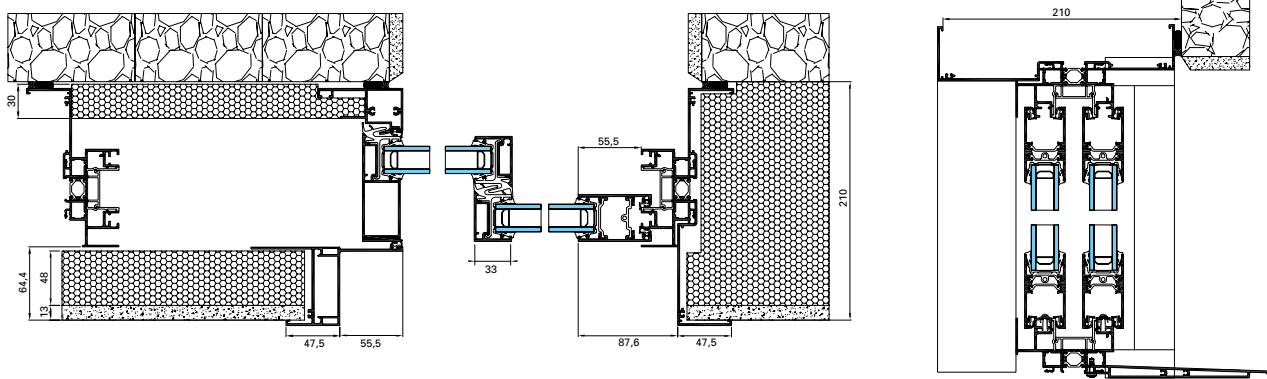
Pocket windows applications are derived from the base frames, to which the internal and external cladding forming the inner partition are added, to create 1-leaf, 2-leaf or 4-leaf frames based on 2 tracks, and 3 leaves on 3 tracks in cases where the cavity is not deep enough.

SOLEAL pocket windows also have the advantage of concealed drainage for all track configurations, along with the lower tracks being adapted to facilitate disabled access.

1-leaf



2-leaf

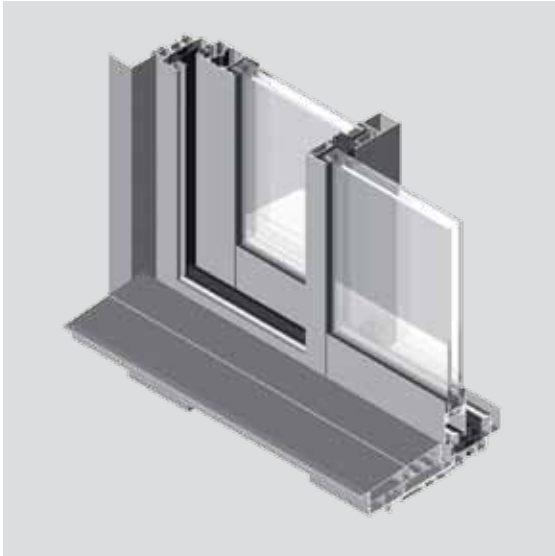


SOLEAL, accessibility

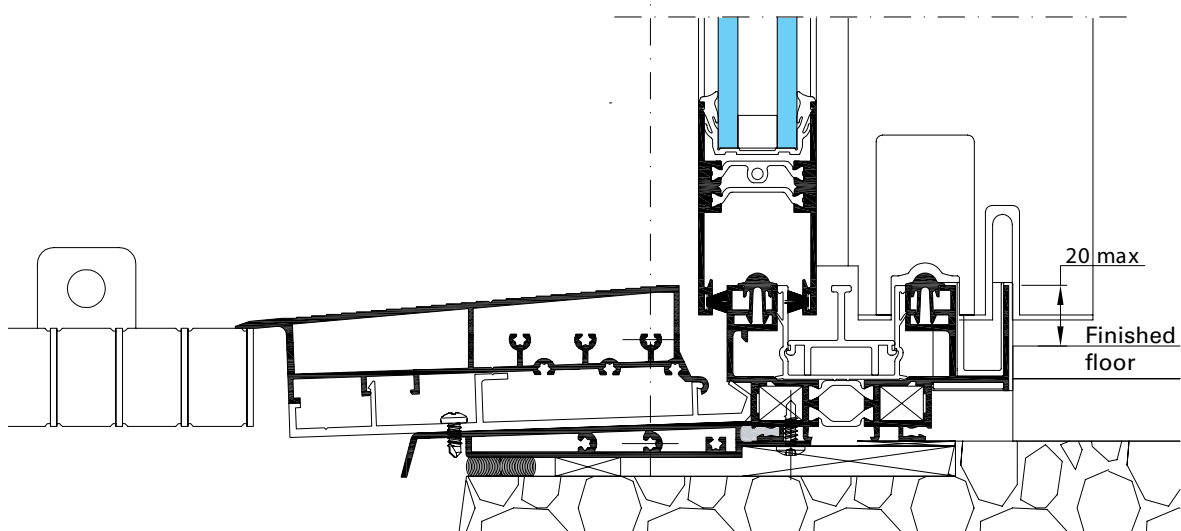
All SOLEAL sliding patio doors satisfy French law no. 2005-102:11/02/2005 concerning building accessibility.

An addition to the frame, comprising an (external) access ramp and a special heat shield (between tracks), enables a disabled access.

This option can be provided for new build or renovation work, in all SOLEAL slider applications.



Architect: Patriarche - Photography: S Demailly



Disabled access threshold on 2 track – 2-leaf (available in 3, 4 tracks and pocket window)

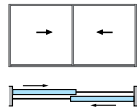
Applications

All of these applications are available with concealed drainage.
All patio door applications may be supplied with a disabled access threshold

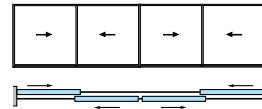
Base chassis

2 tracks

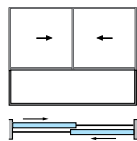
2-leaf - 2 tracks



4-leaf
2 tracks

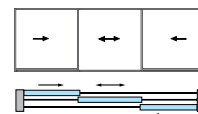


Integrated composite
2-leaf

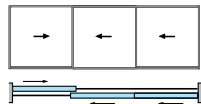


3 tracks

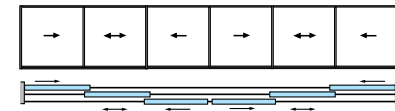
3-leaf
3 tracks



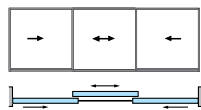
3-leaf joined
2 tracks



6-leaf
3 tracks

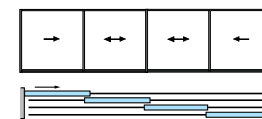


3-leaf independent
2 tracks



4 tracks

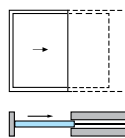
4-leaf
4 tracks



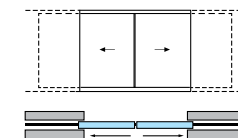
Pocket window chassis

Single track

Single-track
leaf

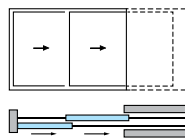


2-leaf
single track

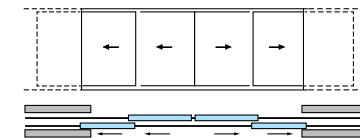


2 tracks

2-leaf
2 tracks

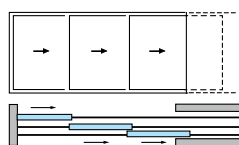


4-leaf
2 tracks



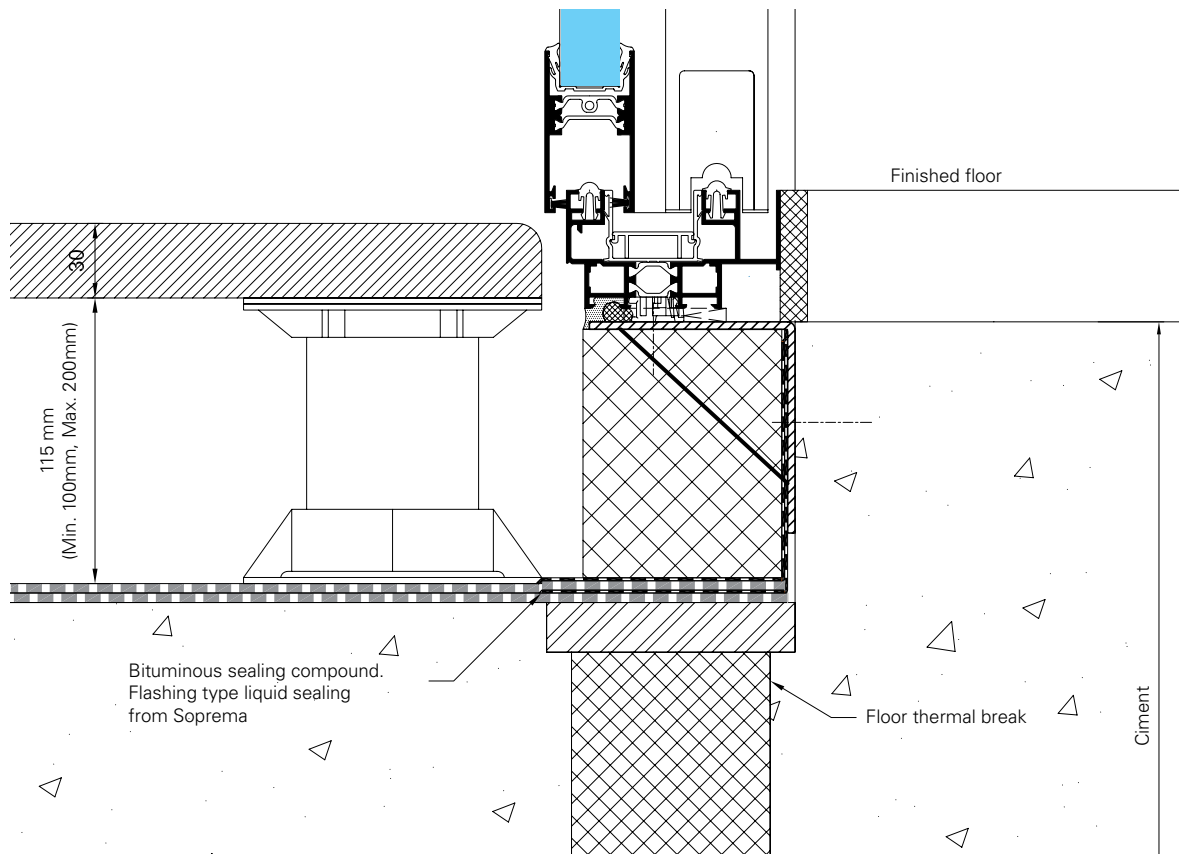
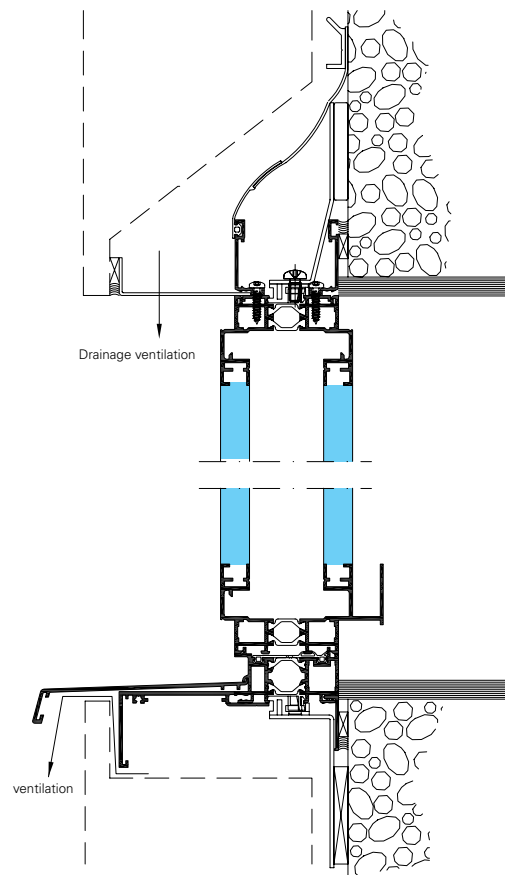
3 tracks

3-leaf
3 tracks

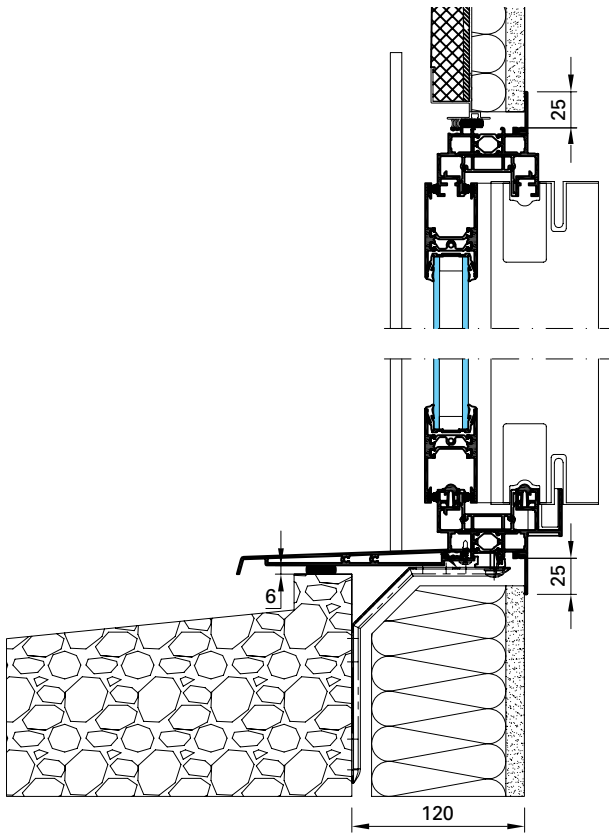


Installation options

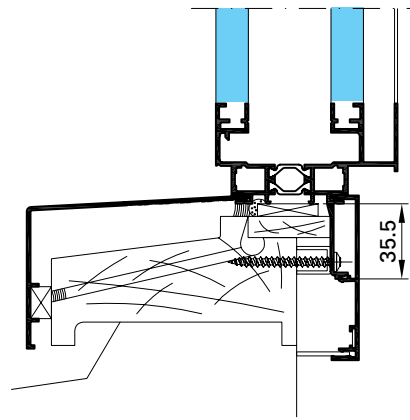
External insulation installation



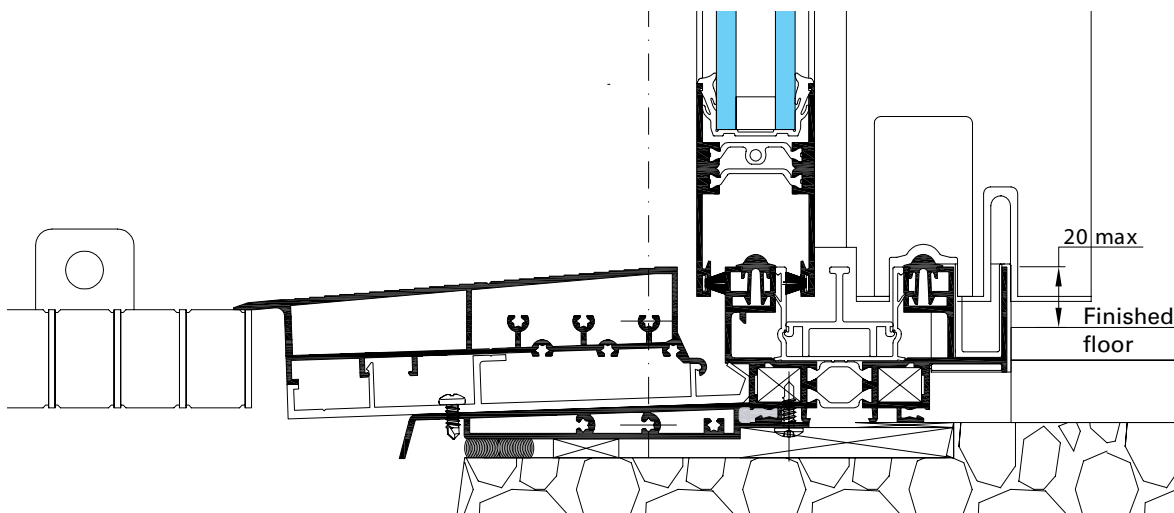
Internal installation



Onto masonry framing



Onto timber



Disabled access threshold on 2 tracks - 2-leaf (available in 3, 4 tracks and pocket window)

Performance

Whether for residential or office buildings, the RT 2012 French thermal regulations aim to set a maximum energy consumption level for new buildings.

These regulations do not impose a minimum requirement for glazing but Technal's objective is to support architects in this new objective.

The SOLEAL slider therefore helps to preserve the permeability of the building envelope due to its excellent Q100* and Q4 values.

*Q100 represents leakage from the frame at 100 Pascals. For Low Energy Consumption Buildings, Q100 must not exceed 5.1 for single-family housing or 8.5 for blocks of flats (in m³/hr/m²).

| WEATHER PERFORMANCE AIR (A), WATER (E), WIND (V) | | | | | | |
|--|--|---|----|----|------|------|
| Type | Dimensions W x H (m) | A | E | V | Q100 | Q4 |
| 2 tracks – 2-leaf | 3 x 2.5 | 4 | 6A | B2 | 1.65 | 0.19 |
| 3 tracks – 3-leaf | 3.5 x 2.348 | 4 | 7A | C2 | 2.5 | 0.29 |
| 2 tracks – 4-leaf, central meeting stile | 3.5 x 2.348 | 4 | 6A | C2 | 1.78 | 0.21 |
| 2 tracks – 2-leaf, disabled access threshold | 3 x 2.5 | 4 | 7A | B2 | 2.04 | 0.24 |
| 2 tracks – 2-leaf integrated SOLEAL casement | 1.4 x 2.5 with bottom fixed light at 1 m | 4 | 5A | C2 | 2.16 | 0.25 |

| AIR PERMEABILITY FOR LOW CONSUMPTION BUILDINGS (average per m ² including walls) | | |
|---|-----------|---------------------------|
| | Q4 Pa Max | equivalent to Q100 Pa Max |
| One family dwelling m ³ /(h.m ²) | 0.6 | 5.1 |
| Block of flats m ³ /(h.m ²) | 1 | 8.5 |

Note : $Q = Q_{100} \times (P/100)^{2/3}$

Q₁₀₀ = Leakage flow at 100 Pa
P = Pressure Pa
Q = Leakage flow at Pa

| ACOUSTIC PERFORMANCE | | | | | | | | |
|----------------------|-------------|----------------------|------------------------|----|------------------|-----------------------|----|------------------|
| Type | Description | Dimensions W x H (m) | Glazing reduction (dB) | | | Window reduction (dB) | | |
| | | | Rw | RA | RA _{Tr} | Rw | RA | RA _{Tr} |
| 2 tracks – 2-leaf | 4(16)8 | W 2.350 x H 2.180 | 36 | 34 | 31 | 35 | 34 | 31 |
| 2 tracks – 2-leaf | 6(16)10 | W 2.350 x H 2.180 | 37 | 36 | 34 | 36 | 34 | 32 |
| 2 tracks – 2-leaf | 44.1s(14)10 | W 2.350 x H 2.180 | 42 | 41 | 37 | 36 | 35 | 34 |

In accordance with EN 14351-1, these window performances are valid for:

- Rw +Ctr (for index RA,Tr) glazing greater than or equal to the values of the glass tested
- corrections - 1 dB for leaf surface + 50% to + 100% / - 2 dB for + 100 % to + 150% / - 3 dB for + 150 % to + 200%

THERMAL PERFORMANCE - U_w

| Type | Dimensions W x H (m) | U _w with Ug 1.1 | U _w with Ug 1.1 warm edge | U _w with Ug 1.0 warm edge |
|-------------------|----------------------|----------------------------|--------------------------------------|--------------------------------------|
| 2 tracks – 2-leaf | 2.3 x 2.18 | 1.7 | 1.6 | 1.5 |
| 2 tracks – 4-leaf | 4.6 x 2.18 | 1.7 | 1.6 | 1.5 |
| 3 tracks – 3-leaf | 3.45 x 2.18 | 1.8 | 1.7 | 1.6 |
| 3 tracks – 6-leaf | 6.5 x 2.18 | 1.8 | 1.7 | 1.6 |
| 4 tracks – 4-leaf | 4.6 x 2.18 | 1.8 | 1.7 | 1.7 |

PERFORMANCE - SOLAR FACTOR

| Type | Dimensions W x H (m) | Absorption by colour S _w winter | | Absorption by colour S _w summer | |
|------------------------------------|----------------------|--|------------------|--|------------------|
| | | Light colours 0.4 | Dark colours 1.0 | Light colours 0.4 | Dark colours 1.0 |
| Sg solar factor single glazing 0.6 | | | | | |
| 2 tracks – 2-leaf | 2.3 x 2.18 | 0.5 | 0.51 | 0.50 | 0.53 |
| 2 tracks – 3-leaf independent | 3.45 x 2.18 | 0.51 | 0.52 | 0.51 | 0.54 |
| 2 tracks – 4-leaf | 4.6 x 2.18 | 0.5 | 0.52 | 0.51 | 0.51 |
| 3 tracks – 3-leaf | 3.45 x 2.18 | 0.51 | 0.53 | 0.52 | 0.54 |
| 3 tracks – 6-leaf | 6.5 x 2.18 | 0.51 | 0.53 | 0.52 | 0.54 |
| 4 tracks – 4-leaf | 4.6 x 2.18 | 0.51 | 0.53 | 0.52 | 0.54 |

**PERFORMANCE - LIGHT TRANSMISSION**

| Type | Dimensions W x H (m) | Light transmission of window TL _w |
|--|----------------------|--|
| Light transmission of single glazing TL _g 0.7 | | |
| 2 tracks – 2-leaf | 2.3 x 2.18 | 0.57 |
| 2 tracks – 3-leaf independent | 3.45 x 2.18 | 0.58 |
| 2 tracks – 4-leaf | 4.6 x 2.18 | 0.58 |
| 3 tracks – 3-leaf | 3.45 x 2.18 | 0.58 |
| 3 tracks – 6-leaf | 6.5 x 2.18 | 0.59 |
| 4 tracks – 4-leaf | 4.6 x 2.18 | 0.59 |



Materials and components

As with all Technal systems, only high-quality materials and components are used to reduce maintenance and guarantee long-term performance.

- Aluminium sections are extruded using 6060 T5 alloys EN 12020, EN 573-3, EN 515 and EN 775-1 to 9.
- Accessories are cast using Zamak 5 to EN 12844.
- All seals EPDM or TPE (ThermoPlastic Elastomer).
- Polyamide insulators are extruded using PA6-6 (0.25 FV).
- Screws are made of stainless steel.



Architect: Puig Pujol - Photography: B. Hanne

Finishes and colours

A wide range of finishes is available to meet the requirements of individual projects, to enhance existing buildings and to offer increased design choice to architects and designers:

- Natural anodised in compliance with EN 123731: 2001.
- Polyester coating finishes in an extensive range of colours, in compliance with QUALICOAT instructions.
- SOLEAL is also available in painted finishes in colours exclusive to Technal for a stylish and modern appearance.



Architect: FONTAINE & MALVY - Photography : P. Loubet



Architect: Anthony Vienne





- 1. Architect: LACATON & VASSAL
- 2. Architect: Puig Pujol - Photography: B. Hanne
- 3. Architect: JP. DHALLUIN P. PENY - Photography: P. Loubet

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