

photographer: Sylvain Mille



SOLEAL

UNIVERSAL DOOR

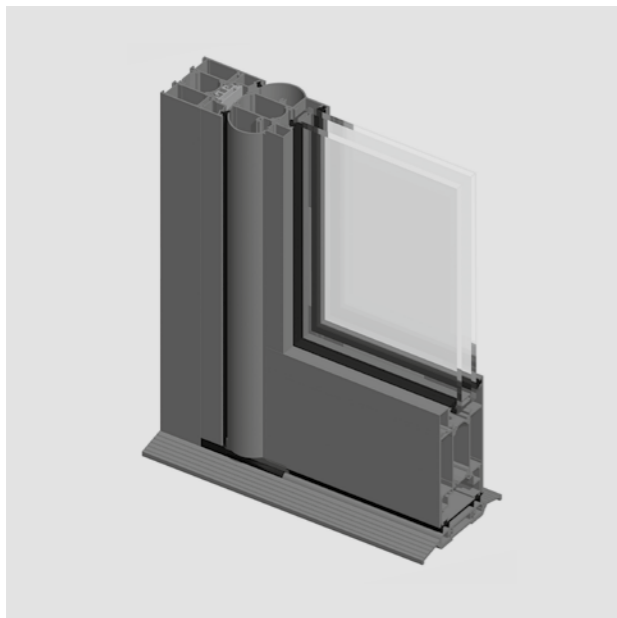
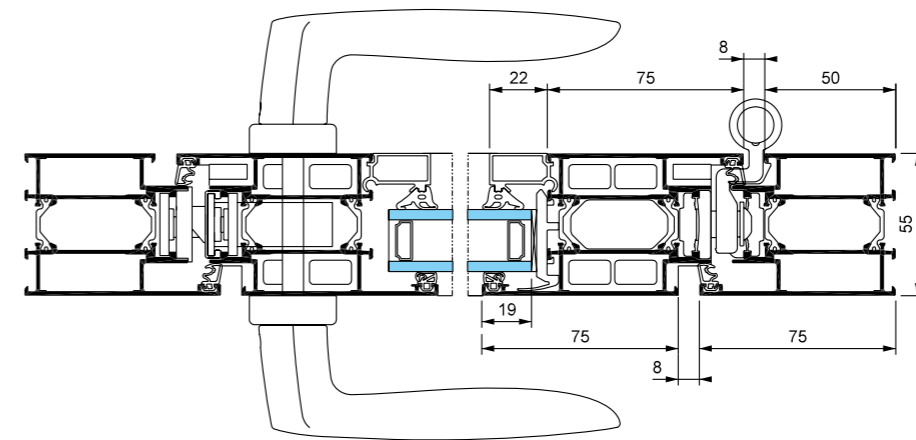




Single action, hinged

Applications:

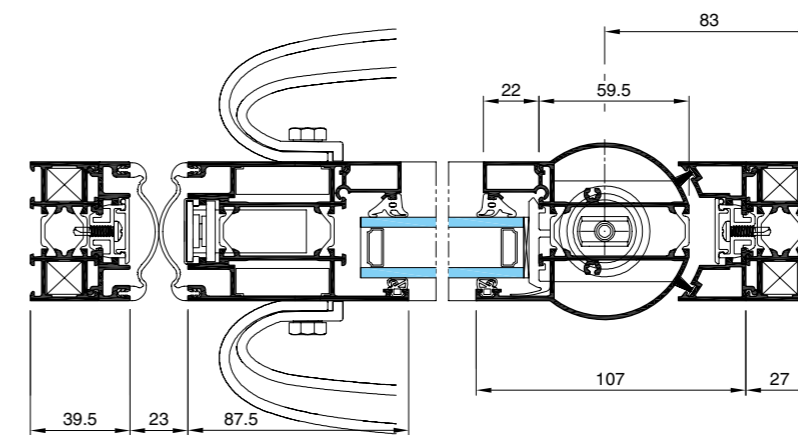
- Single action
- Single action reinforced



Tube

Applications:

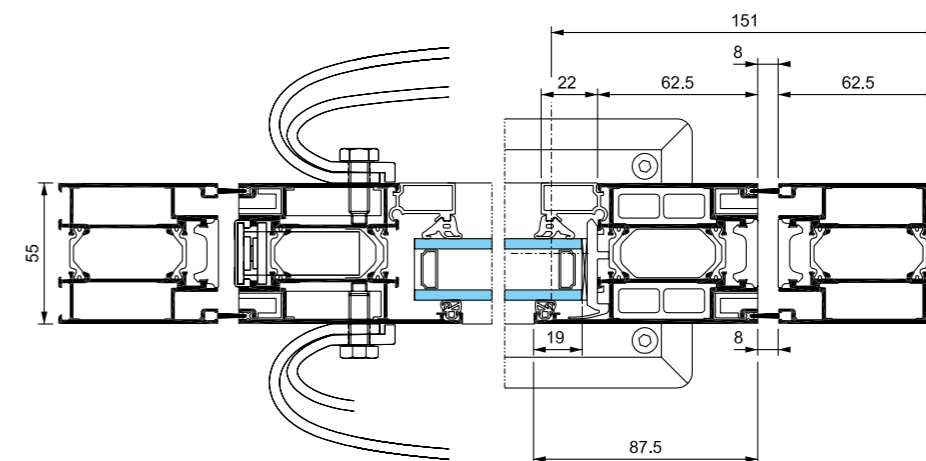
- Single action, bulb stile
- Double action, bulb stile
- Anti finger-trap



Double action, pivot

Applications:

- Double action
- Anti finger-trap

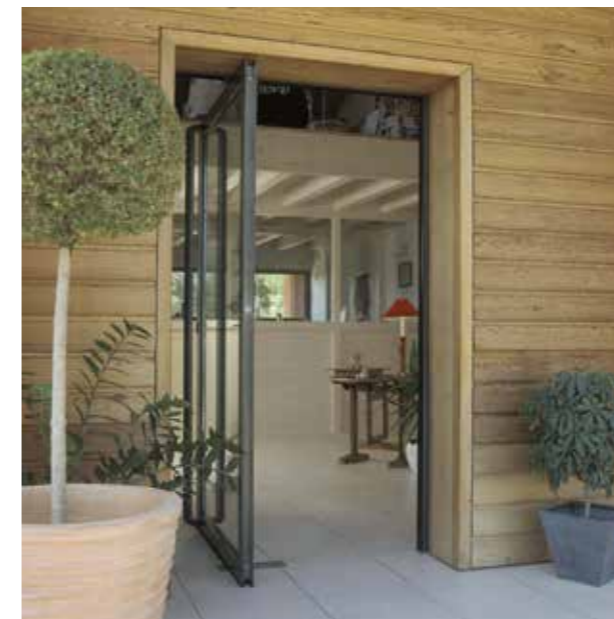




SOLEAL doors, a choice of solutions



Architect: Jérôme Terlaud Photographer: Sylvain Mille



Photographer: Xavier Boymand

Basic concept

A module depth of 55mm allows the realisation of doors and door sets that are completely thermally broken, for integrating any opening option, single or double action.

This door allows designs with SOLEAL windows and balcony doors. Installation detailing, trims and frames are in common with SOLEAL windows, balcony doors and sliders.

A 3 in 1 concept

The SOLEAL door range offers three concepts for all your projects: single action hinged doors, double action pivot doors, and 'tube' doors with bulb stile.

The SOLEAL thermally isolated door, with flat or disabled access thresholds, can be realised as a continuous frame opening leaf or with bottom rail (120-mm visible face).

A new generation of doors

SOLEAL offers real thermal and weather performance which characterises the new generation of Technal doors. It performs above the requirements of current regulations, anticipating future standards.



SOLEAL, universal door

Single action,
hinged



Bulb style anti
finger-trap



Double action,
bottom pivot



Key features and innovations

Multiple applications

Three opening options to meet your project needs:

- Single action, hinged.
- Tube - bulb stile.
- Double action, pivot.

Performance

- Thermal performance:

-Uw = 1.7W/m².K, Sw = 0.45, TLw + 0.55
(Double glazing Ug + 1.1W/m²/K, g = 0.63
and TL = 0.8).

-Uw = 1.4W/m².K, Sw = 0.37, TLw = 0.47
(Triple glazing Ug = 0.63 and TL = 0.73).

-Uw = 1.4W/m².K, Sw = 0.03, TLw = 0.0
(opaque panel Up = 0.7W/m².K).

- Weather performance: A₄-E_{6A}-V_{c3} (1 leaf open
out, disabled access threshold)

Glazing infill: 6 – 42 mm

Maximum weight per leaf: up to 150 kg

Heavy traffic door, Class 8*
(tested to 1 million cycles).

*Single action door and Tube door

Design

- Technal exclusive design push-pad handle.
- Concealed drainage at threshold, bottom rail
and mid rail.
- Slim clamped hinges: 20-mm visible face for
two- and three-part hinges.

Accessibility and ease of use

- Fittings readily applied across the offer.
- Integrated door closer: 90° hold-open.
- Residential and commercial thresholds.

Closures and security

- Wide choice of locks.
- Doors with 3-part hinge Class RC3: burglar
resistance level 3 to EN-1627-30.

Innovation

- Two patents for an innovative door.
- One patent application for an aesthetic design.

SOLEAL door, a bespoke design

A wide choice of closing mechanisms



Technal exclusive-design handle with lock



Stainless steel handle



Push pad handle, Technal exclusive design



Triangular push bar

8

Discrete fittings



Slim hinges



Concealed closer



Electromagnetic lock



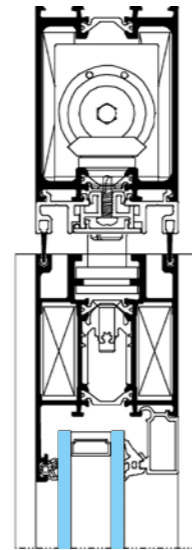
SOLEAL door, accessibility

Concealed closer

Concealed overhead closer set into the header bar for discrete closing assistance of double action pivot, tube and single action doors (to current regulations).

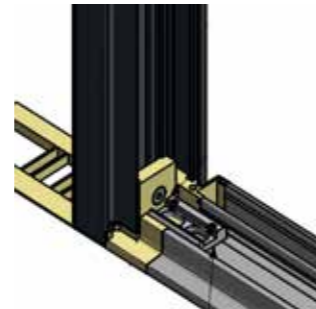


Concealed closer

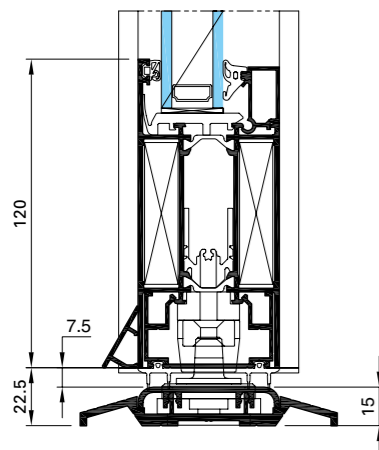


Disabled access thresholds

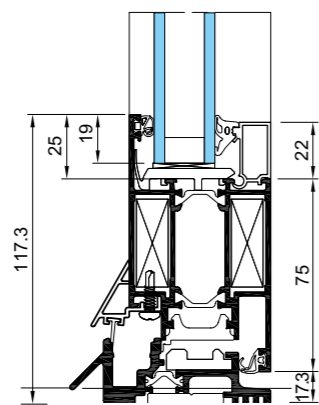
The disabled access threshold for the SOLEAL door achieves regulations for door and balcony door access, while maintaining weather performance and can meet different regulations with a height of 15mm and 20mm.



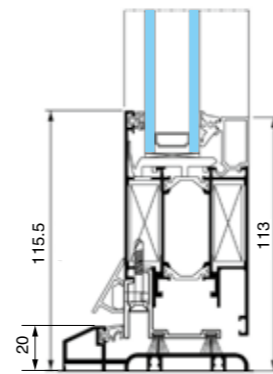
For ease of maintenance or replacement if worn or damaged, all SOLEAL thresholds are removable



Disabled access threshold 15mm



Disabled access door threshold 20mm 'residential', inward opening only



Disabled access door threshold 20mm 'commercial' for inward and outward opening

Security, a complete offer

Standard locking mechanism

- ½ turn deadbolt.
- Roller lock and deadbolt.
- 2-point cylinder lock.
- 2-point lock with square spindle.

The continuity of the thermal break is ensured over the entire height of the door by a front plate lock insulated cover pre-assembled and a rigid insulating rod (patented system).

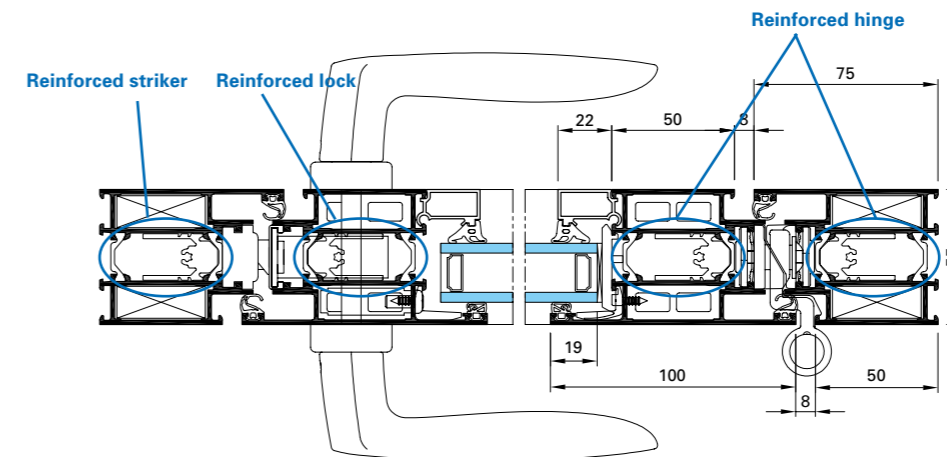
Multipoint locking

- The offer allows additional locking points to be added as required, hook lock or top and bottom shoot bolt for large doors (>2.25m height).

Burglary resistance

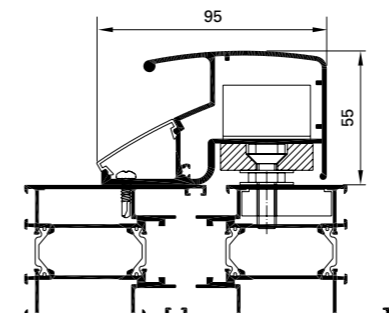
Hinged doors achieve class RC3 on one-leaf doors and RC2 on two-leaf doors, due to reinforced fixings: hinges, locks and strike plates with hooks.

Hinged doors subject to burglar resistance test achieve Class RC3 to BS EN-1627-30

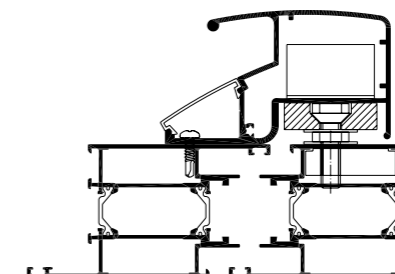


Electromagnetic locking

With the single action version (1 or 2 leaves) connected to an access control, the electromagnetic pad holds the door in the lock position. The profile that houses the pad also serves as a pull handle up the height of the door.



Electromagnetic lock on the outer frame



Electromagnetic lock on the opening frame

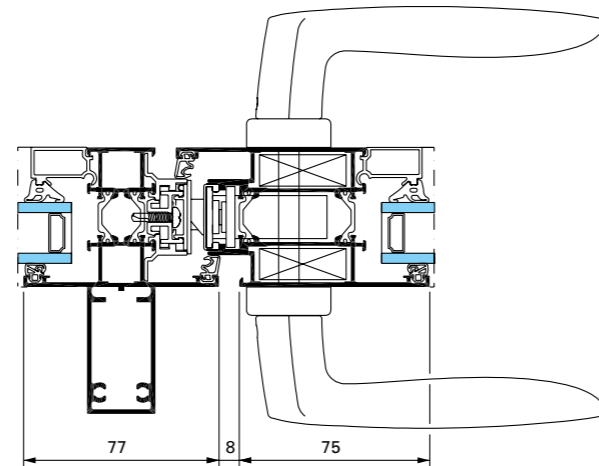


Concealed electromagnetic lock on the opening frame

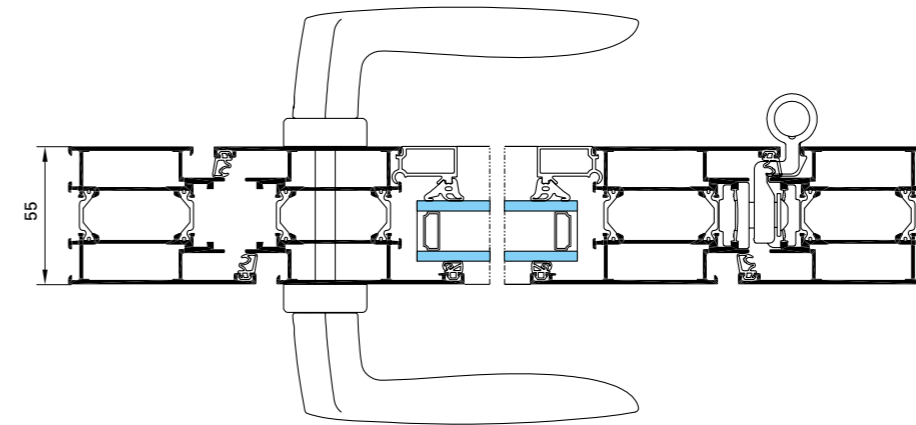
SOLEAL door, single action, hinged

Single action

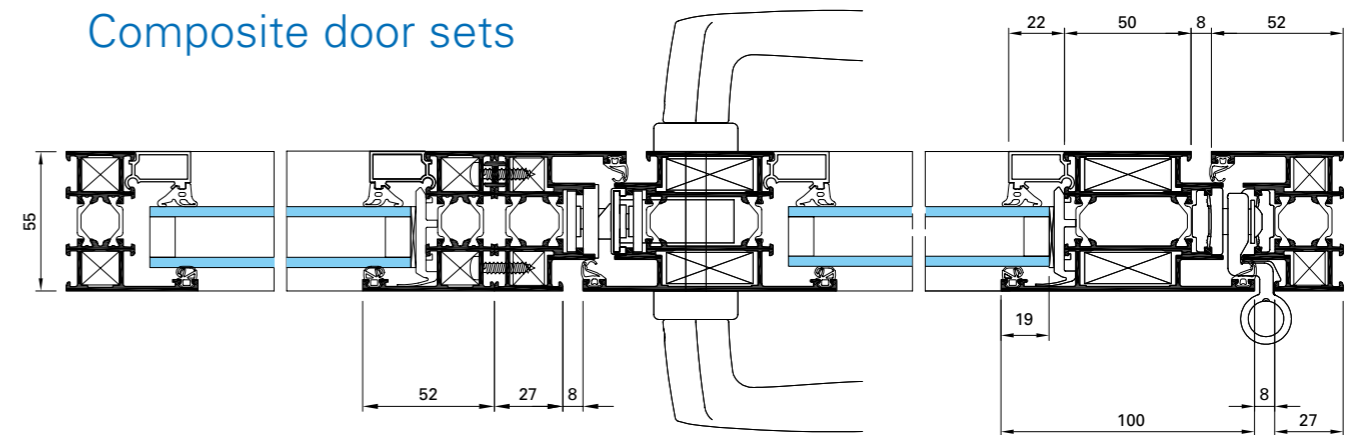
Transom-mullion frames are realised with double aluminium connectors. Steel reinforced uprights offer the option to create large-sized composite door sets.



Single action door

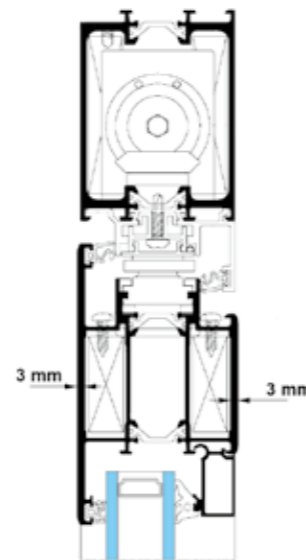
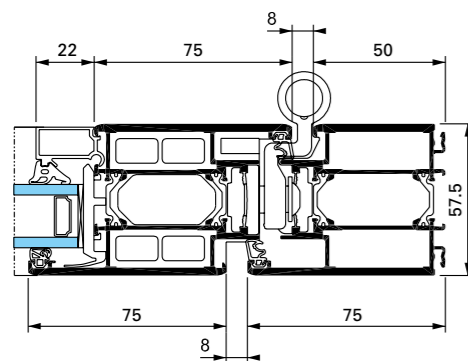


Composite door sets

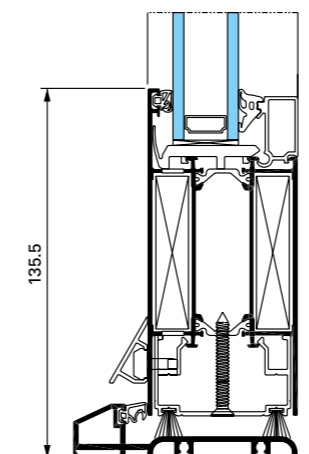


Single action, reinforced

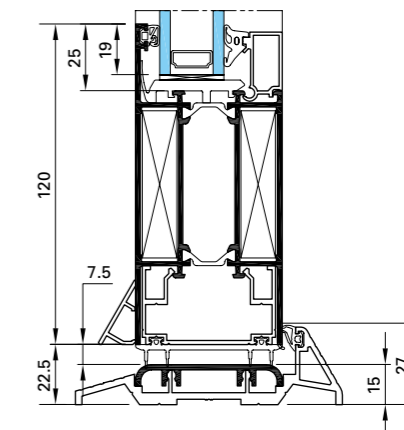
An increase in aluminium thicknesses by 3mm permits leaf sizes 2.60m high by 1.3m wide.



Single action door with bottom rail



Single action door with bottom rail and continuous threshold

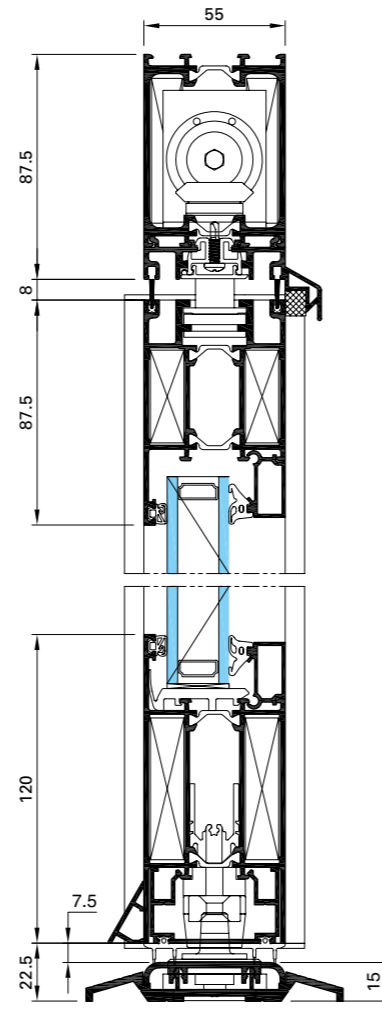


SOLEAL door, Tube

The Tube door is available in single or double action with anti finger-trap level 1 and level 2. The bulb stile version of SOLEAL Tube makes it ideal for specification in all public buildings such as schools, restaurants, theatres, where anti finger-trap protection is a priority. A dual-hardness gasket on the locking edge maintains a 23-mm gap between the aluminium.

Tube single action

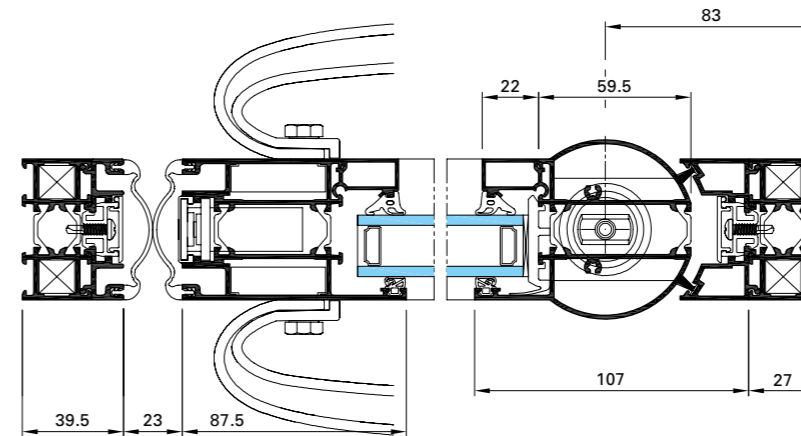
■ Optionally, the concealed closer can be used with this anti finger-trap application, assisting door closing.



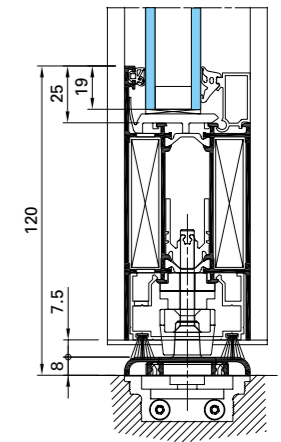
Tube anti-finger-trap

■ Optionally, the concealed closer can be used with this anti finger-trap application, assisting door closing.

Tube double action



Flat threshold with bottom rail

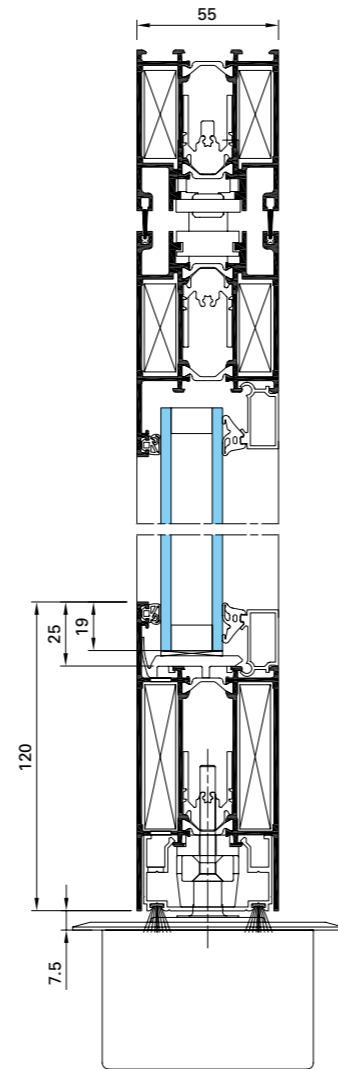
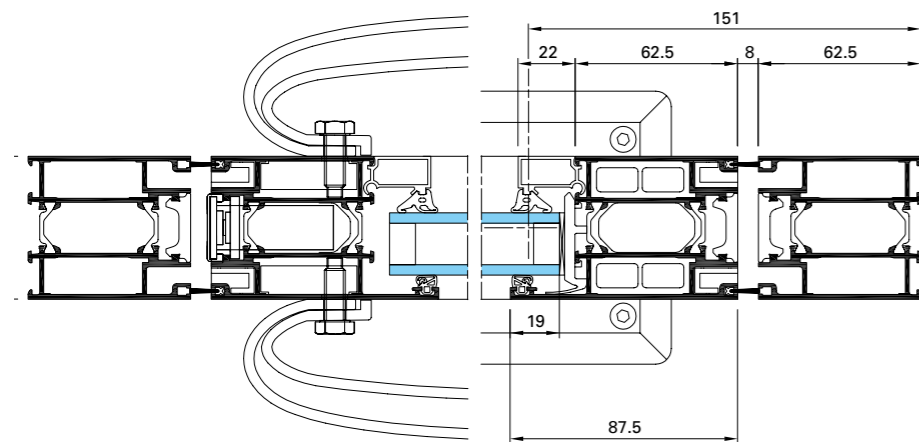


SOLEAL door, Double action pivot

The double action allows simultaneous or independent inward and outward opening of each leaf.

An 8-mm space between the opening leaf and fixed leaf is closed by a double barrier of brush seals.

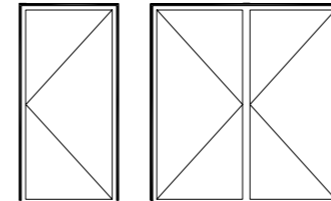
- Optionally, this application may use a floor spring or concealed overhead closer in the top outer-frame transom.
- Adaptable to anti-finger-trap, level 2.



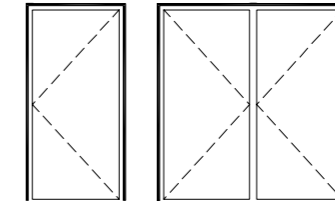
Applications

Concealed drainage on the outer frame and transom.

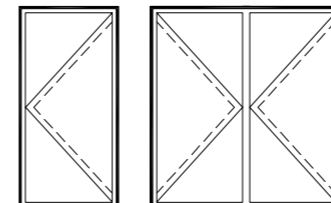
Single action inward-outward opening



1 leaf - 2 leaves

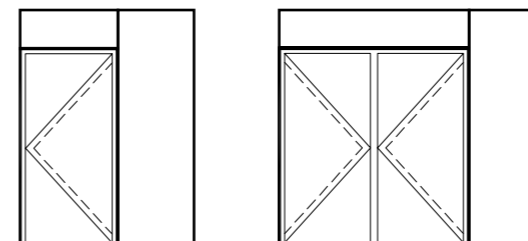
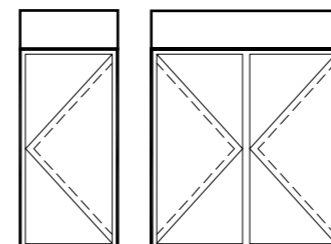


Double action



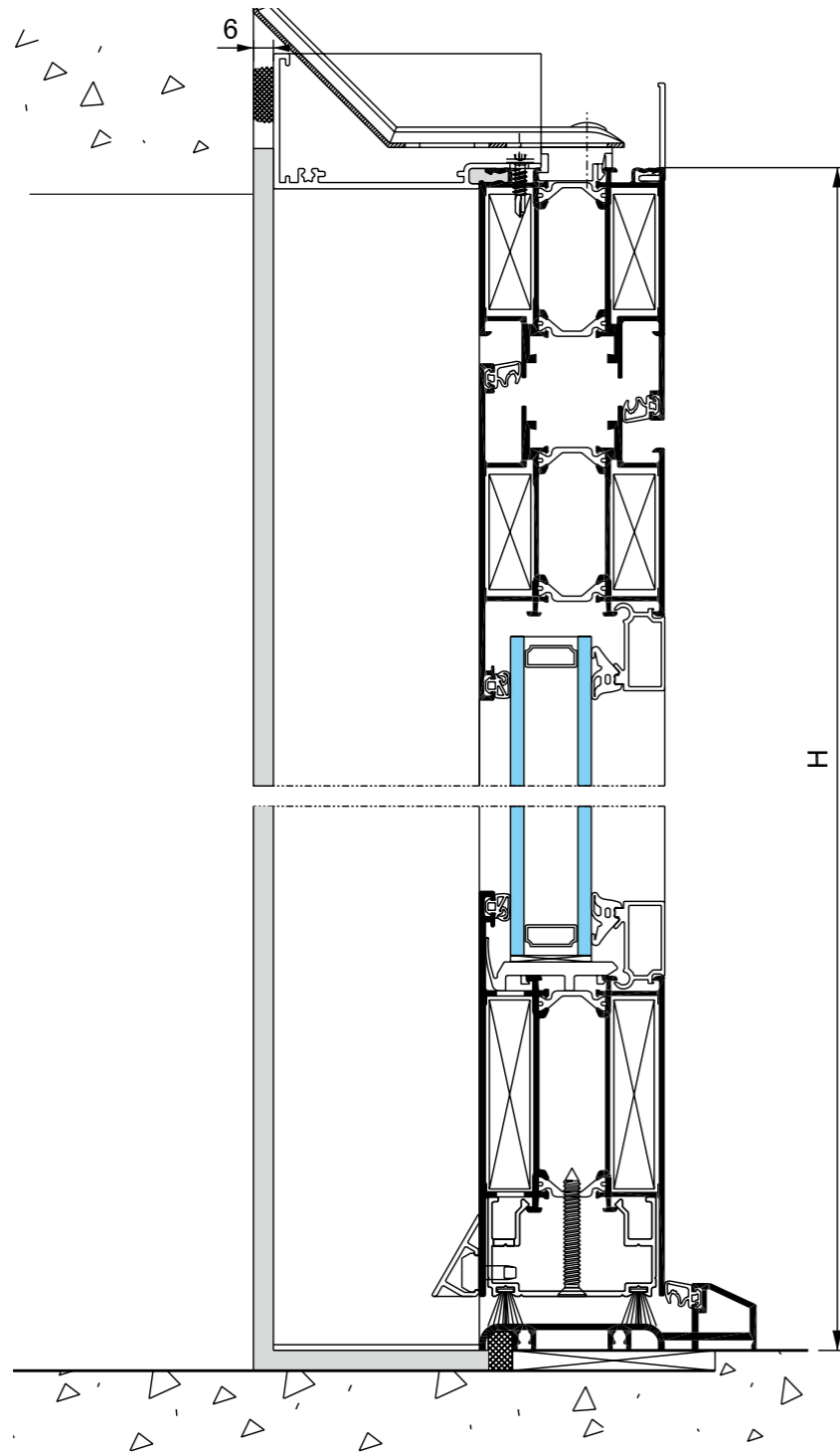
1 leaf - 2 leaves

Composite

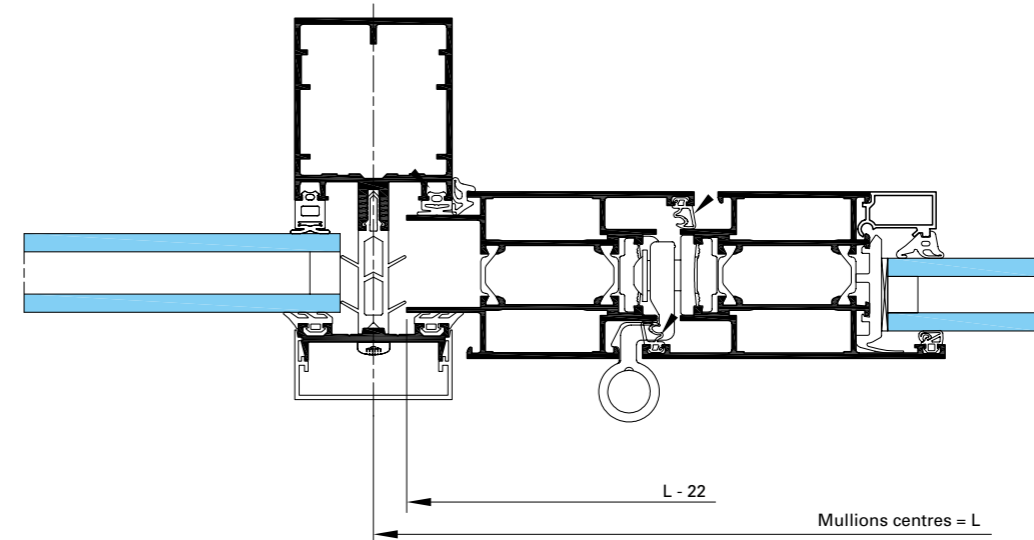


Installation

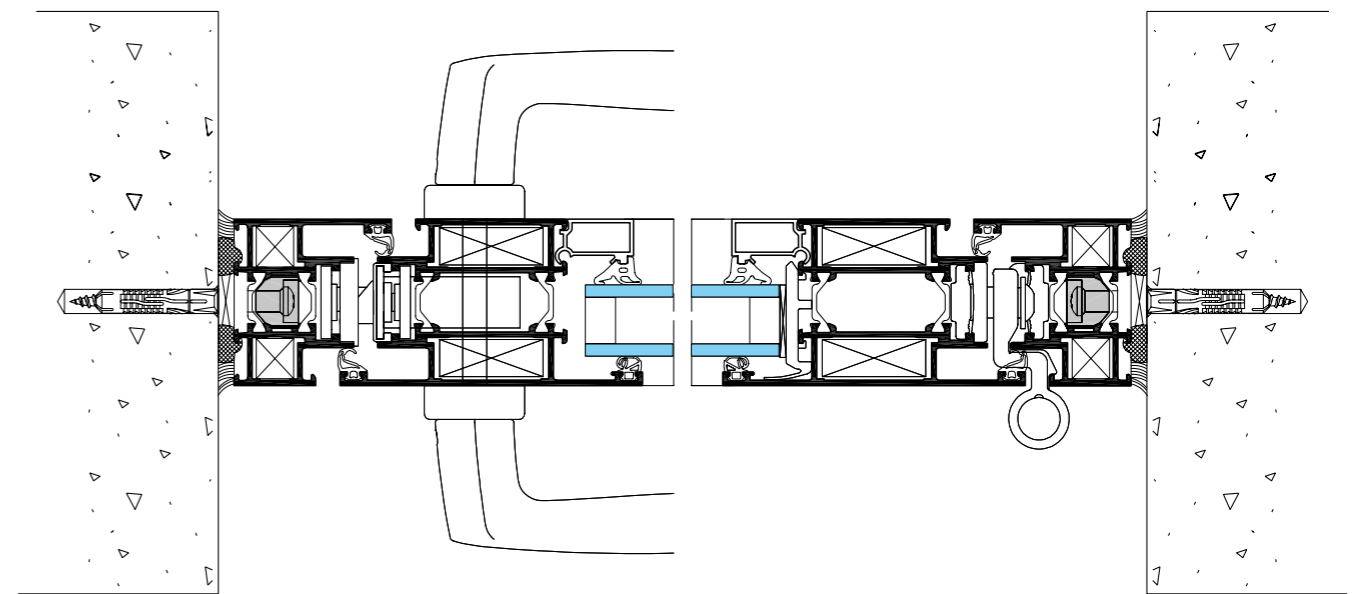
Internally recessed



Inserted in to GEODE curtain walling

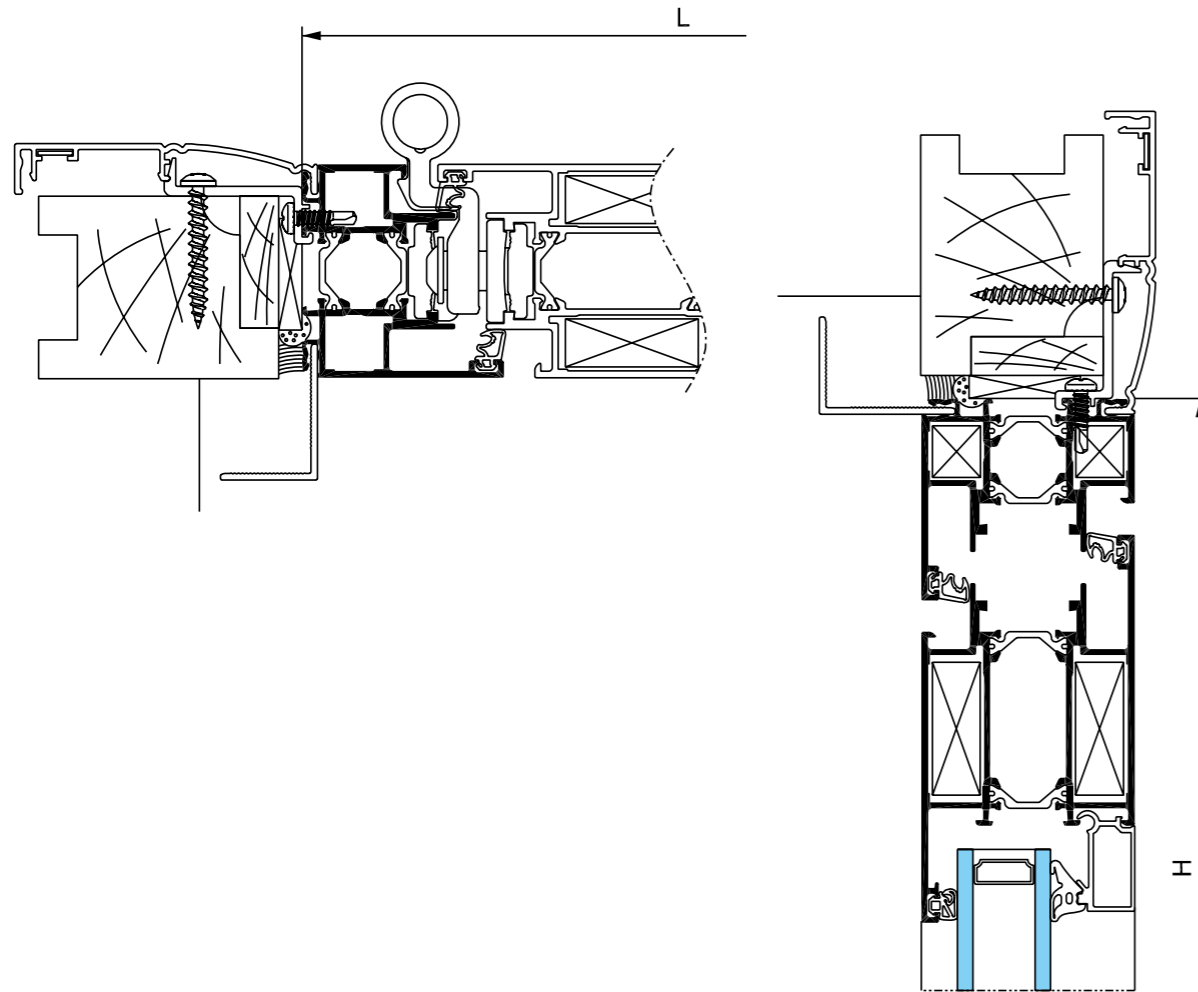


Direct fixed



Installation

Refurbishment



Performance

Weather performance (AEV)

1 LEAF OUTWARD OPENING, HINGED, REBATED COMMERCIAL THRESHOLD

Frame	Height x width (mm)	Classification	N° PV	Q100
1-leaf door	2400 x 1100	A2 2A C3	BP11.7.2012-1	-

OUTWARD OPENING, HINGED, DISABLED ACCESS THRESHOLD AND GASKET CORNERS

Frame	Height x width (mm)	Classification	N° PV	Q100
1-leaf door	2406 x 1100	A3 E7A C3	404/12/202-1	2.17

OUTWARD OPENING, HINGED, DISABLED ACCESS THRESHOLD

Frame	Height x width (mm)	Classification	N° PV	Q100
1-leaf door	2406 x 1100	A4 E6A C3	404/12/202- 2	2.12

INWARD OPENING, HINGED, DISABLED ACCESS THRESHOLD AND GASKET CORNERS

Frame	Height x width (mm)	Classification	N° PV	Q100
1-leaf door	2200 x 1000	A3 E4B C3	404/12/202-3	2.98

INWARD OPENING, HINGED, DISABLED ACCESS THRESHOLD

Frame	Height x width (mm)	Classification	N° PV	Q100
1-leaf door	2200 x 1000	A3 E3B C3	404/12/202-4	3.01

OUTWARD OPENING, HINGED, DISABLED ACCESS THRESHOLD

Frame	Height x width (mm)	Classification	N° PV	Q100
2-leaf door	2500 x 2000	A3 E3A VB2	404/12/324- 1	-

Performance

THERMAL PERFORMANCE – Uw*

	Glazing Ug (W/m².K)	Door Uw (W/m².K)	Glazing Ug (W/m².K)	Door Uw (W/m².K)	Insulation panel Up (W/m².K)	Door Uw (W/m².K)
Triple glazing	0.6 + warm edge spacer	1.4	0.6 + warm edge spacer	1.5	0.7	1.3
	0.8	1.6	0.8	1.7	0.8	1.4
Double glazing	1.0 + warm edge spacer	1.6	1.0 + warm edge spacer	1.8	1.0	1.5
	1.1 + warm edge spacer	1.7	1.1 + warm edge spacer	1.8	1.2	1.7
	1.0	1.7	1.0	1.9	1.4	1.8
	1.1	1.8	1.1	1.9		
	1.2	1.8	1.2	2.0		
	1.3	1.9	1.3	2.0		
	1.4	2.0	1.4	2.1		
	1.5	2.0	1.5	2.1		
	1.6	2.1	1.6	2.2		
		1-leaf door, glazed L x H = 1.25 m x 2.18 m		2-leaf door, glazed L x H = 1.53 m x 2.18 m		1-leaf door, infil panel, L x H = 1.25 m x 2.18 m

*Thermal performance using thermal improvement foam in glazing rebate

THERMAL PERFORMANCE – SOLAR FACTOR AND LIGHT TRANSMISSION

Sg Solar factor of glazing only or with sun protection	Sw solar factor absorption according to section colours		TLg light transmission of glazing only or with sun protection	TLw light transmission of window
	0.4 white, yellow, orange, light red	1.0 black, dark brown, dark blue		
1-leaf single action door : L x H = 1.25 m x 2.18 m				
0.1	0.08	0.10	0.2	0.14
0.2	0.15	0.17	0.3	0.21
0.3	0.22	0.24	0.4	0.28
0.4	0.29	0.31	0.5	0.35
0.5	0.36	0.38	0.6	0.42
0.6	0.43	0.45	0.7	0.49
2-leaf single action door : L x H = 1.53 m x 2.18 m				
0.1	0.08	0.10	0.1	0.06
0.2	0.14	0.17	0.2	0.12
0.3	0.20	0.23	0.3	0.19
0.4	0.27	0.29	0.4	0.25
0.5	0.33	0.35	0.5	0.31
0.6	0.39	0.42	0.6	0.37



Materials and components

As with all Technal façade systems, only the highest quality materials and components are used for low maintenance and performance over time:

- Aluminium profiles are extruded from alloys 6005 T6, 6063 T6 or 6060 T5 to BS EN 12020, BS EN 573-3, BS EN 515 and BS EN 775-1 to 9.
- Accessories are cast from Zamak 5 or A-S9G03 to BS EN 12844.
- All glazing gaskets are EPDM SH 60-75.
- Polyamide thermal breaks are extruded from PA6-6 (0.25 FV).
- Screws are austenitic stainless steel.

Finishes and colours

A wide range of finishes is available to meet individual project requirements, complement existing buildings and offer additional design freedom for architects and specifiers:

- Stoved polyester powder coated finishes in a wide palette of colours and in accordance with BS 6496.
- Natural self-colour or Anolok anodised in accordance with BS EN 12373-1:2001 and BS 3987.
- Single and dual colours.





1



2



3

1. Photographer: Jordi Canosa
2. Photographer: Serge Denailly
3. Photographer: Christian Richters

270, rue Léon-Joulin
BP 63709 - 31037 Toulouse cedex 1 - FRANCE
Tel. +33 5 61 31 28 28 - www.technal.com



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