

# AMBIAL

THE VERSATILE  
FOLDING DOOR



**sapa:**

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 SAPA'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

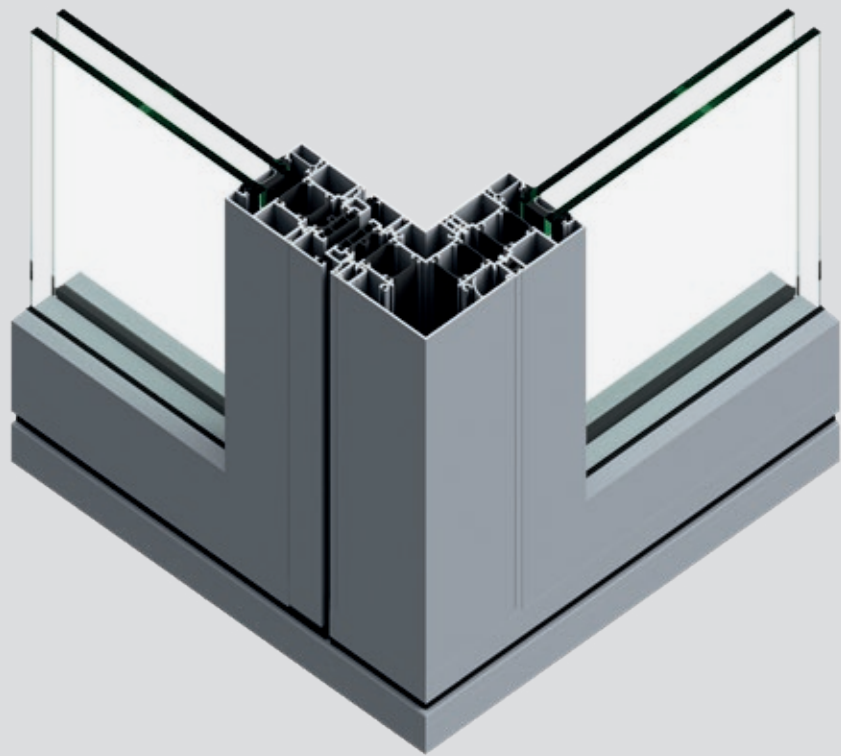
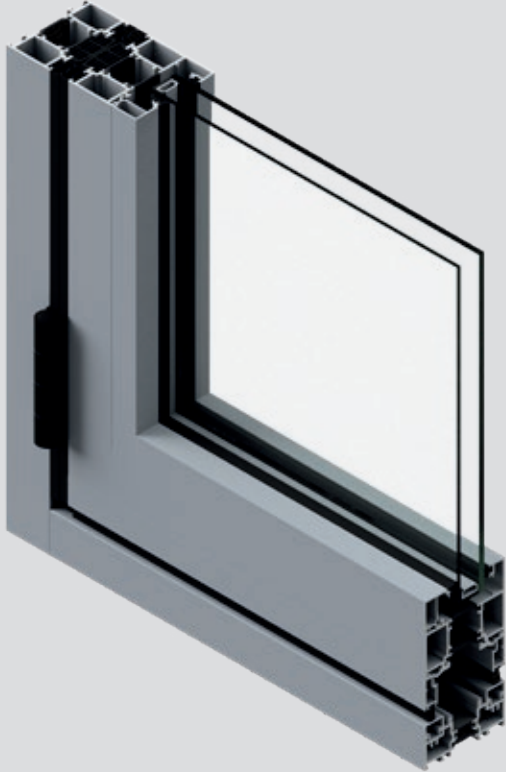
Whether in line or with open corner, inward or outward opening, from the centre or from one of the sides, AMBIAL is designed to suit all architectural wishes, whether a new-build or renovation: villas, architect-designed houses, extensions, hotel or restaurant terraces, balconies of apartment blocks, 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
- Min. dimensions: H frame 572 mm, W leaf 600 mm / W service leaf 670 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
- Locking function with 2 or 3 locking points, with or without key.
- 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

## 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:
  - 66 mm in standard version
  - 76 mm in reinforced version for large dimensions

## 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.
- Thanks to our software TechDesign, it's possible to generate a dynamic EPD according specified dimensions.

# 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



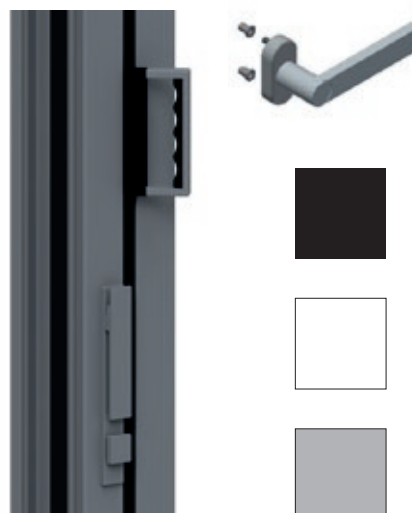
### HIGHLY RESISTANT HARDWARE

- Rollers covered with black caps which help with cleaning the tracks (design exclusive to SAPA)
- 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 flush key lock



### EXCLUSIVE HANDLE DESIGN

- Square, ultra-flat handle with associated key
- Pull handle for easy closure
- Optional exterior handle on the service leaf
- All handles are available in three colors
  - Black, RAL 9005
  - White, RAL 9010
  - Grey, RAL 9006









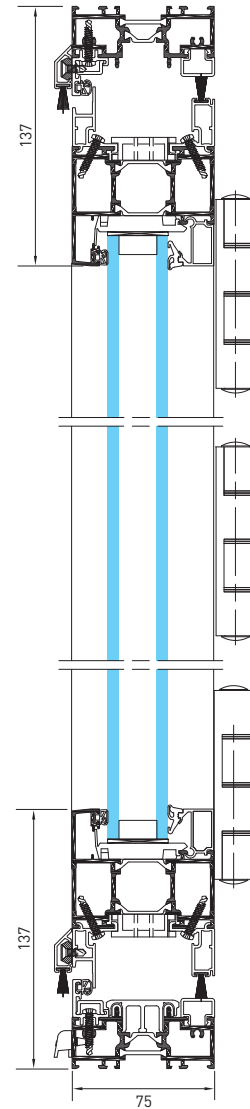
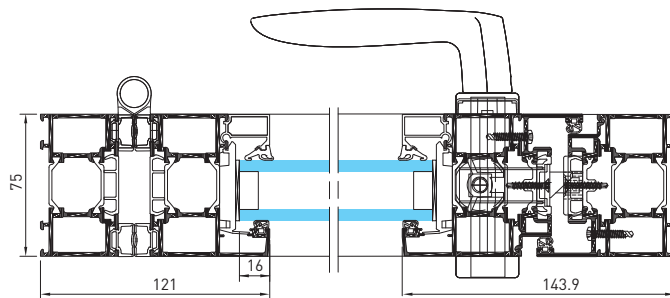
# CROSS SECTIONS

## / STRAIGHT LINE

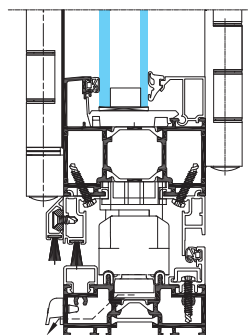
### PERFORMANCES

- Optimised heat loss values:  $U_w = 0.95 \text{ W/m}^2\text{K}$  with  $U_g = 0.5 \text{ W/m}^2\text{K}$ , 5 leaves measuring (W x H) 6000 x 3000 mm.
- Weather Resistance Performance:
  - Air: Class 4
  - Water: up to 450Pa
  - 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
- Available in Burglar protection class RC2, straight line version 1 up to 10 sashes.

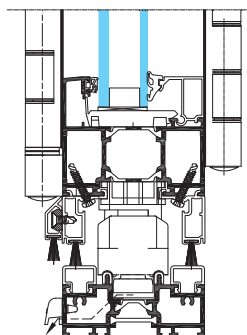
### 1-LEAF - INWARD OPENING



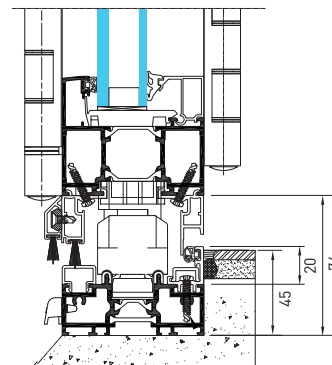
### THRESHOLD



Outward opening: with rebate



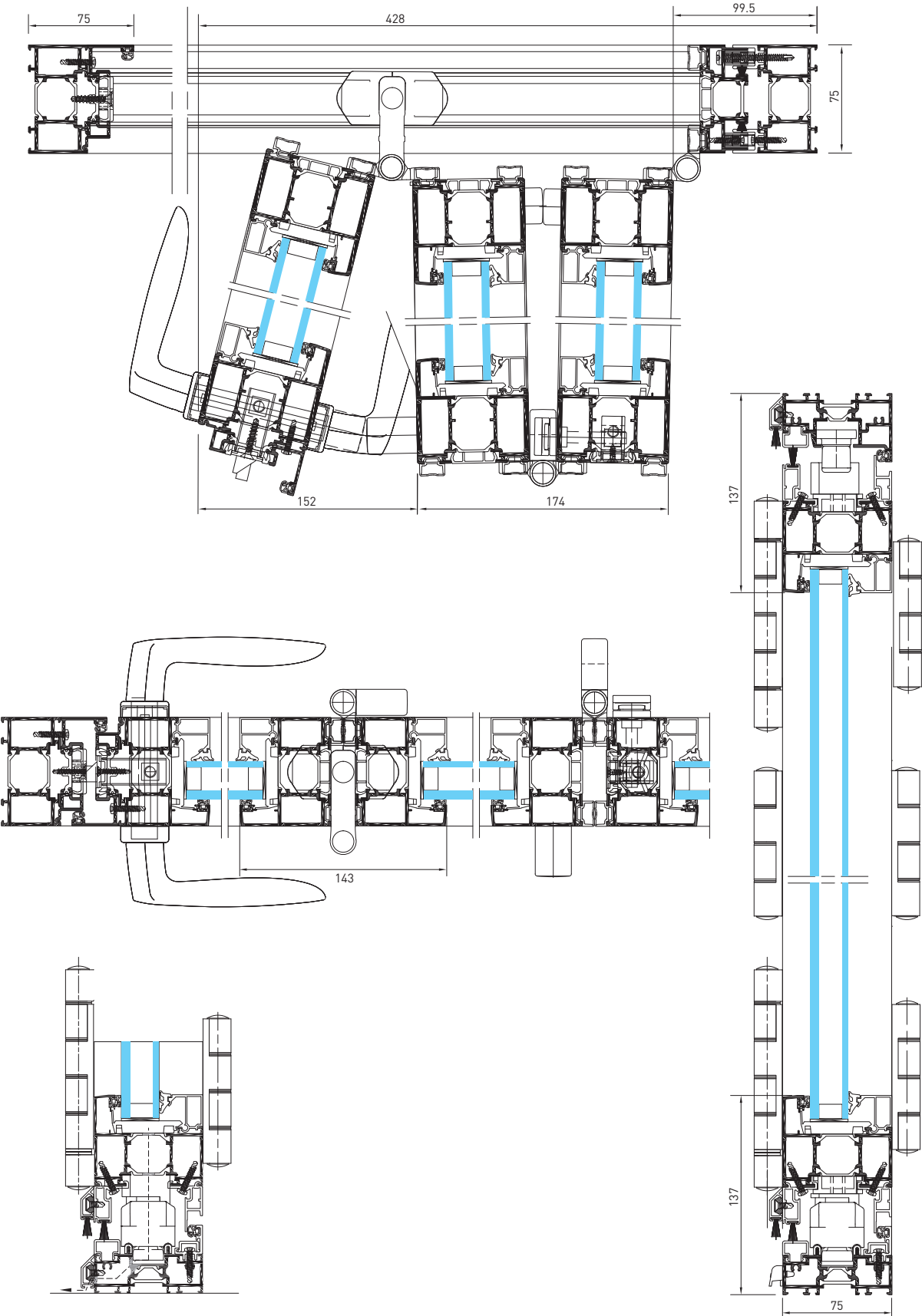
Outward or inward opening: with double brush



Outward opening: recessed disabled access threshold



3-LEAF - OUTWARD OPENING

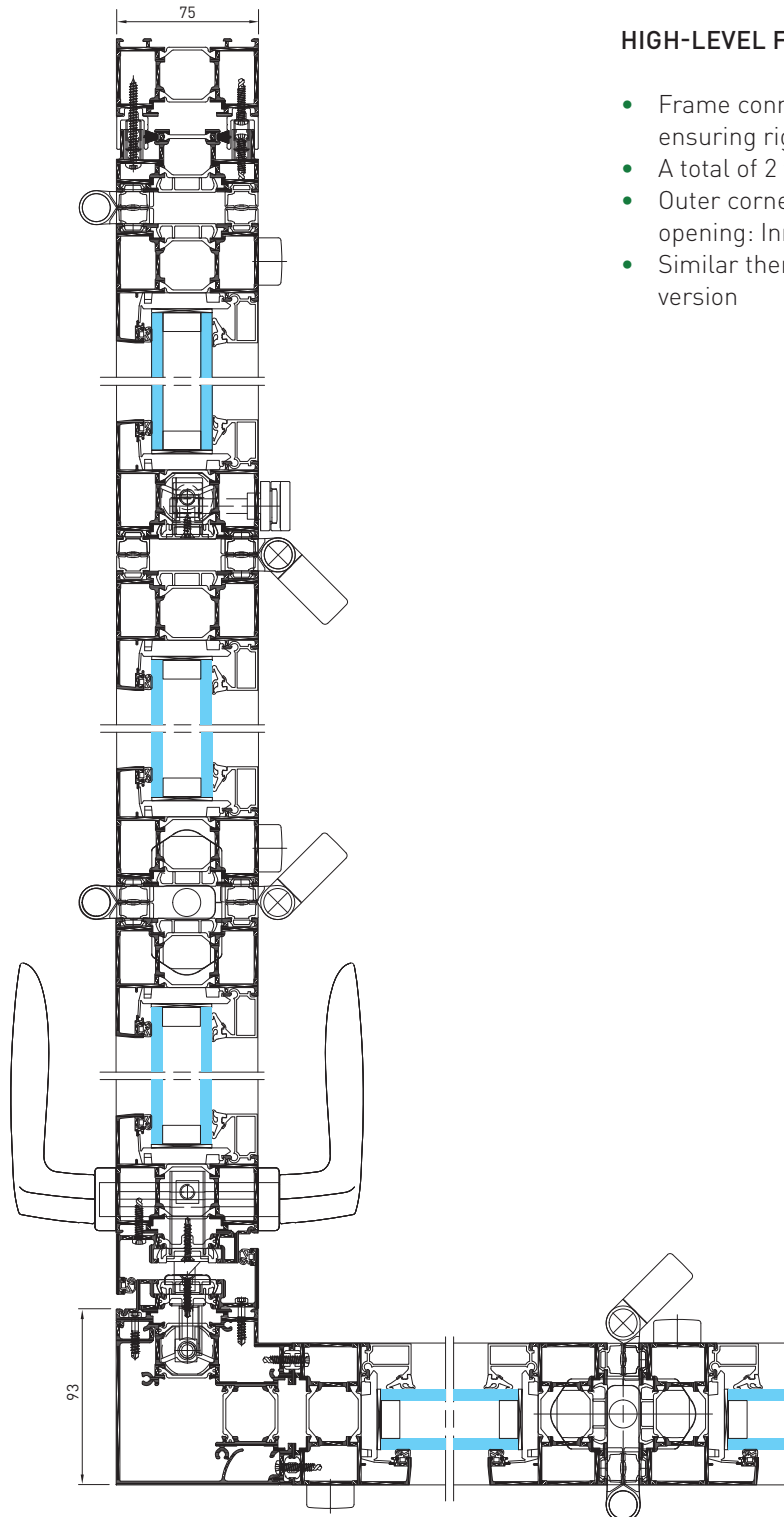


Concealed drainage in option for all configurations

Threshold option with rebate

# CROSS-SECTIONS

/ OPEN CORNER

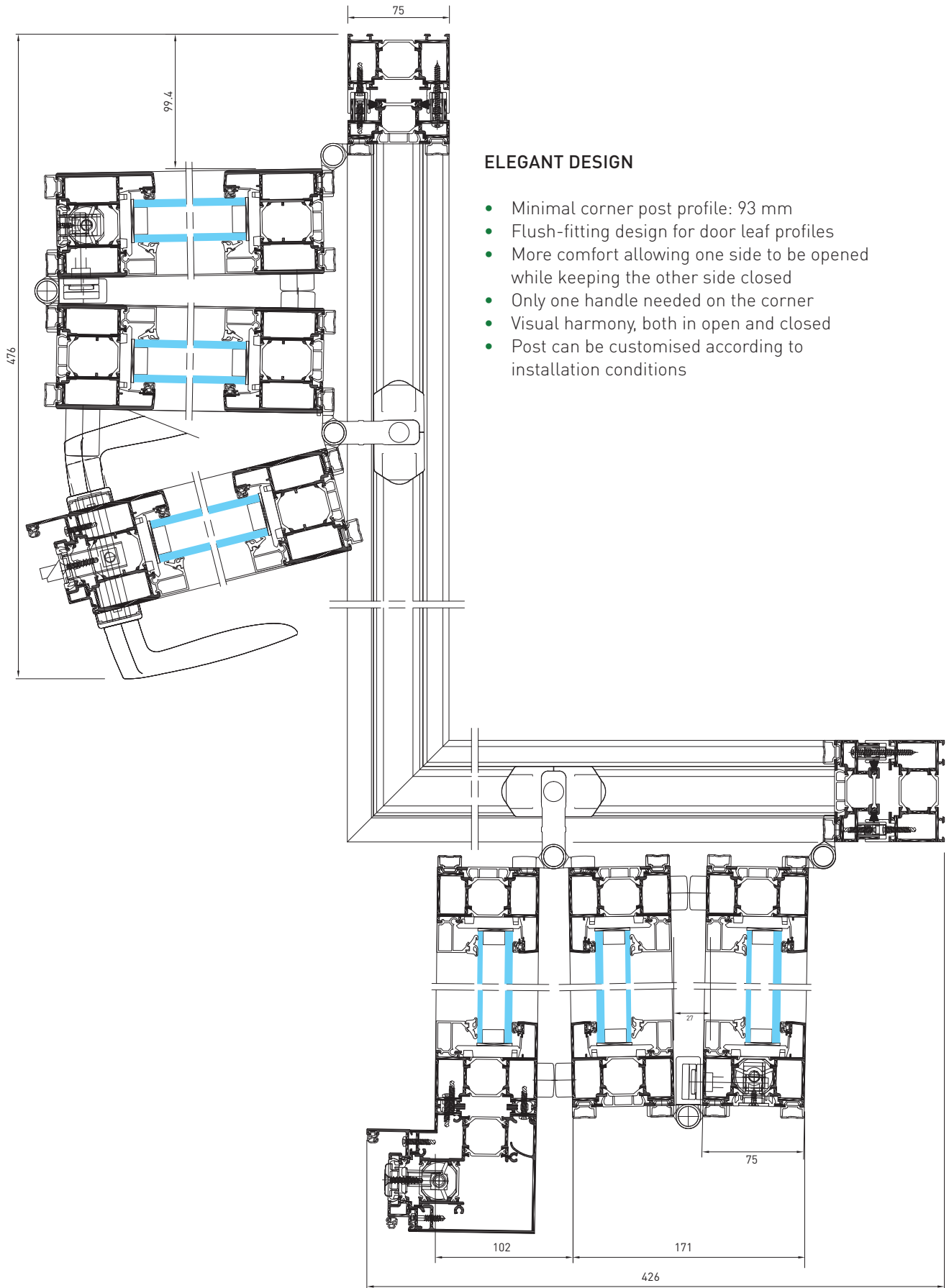


## HIGH-LEVEL FINISH

- 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**

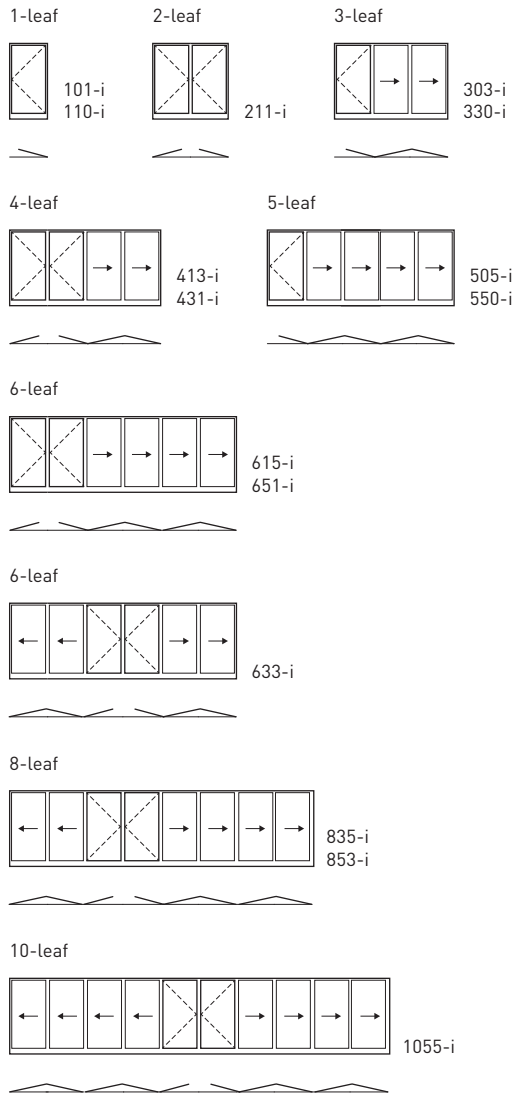


**ELEGANT DESIGN**

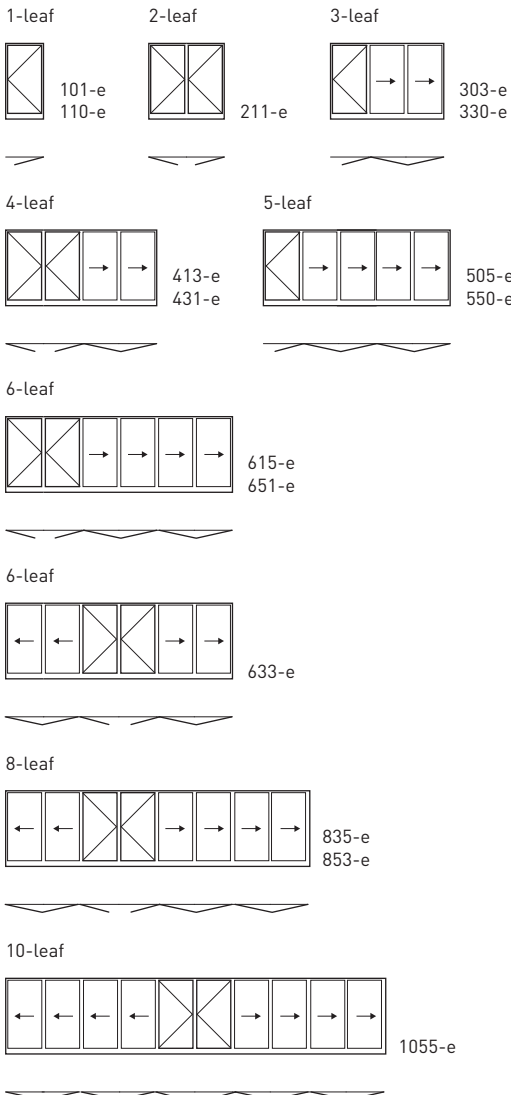
- Minimal corner post profile: 93 mm
- Flush-fitting design for door leaf profiles
- More comfort allowing one side to be opened while keeping the other side closed
- Only one handle needed on the corner
- Visual harmony, both in open and closed
- Post can be customised according to installation conditions

# CONFIGURATIONS

## INWARD OPENING



## OUTWARD OPENING



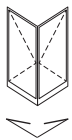
Letters	1 <sup>st</sup> number	2 <sup>nd</sup> number	3 <sup>rd</sup> number	Opening
AS = outer angle	Total number of leaves	Number of leaves on the left	Number of leaves on the right	i = inward e = outward





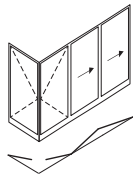
## INWARD OPENING

1-leaf in angle



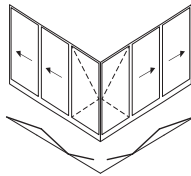
AS-211-i

1x3-leaf in angle



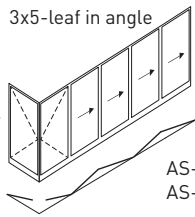
AS-413-i  
AS-431-i

3x3-leaf in angle



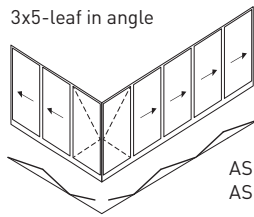
AS-633-i

3x5-leaf in angle



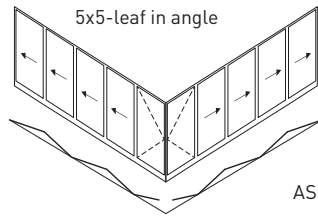
AS-615-i  
AS-651-i

3x5-leaf in angle



AS-835-i  
AS-853-i

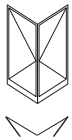
5x5-leaf in angle



AS-1055-i

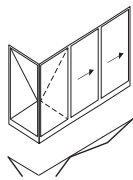
## OUTWARD OPENING

1-leaf in angle



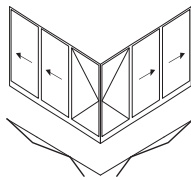
AS-211-e

1x3-leaf in angle



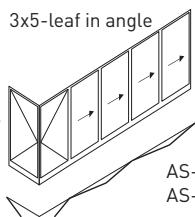
AS-413-e  
AS-431-e

3x3-leaf in angle



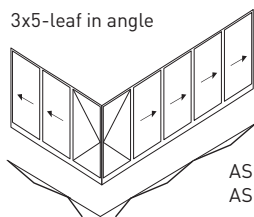
AS-633-e

3x5-leaf in angle



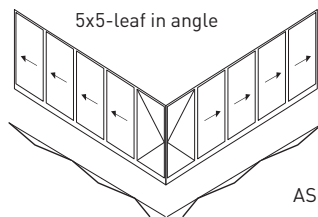
AS-615-e  
AS-651-e

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	Watertightness	Resistance to wind pressure
3-leaf / 2250 x 2400 mm	Class 4	up to 450Pa	Class C3

## ACOUSTIC PERFORMANCES

AMBIAL	Glazing	Thickness	Performances glazing $R_w(C;C_{tr})$	Performances AMBIAL $R_w(C;C_{tr})$
3 leaves open out 3650 x 2180 mm	4/16/4	24	30(-1;-4)	32(-1;-4)
	44.2 Si-16-10	35	45(-4;-6)	42(-1;-5)

## THERMAL PERFORMANCE - $U_w$

Configurations	Size (W x H)	$U_w$ with $U_g = 0.6$ triple glazing	$U_w$ with $U_g = 0.5$ warm edge triple glazing	$U_w$ with $U_g = 1.0$ 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 SAPA 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.

## 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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By  **Hydro**

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