SOLEAL
HIGH PERFORMANCE
DOOR
SOLEAL
/ DOORS 55 AND 65 MM,
A COMPLETE OFFER

A CHOICE OF SOLUTIONS

Modules depth of 55 and 65-mm permit realisation of doors and door sets completely thermally broken, for any kind of project, building or private housing.

The SOLEAL doors allow designs with all Technal products. Installation detailing, trims and frames are in common with SOLEAL windows, balcony doors and sliders.

This thermally insulated door, with flat or disabled access thresholds, can be made with continuous frame opening leaf or with bottom rail (120-mm visible face in 55-mm version and 166-mm visible face in 65-mm version).

NEAT DESIGN AND HIGH PERFORMANCE

SOLEAL doors are offering straight and sober lines for a sleek appearance with minimal views of aluminium and a nice global design.

The 55-mm version offers three concepts for all your projects: single action hinged doors, double action pivot doors, and ‘tube’ doors with bulb stile.

The 65-mm version meets market expectations with big dimensions up to 3-m high and with heavy weight up to 250-Kg by leaf with concealed hinges.
SOLEAL 55 / HIGH PERFORMANCE DOOR

MULTIPLE APPLICATIONS
- Three opening options to meet your project needs:
  - Single action, hinged
  - Tube - bulb stile
  - Double action, pivot

PERFORMANCES
- Thermal performance for single action door:
  - A leaf W x H = 1.25 m x 2.18 m:
    - $U_w=1.6\ W/m^2.K$, $TL_w=0.49$, $Sw=0.37$
  - Double glazing $U_g=1.0\ W/m^2.K$ and insulating glazing insert
    - $U_w=1.3\ W/m^2.K$, $TL_w=0.49$, $Sw=0.37$
  - Triple glazing $U_g=0.6\ W/m^2.K$ and insulating glazing insert
    - $U_w=1.4\ W/m^2.K$
  - Opaque panel $Up=0.8\ W/m^2.K$
- Glazing infill: 6 – 42 mm
- Maximum weight per leaf: up to 150 kg
- Heavy traffic door, Class 8* (tested to 1 million cycles)
  - Big dimensions:
    - Hinged door with disabled access threshold, $W \times H = 1.10\ m \times 3.00\ m$
    - Tube door with disabled access threshold, $W \times H = 1.10\ m \times 3.00\ m$
- Weather performance A.E.V. (Air, Water, Wind)
  - Door 55 mm, 1-leaf hinged door outward opening with disable access threshold ($H \times W = 2.4 \times 1.1\ m$):
    - Air permeability: Class 4
    - Water tightness: Class 6A
    - Resistance to wind pressure: Class C3
*Single action door and Tube door

KEY FEATURES AND INNOVATIONS

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 [1-leaf door hinged]

INNOVATION
- Two patents for an innovative door
- One patent application for an aesthetic design
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 DOOR 55 / 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).

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.

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
Results obtained for the SOLEAL hinged door:
• Class 3 on the door leaf 1
• Class 2 on the door leaf 2
Through reinforcement of certain components such as hinges, latches, locks and hooks. The initial aesthetics are well preserved.

ELECTROMAGNETIC LOCKING
With the single action version (1 or 2 leaf) 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.
SOLEAL DOOR 55 / SINGLE ACTION, HINGED

SINGLE ACTION DOOR WITH BOTTOM RAIL

COMPOSITE DOOR SETS

SINGLE ACTION, REINFORCED

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

INTEGRATION
SOLEAL DOOR 55 / 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 dualhardness gasket on the locking edge maintains a 23-mm gap between the aluminium.

TUBE SINGLE ACTION

• An optional section on the reported beating top frame acts as the simple action of the door. This profile can be mounted either inside or outside the opening giving way.

TUBE DOUBLE ACTION

• Optionally, the concealed closer can be used with this anti finger-trap application, assisting doorclosing.

TUBE ANTI-FINGER-TRAP

• Optionally, the concealed closer can be used with this anti finger-trap application, assisting doorclosing.
SOLEAL DOOR 55 / 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.
CHARACTERISTICS AND KEY INNOVATIONS

APPLICATIONS
- 1 an 2-leaf, inward opening
- 1 an 2-leaf, outward opening
- Possibility of composition (with lateral fixed post or top fixed light)
- Integration in GEODE and SPINAL façades

PERFORMANCES
- Thermal performances for single action door, 1-leaf (W x H = 1.25 x 2.18 m):
  - $U_w=1.4 \text{ W/m}^2\cdot\text{K}$ with $T_{lw}=0.51$ and $S_w=0.38$
    (Double glazing $U_g=1.0 \text{ W/m}^2\cdot\text{K}$)
  - $U_w=1.0 \text{ W/m}^2\cdot\text{K}$ with $T_{lw}=0.52$ and $S_w=0.40$
    (Triple glazing $U_g=0.5 \text{ W/m}^2\cdot\text{K}$)
- Glazing infill: up to 52-mm
- Maximum weight by leaf: up to 250-kg with concealed hinges
- Maximum dimensions of opening, door on hinges with disable access threshold (W x H = 1.4 x 3 m)
- High traffic door, class 8 (test in progress at 1 million cycles)
- Weather performances A.E.V. (Air, Water, Wind) Door 65-mm, 1-leaf inward opening door with hinges and disable access threshold (W x L = 2.5 x 1.2 m):
  - Air permeability: Class 4
  - Water tightness: Class 7 A
  - Resistance to wind pressure: Class C5
- Acoustic attenuation: up to 40 dB (RA,ref)

DESIGN
- Straight and sober lines for a sleek appearance with minimal views of aluminium and a nice global finish
- Technal exclusive design push-pad handle
- Concealed drainage at threshold, bottom rail and mid rail
- 3 types of hinges to adapt to different use (slim clamped, faced-fixed, concealed hinges)
- Pull handle option on the full height of the opening frame (1 and 2-leaf)

ACCESSIBILITY AND EASE OF USE
- Disable access threshold profiles are available in all applications
- Integrated door closer: 90° hold-open
- Residential and commercial thresholds

CLOSING AND SECURITY
- 1 or 3-point locks with additional points and extension possible
- Adjustable strike to facilitate closure
- Adjustable strike for better efficiency in long term usage
- Burglary resistance (on going)
- Technical mullion
- Illuminated push button with buzzer and internal wiring for power cable

CHARACTERISTICS AND KEY INNOVATIONS

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SOLEAL DOOR 65 / ACCESSIBILITY

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 20mm.

CONCEALED CLOSER
Concealed overhead closer set into the opening or fixed frame for discrete closing assistance for single action doors.

ELECTROMAGNETIC LOCKING
With the single action version (1 or 2-leaf) 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.

SECURITY / REINFORCED OFFER

BASIC LOCK OR MULTI-POINTS WITH CONTINUOUS STAINLESS STILL FACEPLATE
- 1-point lock, ½ turn bolt for the fixed frame
- 2 and 3-point locks with top and bottom locking
- 3-point lock with continuous stainless steel faceplate, lift-handle and key-lock versions
- Additional points and extensions possible, for 3-point lock, using a stainless steel faceplate

STRIKE
- Adjustable strike plates available in polyamide and stainless steel
- Spare adjustable stainless steel strike plate as a replacement for the cylinder lock
- Cover behind the strike plates: better finish
- Electric strike plates

HINGES
- Slim clamped hinges with 2 or 3 parts up to 180 kg
- Face-fixed hinges with 2 or 3 parts up to 210 kg
- Concealed hinges up to 250 kg

HINGES
- Slim clamped hinge
- Face-fixed hinge
- Concealed hinge
SOLEAL DOOR 65 / SINGLE ACTION, HINGED

1 LEAF DOOR - OUTWARD OPENING

2 LEAF - OUTWARD OPENING WITH REINFORCER ON CENTRAL MULLION

1 LEAF DOOR COMPOSITION WITH INTEGRATION - OUTWARD OPENING - WITH FIXED PART

INWARD OPENING, DISABLE
ACCESS THRESHOLD RESIDENTIAL

OUTWARD OPENING,
BOTTOM PLINTH
SOLEAL DOOR 55 AND 65
/ A BESPOKE DESIGN

A WIDE CHOICE OF CLOSING MECHANISMS

Technal exclusive-design handle with lock
Technal exclusive-design handle with lock
Push pad handle, Technal exclusive design*
Triangular push bar

Extended triangular push bar
Stainless steel push bar
Push pad handle with Technal logo (exclusive)
Rectangular push pad

DISCRETE FITTINGS

Connection between threshold and mullion
Concealed closer
Electromagnetic lock

* Only available for SOLEAL 55 door
CONFIGURATIONS 55 AND 65

Concealed drainage on the outer frame and transom.

SINGLE ACTION INWARD-OUTWARD OPENING

1 leaf – 2 leaf outward opening
1 leaf – 2 leaf inward opening

COMPOSITION

1 leaf – 2 leaf outward opening
1 leaf – 2 leaf
1 leaf – 2 leaf inward opening
1 leaf – 2 leaf

Technical mullion integration

CONFIGURATIONS 55

DOUBLE ACTION

1 leaf – 2 leaf

COMPOSITION

1 leaf – 2 leaf
1 leaf – 2 leaf
INSTALLATION 55 AND 65

INTERNALLY RECESSED

DIRECT FIXED

REFURBISHMENT

SOLEAL 55 DOOR INSERTED IN TO GEODE CURTAIN WALLING

SOLEAL 65 DOOR INSERTED IN TO SPINAL CURTAIN WALLING
### THERMAL PERFORMANCE - Uw*

<table>
<thead>
<tr>
<th>Configuration</th>
<th>(L x H) m</th>
<th>With Ug = 1.1</th>
<th>With Ug = 1.0</th>
<th>With Ug = 0.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-leaf, glazed single action</td>
<td>1.25 x 2.18</td>
<td>1.7</td>
<td>1.6</td>
<td>1.5</td>
</tr>
<tr>
<td>2-leaf, glazed single action</td>
<td>1.53 x 2.18</td>
<td>1.8</td>
<td>1.7</td>
<td>1.5</td>
</tr>
<tr>
<td>1-leaf, infill panel single action with Up = 0.8</td>
<td>1.25 x 2.18</td>
<td>1.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Thermal performance using thermal improvement foam in glazing rebate and disable access threshold**

**Stainless steel swisspacer or equal**

### AEV PERFORMANCE: (AIR, WATER, WIND)

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Height x Width (mm)</th>
<th>Air permeability</th>
<th>Water tightness</th>
<th>Resistance to wind pressure nº PV</th>
<th>Q100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 leaf open out, hinged, rebated commercial threshold</td>
<td>2.4 x 1.1</td>
<td>Class 2</td>
<td>Class 2A</td>
<td>Class C3</td>
<td>BP11.7.2012-1</td>
</tr>
<tr>
<td>1 leaf open out, hinged, disabled access threshold and gasket corners</td>
<td>2.4 x 1.1</td>
<td>Class 3</td>
<td>Class 7A</td>
<td>Class C3</td>
<td>406/12/202-1</td>
</tr>
<tr>
<td>1 leaf open out, hinged, disabled access threshold</td>
<td>2.4 x 1.1</td>
<td>Class 4</td>
<td>Class 6A</td>
<td>Class C3</td>
<td>406/12/202-2</td>
</tr>
<tr>
<td>1 leaf open in, hinged, disabled access threshold and gasket corners</td>
<td>2.2 x 1.0</td>
<td>Class 3</td>
<td>Class 4B</td>
<td>Class C3</td>
<td>406/12/202-3</td>
</tr>
<tr>
<td>1 leaf open in, hinged, disabled access threshold</td>
<td>2.2 x 1.0</td>
<td>Class 3</td>
<td>Class 3B</td>
<td>Class C3</td>
<td>406/12/202-4</td>
</tr>
<tr>
<td>2-leaf, door open out, hinged, disabled access threshold</td>
<td>2.5 x 2.0</td>
<td>Class 3</td>
<td>Class 3A</td>
<td>Class B2</td>
<td>406/12/326-1</td>
</tr>
</tbody>
</table>
MATERIALS AND COMPONENTS

As with all Technal systems, only the best materials and parts are used to minimise maintenance and ensure long-term performance:

- The aluminium profiles are extruded from alloys 6060 Building compliant with EN 12020, EN 573-3, EN 515 and EN 775-1 to 9
- Fittings are cast from EN 12844 compliant Zamak 5
- All seals are EPDM or TPE (Thermoplastic elastomer)
- The polyamide thermal breaks are extruded from PA6-6 (0.25 FV)
- Screws are made from stainless steel

ACOUSTIC PERFORMANCES

<table>
<thead>
<tr>
<th>Configuration</th>
<th>Glazing thickness in mm</th>
<th>Acoustic attenuation glazing (dB)</th>
<th>Acoustic attenuation door SOLEAL 65 mm (dB)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-leaf door</td>
<td>6 / 16</td>
<td>32</td>
<td>38</td>
</tr>
<tr>
<td>2-leaf door</td>
<td>6 / 16</td>
<td>32</td>
<td>38</td>
</tr>
</tbody>
</table>

**Thermal performance using thermal improvement foam in glazing rebate and disable access threshold

** Stainless steel swisspacer or equal

FINISHES AND COLOURS

A wide range of finishes and colours is available to meet individual project requirements, enhancing exiting buildings and offering architects and designers greater design freedom:

- Natural anodised in accordance with EN 12373-1:2031
- Polyester coating finishes in a wide range of colours in accordance with "QUALICOAT" instructions
- SOLEAL door is also available in lacquered finishes with exclusive Technal colours for a stylish and contemporary look