

# AMBIAL

THE VERSATILE  
FOLDING DOOR



Photographer: David Aubert



By  Hydro





# AMBIAL

## / THE ORIGINAL HIGH-PERFORMANCE XXL OPENINGS

The AMBIAL folding door can be fully opened inwards or outwards, offering you a panoramic view, flooding rooms with natural light and blurring the boundaries between indoors and outdoors.

### HIGH PERFORMANCES

Designed to be both durable and easy to use, the AMBIAL supported folding door can incorporate up to 10-leaf with a maximum height of 3 m for an opening of 12 m wide, in straight line or with open corner, without visible post.

With a 75 mm module and supported by TECHNAL's exclusive rollers, chosen for their resilience, each leaf can support a weight of up to 150 kg.

AMBIAL also guarantees thermal and acoustic performance, as well as high-level weather and water resistance.

### SLEEK DESIGN

The finishes have been designed with the greatest attention to detail, to offer a harmonious appearance, both when open or closed. The frames are flush-fitting, with slim, well-balanced profiles. The upper and lower rollers and fixings are covered, to give a uniform overall look, even when open. Drainage is concealed to ensure a flush design.

### WIDE SELECTION OF CONFIGURATIONS

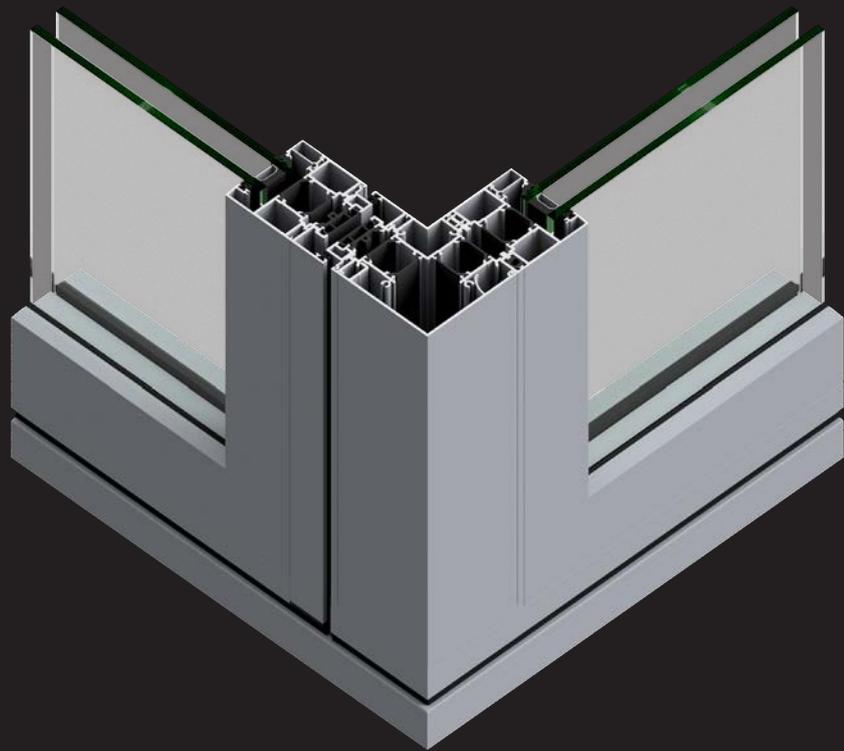
Whether in line or with open corner, inward or outward opening, from the centre or from one of the sides, AMBIAL is designed to suit all architectural wishes, whether a new-build or renovation: villas, architect-designed houses, extensions, hotel or restaurant terraces, balconies of apartment blocks, etc.



Certified Cradle to Cradle - Bronze Level

# AMBIAL

/ THE MULTI-SPACE FOLDING DOOR



# KEY FEATURES & INNOVATIONS

## LARGE DIMENSIONS

- Large sizes available up to (W x H) 1200 x 3000 mm per leaf, with possible configurations from 1 to 10-leaf for the straight line version with an opening of up to 12 m wide and from 2 to 10-leaf for the corner version
- Weight: up to 150 kg per leaf
- Glazing thickness from 9 to 59 mm

## RELIABILITY AND PROTECTION

- Secure design, to keep the door on the upper and lower tracks, thanks to the anti-derailment and anti-lift function
- Option to lock the intermediate leaves with ultra-flat handles so the profiles or keys don't risk to be damaged in the folded position
- Locks adapted depending on the function: 2 points with or without key, 3 points with key or 2 lever points for semi-fixed leaf
- Blocking magnets to protect the door from any shocks when in the open position, or if it is windy or if the door is incorrectly operated
- Security system to prevent the intermediate leaves being opened when the main door is closed
- Protective space between gaskets to avoid fingers being trapped
- Optional anti-slip threshold frame

## AESTHETICS AND COMFORT

- Completely flush appearance in closed position, with clean lines
- Uniform appearance in open position
- Great freedom of creation thanks to the wide range of configurations
- Exclusive designed, ultra-flat handle and key
- Easy to operate, thanks to the upper and lower rollers, foldable pull handle and optional exterior handle on the service leaf

- The double brush option allows for a flush-fitting threshold
- Possibility to create a 1 or 2-leaf door to maintain the visual harmony nearby
- Registered design

## PERFORMANCES

- Supported system for more stability
- Excellent thermal and sound insulation
- Extreme high endurance performance of 50.000 cycles ensuring a long lifetime of the AMBIAL folding door
- The leaves are as easy to open as a sliding door
- Maximum resistance to rust on all hardware
- Rebated frame for improved weather resistance
- 2 vent heights available:
  - 63 mm in standard version
  - 73 mm in reinforced version for large dimensions

## SOFTWARE

- Applications available on TechDesign, Tech3D and TechAcoustic.

## SUSTAINABILITY

- Profiles in Hydro CIRCAL®: prime quality aluminium made with a minimum of 75% recycled end-of-life aluminium (post-consumer scrap). CO<sub>2</sub> footprint of 2.3 kg of CO<sub>2</sub> per kilo of aluminium. EPD on demand.

# AMBIAL

## / THE FINE DETAILS

### HIGH-END FINISHES

- Straight, black vertical line, in line with the edge of the leaves when viewed in the open position
- In the closed position, black hinges concealed in the vertical line of the seal
- Black hardware, seals and brush seals
- Screw heads covered with black caps, enhancing weather resistance
- Concealed drainage
- Two options for concealing vertical grooves:
  - Black synthetic profile
  - Black seal which improves thermal and acoustic performance



### HIGHLY RESISTANT HARDWARE

- Rollers covered with black caps which help with cleaning the tracks (design exclusive to TECHNAL)
- Stainless steel tracks and wheels
- Simple adjustment on site:
  - Vertical +3 mm / -1 mm
  - Lateral +5 mm / -5 mm
- Anti-derailment load-bearing wheel
- Perfect security, thanks to a 3-point locking system with insulated key lock



### EXCLUSIVE HANDLE DESIGN

- Square, ultra-flat handle and key design
- Handles and key covers can be lacquered to match all TECHNAL colours
- Pull handle mounted on hinges or on support for easy closure





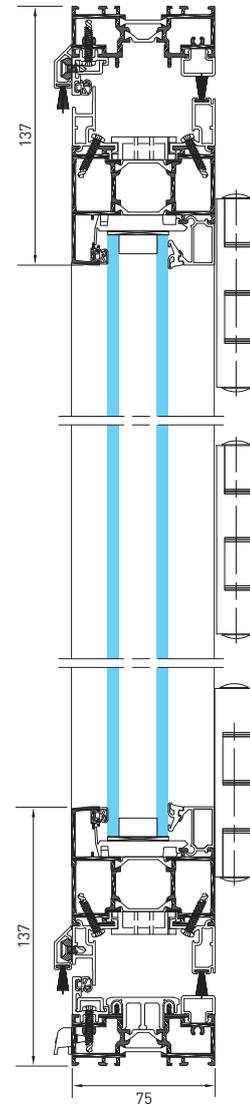
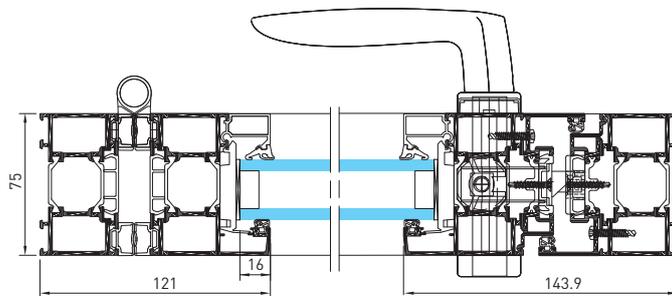
# CROSS SECTIONS

## / STRAIGHT LINE

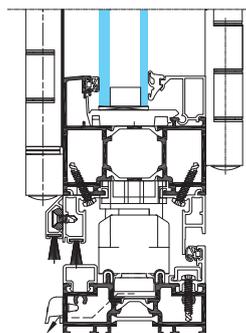
### PERFORMANCES

- Optimised heat loss values:  $U_w = 0.95 \text{ W/m}^2\cdot\text{K}$  with  $U_g = 0.5 \text{ W/m}^2\cdot\text{K}$ ,  $S_w = 0.37$  and  $TL_w = 0.53^*$   
\*These values are obtained with double glazing of  $1.0 \text{ W/m}^2\cdot\text{K}$  and insulating crossbar with 5 leaves measuring (W x H) 6000 x 3000 mm.
- Weather Resistance Performance:
  - Air: Class 4
  - Water: Class 8A
  - Wind: Class C3
- Acoustic attenuation: up to 42 dB ( $R_w$ )
- Operating force: Class 1 (less than 100 N)
- Mechanical strength: Class 3
- Corrosion resistant hardware: Grade 5 (420 h in saline mist)
- Hardware endurance test: grade 5 / 25,000 cycles (test conducted in accordance with EN13126-15)
- Optional cylinder lock tested to 400,000 opening and closing cycles

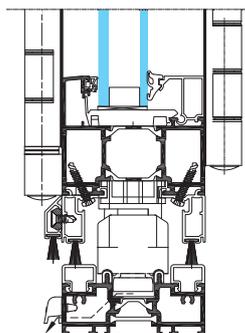
### 1-LEAF - INWARD OPENING



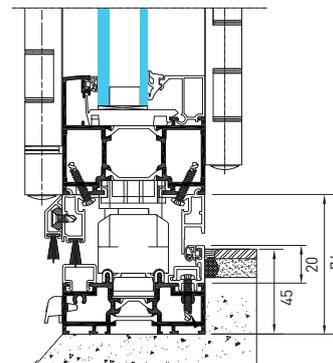
### THRESHOLD



Outward opening: with rebate

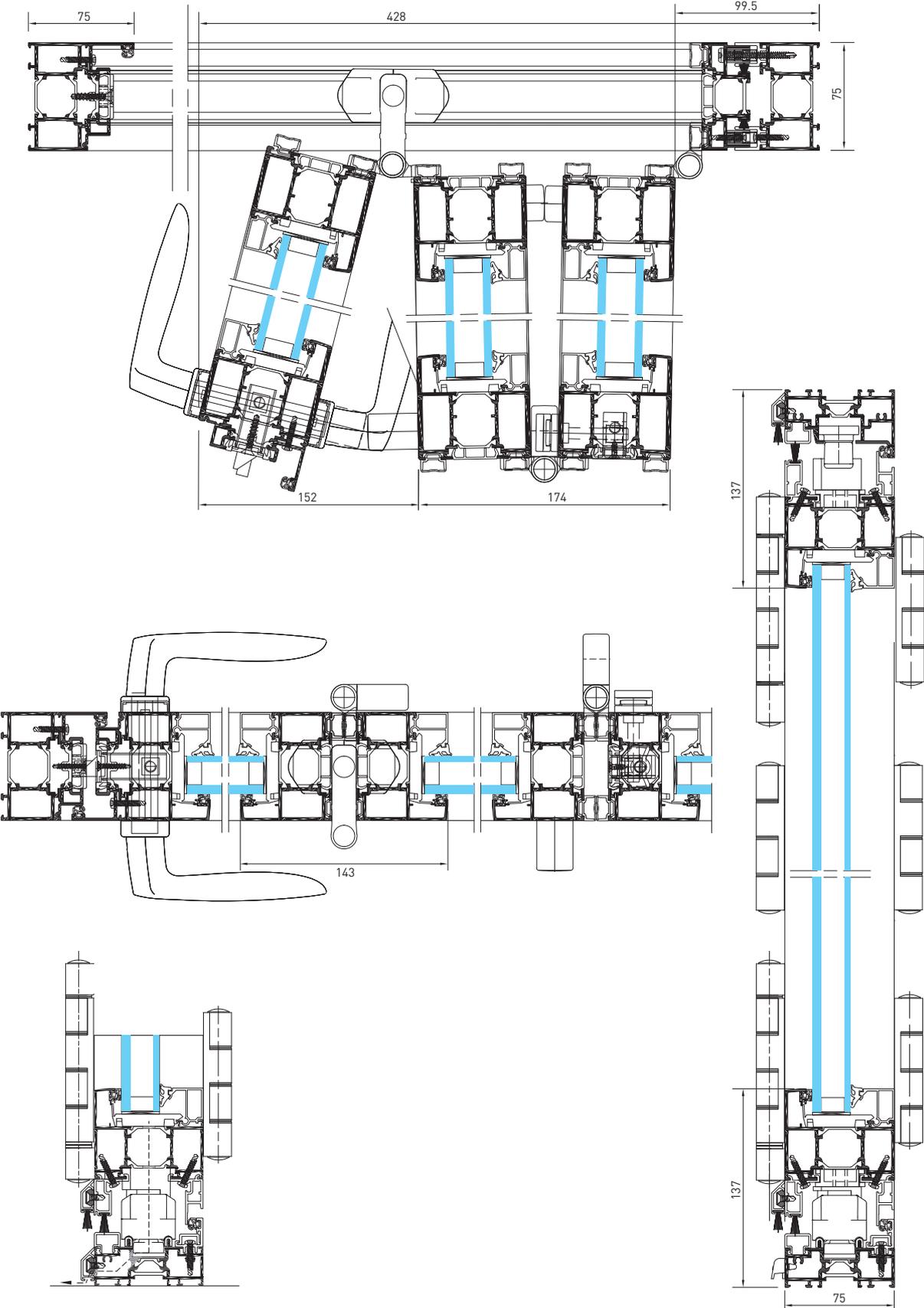


Outward or inward opening: with double brush



Outward opening: recessed disabled access threshold

3-LEAF - OUTWARD OPENING

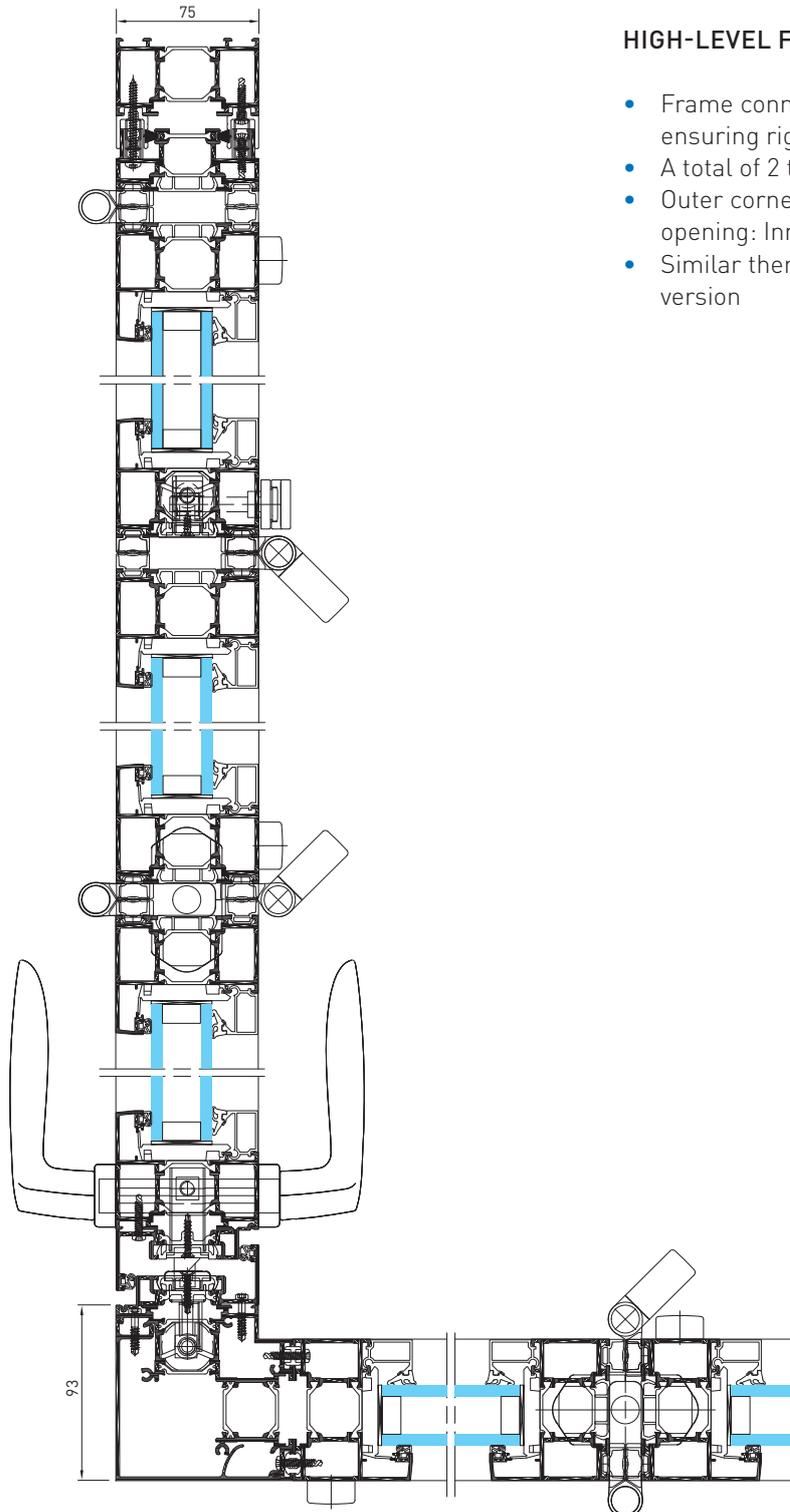


Concealed drainage in option for all configurations

Threshold option with rebate

# CROSS-SECTIONS

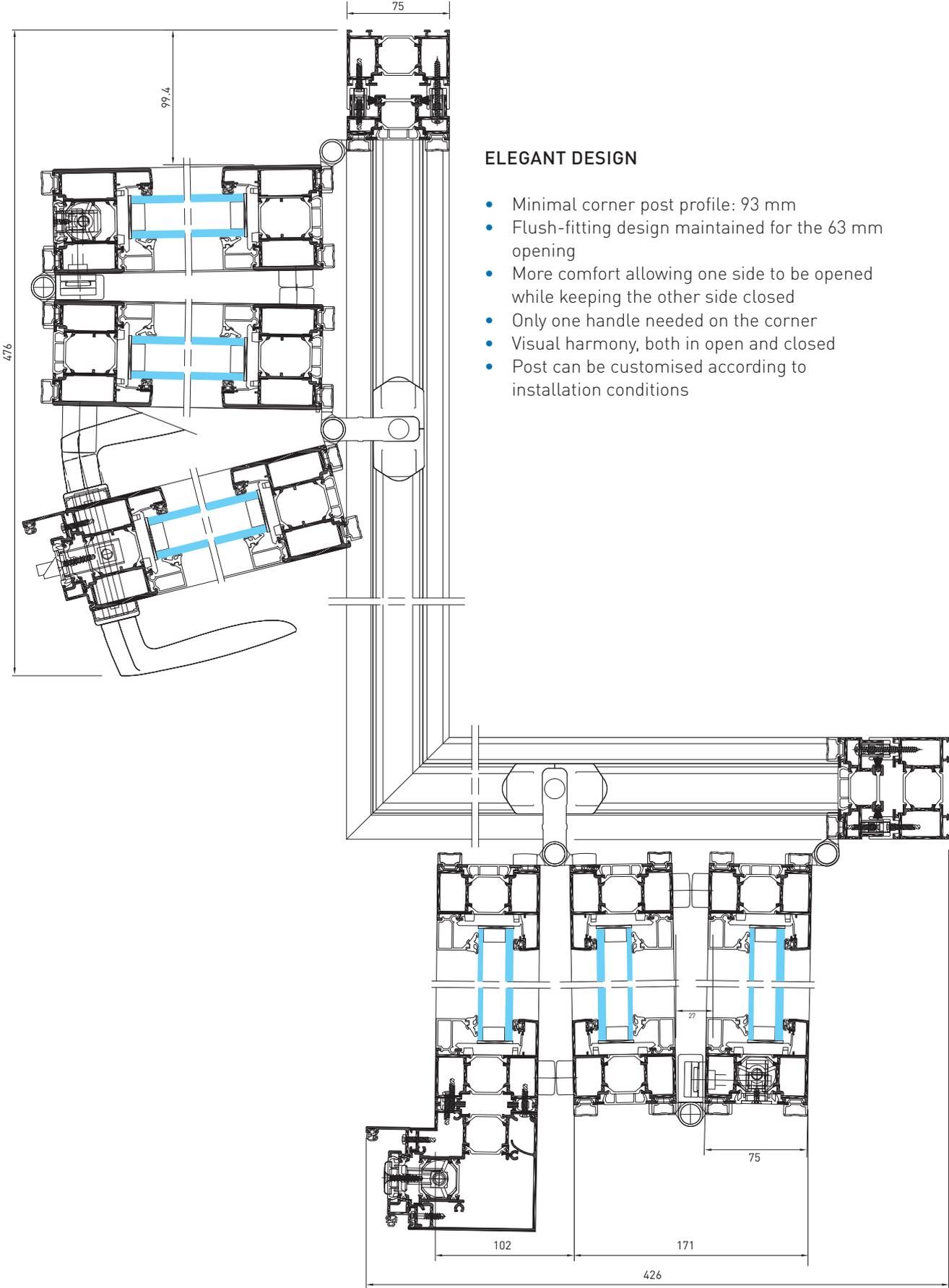
/ OPEN CORNER



## HIGH-LEVEL FINISH

- Frame connected to the opening profile, ensuring rigidity and high performance
- A total of 2 to 10 opening leaves
- Outer corner solution with inward or outward opening: Inner corner available upon request
- Similar thermal performances to the in line version

**3 X 3-LEAF - OPEN OUT  
OUTER ANGLE**

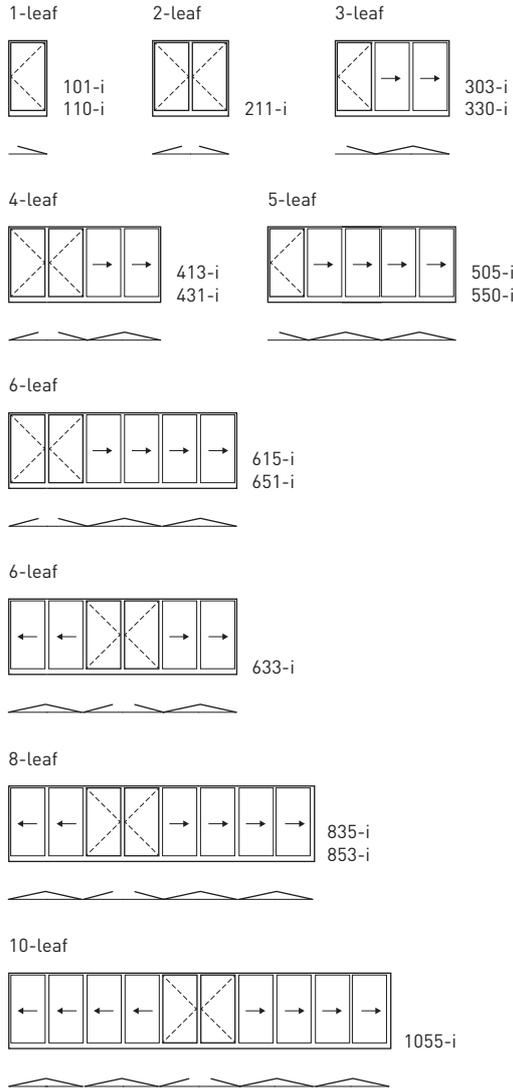


**ELEGANT DESIGN**

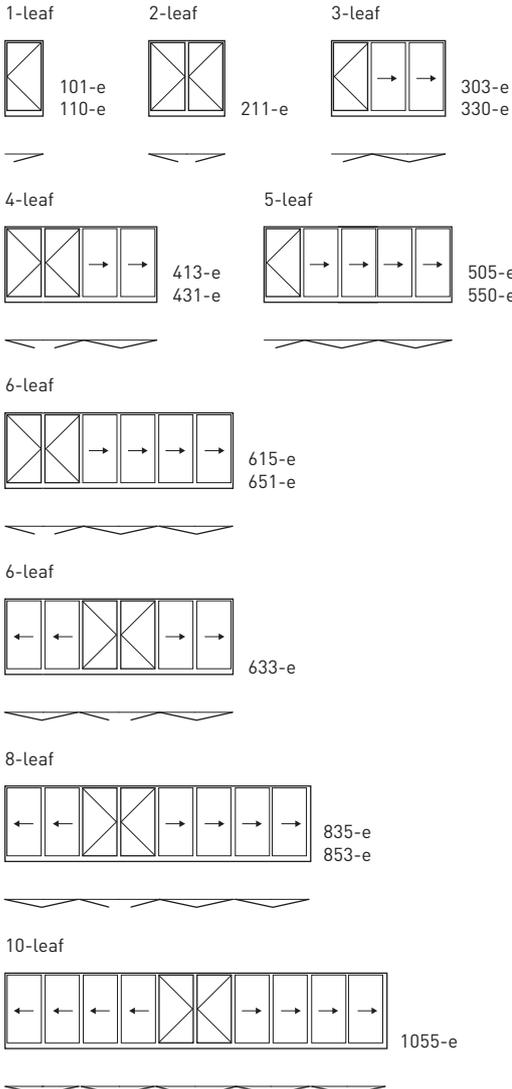
- Minimal corner post profile: 93 mm
- Flush-fitting design maintained for the 63 mm opening
- More comfort allowing one side to be opened while keeping the other side closed
- Only one handle needed on the corner
- Visual harmony, both in open and closed
- Post can be customised according to installation conditions

# CONFIGURATIONS

## INWARD OPENING



## OUTWARD OPENING

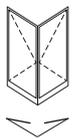


| Letters          | 1st number           | 2nd number                 | 3rd number                  | Opening                   |
|------------------|----------------------|----------------------------|-----------------------------|---------------------------|
| AS = outer angle | Total number of leaf | Number of leaf on the left | Number of leaf on the right | i = inward<br>e = outward |



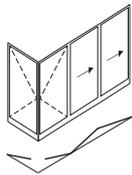
**INWARD OPENING**

1-leaf in angle



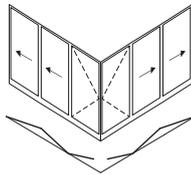
AS-211-i

1x3-leaf in angle



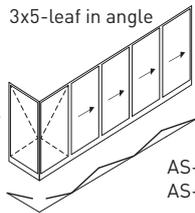
AS-413-i  
AS-431-i

3x3-leaf in angle



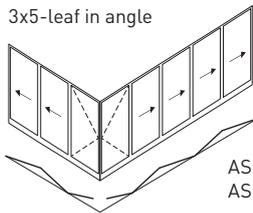
AS-633-i

3x5-leaf in angle



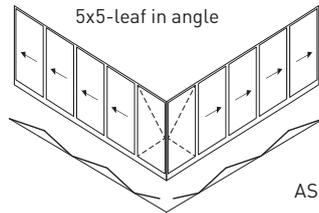
AS-615-i  
AS-651-i

3x5-leaf in angle



AS-835-i  
AS-853-i

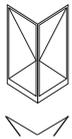
5x5-leaf in angle



AS-1055-i

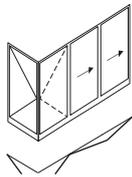
**OUTWARD OPENING**

1-leaf in angle



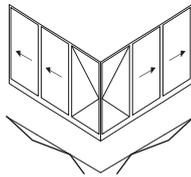
AS-211-e

1x3-leaf in angle



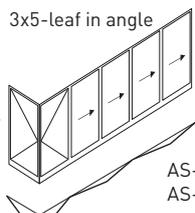
AS-413-e  
AS-431-e

3x3-leaf in angle



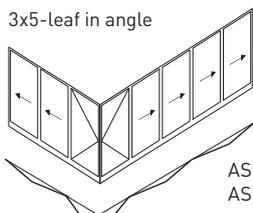
AS-633-e

3x5-leaf in angle



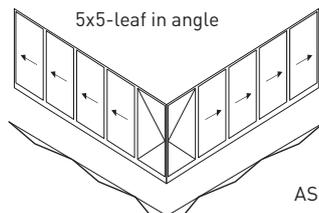
AS-615-e  
AS-651-e

3x5-leaf in angle



AS-835-e  
AS-853-e

5x5-leaf in angle



AS-1055-e

# PERFORMANCES

## AEV PERFORMANCES (Air, Water, Wind)

| AMBIAL                  | Air permeability | Water tightness | Resistance to wind pressure |
|-------------------------|------------------|-----------------|-----------------------------|
| 3-leaf / 2250 x 2400 mm | Class 4          | Class 8A        | Class C3                    |

## ACOUSTIC PERFORMANCES

| AMBIAL                              | Glazing      | Thickness | Performances glazing |            | Performances AMBIAL |            |
|-------------------------------------|--------------|-----------|----------------------|------------|---------------------|------------|
|                                     |              |           | $R_w$                | $R_{A,tr}$ | $R_w$               | $R_{A,tr}$ |
| 3 leaves open out<br>3650 x 2180 mm | 4/16/4       | 24        | 30                   | 26         | 32                  | 28         |
|                                     | 44.2Si-16-10 | 35        | 45                   | 39         | 42                  | 37         |

## THERMAL PERFORMANCE - $U_w$

| Configurations | Size (W x H)    | $U_w$ with $U_g = 0.6$<br>triple glazing | $U_w$ with $U_g = 0.5$<br>warm edge<br>triple glazing | $U_w$ with $U_g = 1.0$<br>double glazing |
|----------------|-----------------|--|---|--|
| 3-leaf         | 3450 x 2180 mm  | 1.4 W/m <sup>2</sup> .K                  | 1.2 W/m <sup>2</sup> .K                               | 1.6 W/m <sup>2</sup> .K                  |
| 5-leaf         | 6000 x 3000 mm  | 1.3 W/m <sup>2</sup> .K                  | 0.95 W/m <sup>2</sup> .K                              | 1.6 W/m <sup>2</sup> .K                  |
| 6-leaf         | 6900 x 2180 mm  | 1.3 W/m <sup>2</sup> .K                  | 1.1 W/m <sup>2</sup> .K                               | 1.6 W/m <sup>2</sup> .K                  |
| 10-leaf        | 11500 x 2180 mm | 1.3 W/m <sup>2</sup> .K                  | 1.1 W/m <sup>2</sup> .K                               | 1.6 W/m <sup>2</sup> .K                  |



# PERFORMANCES

## MATERIALS AND PARTS

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

- 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.

## FINISHES AND COLOURS

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

Natural anodised in accordance with EN 123731: 2001.

- Polyester coating finishes in a wide range of colours in accordance with "QUALICOAT" instructions.
- AMBIAL is also available in lacquered finishes with exclusive TECHNAL colours for a stylish and contemporary look.

## PROFILES

- AMBIAL is made from Hydro CIRCAL<sup>®</sup>, recycled low carbon aluminium. That means it's prime quality aluminium made with a minimum of 75% recycled end-of-life aluminium (post-consumer scrap). Hydro CIRCAL<sup>®</sup> has one of the smallest CO<sub>2</sub> footprint worldwide: 2.3 kg of CO<sub>2</sub> per kilo of aluminium.
- The aluminium profiles are extruded from alloys 6060 Building compliant with EN 12020, EN 573-3, EN 515 and EN 775-1 to 9.



Photographer: David Aubert



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