SOLEAL FY65

WINDOW SYSTEM

IMAGINE WHAT'S NEXT

TECHNAL

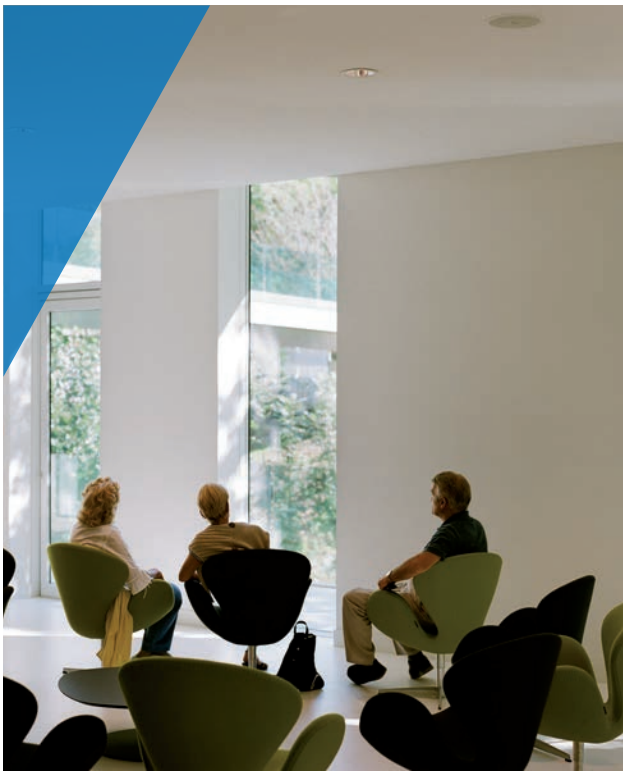
SOLEAL FY65
/ A RANGE OF DIFFERENT WINDOW SOLUTIONS

AN ALL-IN-ONE DESIGN

The SOLEAL FY65 window range offers many options for your projects.SOLEAL FY65 is available in two main styles, the visible opening window and the minimal opening window, thus accommodating all your aesthetic needs.
This range is characterised by the number of options available: one and two leaf windows and balcony doors, into curtain walling or composite units, on cills, with transom or side light, fixed lights, top,side and bottom hung, projecting or on butt hinges, pivot, parallel opening, tilt/turn and tilt/slide.
The installation and finishing options are the same for both SOLEAL PY 55 doors and sliding systems.

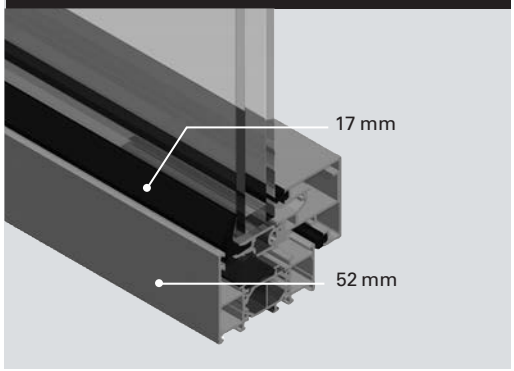
A NEW GENERATION OF WINDOWS

The SOLEAL FY65 range offers exceptional thermal, acoustic and weather performance - properties which come as standard with the new generation of TECHNAL windows. As a result, SOLEAL FY65 windows not only meets current regulatory demands but anticipates future requirements with its high performance.

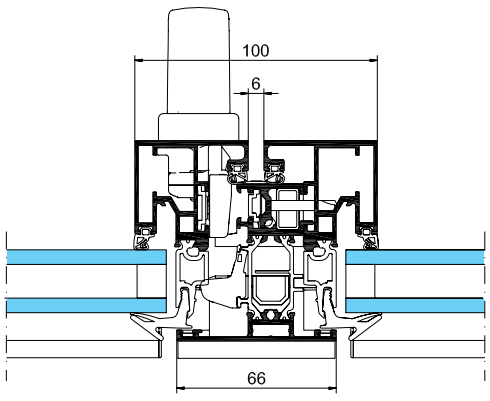


MINIMAL

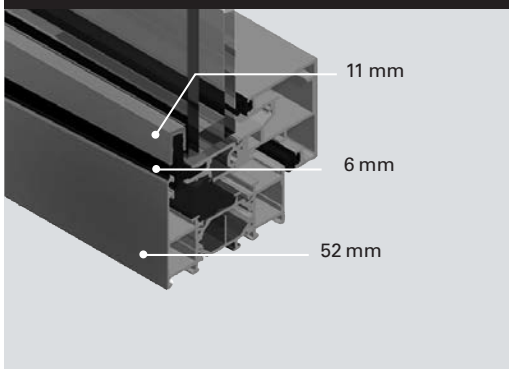
MINIMAL



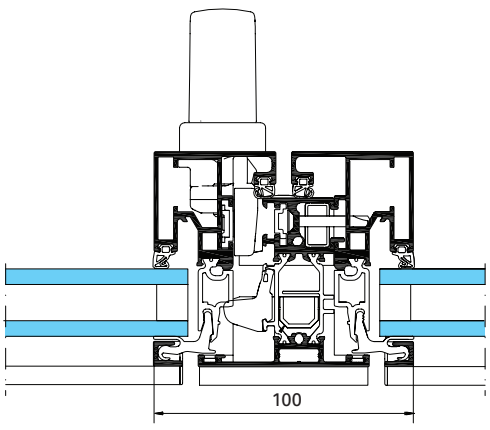
The flashing ensures the seamless integration of the opening frame and the fixed and opening sections appear as one. The fine, minimalist lines are reminiscent of the steel frame construction used for commercial buildings.



CLIP-ON TRIM

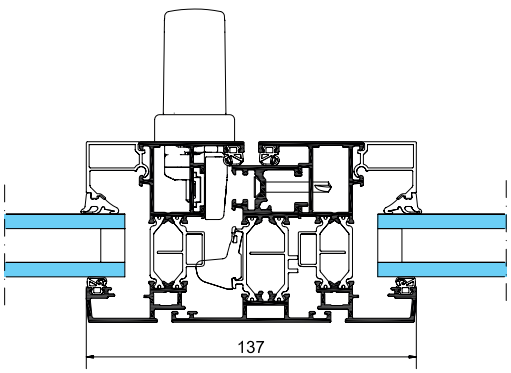


The clip-on trim subtly borders the opening frame, giving it a contemporary feel.



VISIBLE

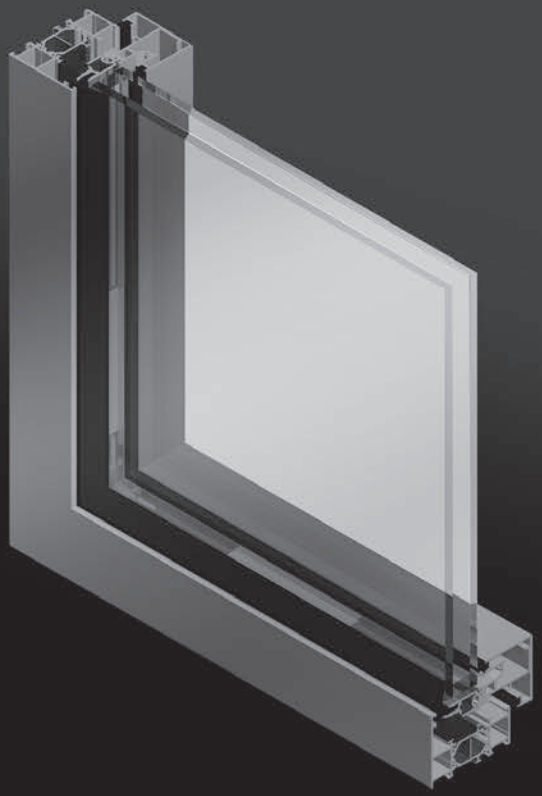
The visual impact of the opening and outer frames has been carefully balanced resulting in an assembly purveying opulence and high quality.



SOLEAL FY65

HIGH PERFORMANCE
WINDOW

SOLEAL FY MINIMAL
65 MM



SOEAL FY VISIBLE
65 MM

KEY FEATURES AND INNOVATIONS

DESIGN

- Several versions are available to meet all your projects' requirements:
- -Minimal: a minimalist opening frame with fine and subtle lines.
- -A minimalist opening frame with "clip-on trim" creating a contemporary feel.
- -A visible opening frame, for a stylish and high quality finish.
- - Option of concealed fittings for a minimalist design and option of large sizes (up to 2.5 x 1.4m and 160kg).
- Concealed hardware reduces risk of damage and injury - a safer choice for schools and health and custodial premises.
- Concealed drainage for invisible water removal from opening as well as fixed frames.
- Flashings available in different shapes and styles.

MULTIPLE CONFIGURATIONS

- Fixed lights.
- 1 and 2 leaves.
- Composite and ribbon with transom or side lights.
- Projecting top-hung.
- Parallel opening.
- Horizontal and vertical pivot (visible or concealed pivot available).
- Tilt/slide.

LOCKING SYSTEMS AND SECURITY

- Various combinations are available up to 6-point, with or without key, locking systems.
- Handles centred on the central mullions of
- 2-leaf windows with minimum sight lines of 66 mm (minimal opening frame) and 137 mm (visible opening frame) are available as an option.
- The Technal-exclusive handles are available for all configurations ensuring style consistency and can be adapted for use on doors and sliding systems.
- Windows subjected to burglar resistance tests achieving a classification of RC2 in accordance with the EN-1627-30 and PAS24 standards.

INNOVATION

- 4 patents for innovative window vision.
- 2 patents pending for aesthetic ideals.

SOLEAL FY65

/ MADE-TO-MEASURE DESIGN

PURITY, FINESSE AND SUBTLETY

Minimal version

Clip-On Trim
Minimal Version

Visible version

Concealed drainage

Subtle edges

Concealed fittings

A WIDE RANGE OF LOCKING SYSTEMS

Stainless steel handle

Exclusive Technal-designed handle

Exclusive Technal-designed handle with lock

Classic handle

Bi-parting espagnolette locking

Architect: FORMA 6 - Photography: Patrick Miara

SOLEAL FY65
/ THRESHOLD

THE THRESHOLDS USED ON BALCONY DOORS EASE ACCESS WHILST ENSURING OPTIMUM WEATHER TIGHTNESS.

SECURITY

- Windows can be fitted with 2- to 6-point locking depending on the desired level of security.
- Windows have been subjected to burglar resistance tests achieving classification RC2 in accordance with EN1627-30 standard and PAS24

Top point

Mid-point between the handle and mechanism

Bottom of opening frame

Bottom of outer frame

SOLEAL FY65 WINDOW
/ ADVANCED PERFORMANCE

THERMAL AND WEATHER PERFORMANCES

- Optimised thermal loss values up to 0.9 W/ m².°K, Sw =0.41 and LTw = 0.54 with triple glazing (Ug = 0.5 + warm edge).
- Very low air permeability meeting 2012 thermal regulations Q4 up to 0.02 m3/(h.m²).

ACOUSTIC PERFORMANCE SUITED TO URBAN ENVIRONMENTS

- Very good sound-proofing: up to 43 dB (RA, Tr) of acoustic attenuation.
- Test on window with 88.1/-20/-66.2 sound-proof glazing.

TWO VERSIONS OF OPENING FRAMES

- To meet all market needs, many of the configurations of the SOLEAL 65 range are available in open-in and open-out versions.
- Minimal open-in frame glazing infill up to 42 mm.
- Visible opening frame (open-in and open-out) glazing infill up to 52 mm.
- The fixed light sections common to both Minimal and Visible can accommodate glazing up to 52 mm.

CONCEALED FITTINGS

- Available with 110° opening and maximum weight = 160 kg.
- Offers variety of frames: 1 leaf, 2 leaves, french and tilt and turn opening.

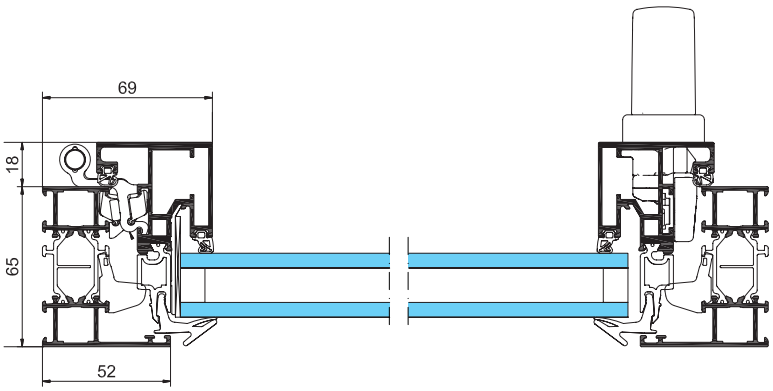
MULTIPLE CONFIGURATIONS

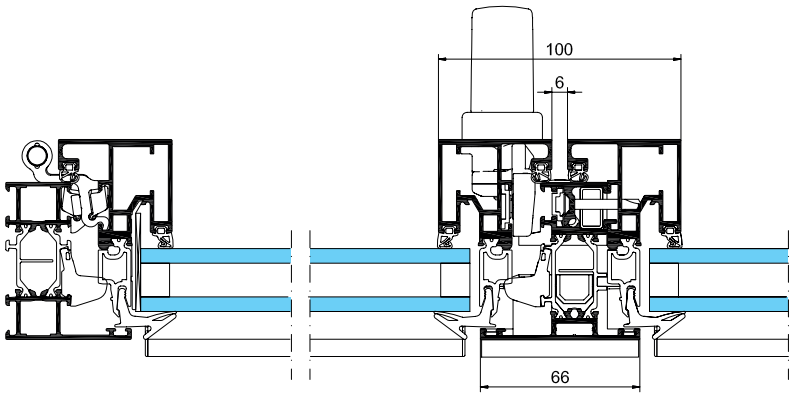
- Fixed casement.
- 1 and 2 leaf.
- Composite assemblies with transom or side lights.
- Top hung butt hinges.
- Projecting top hung.
- Parallel opening.
- Horizontal and vertical pivot (visible or concealed pivot available).
- Tilt/slide.

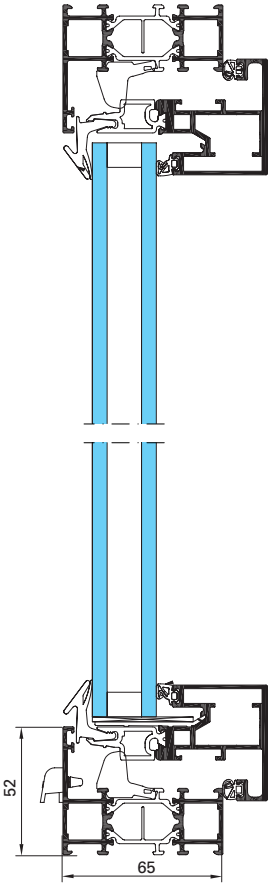
SOLEAL FY65 MINIMAL

/ OPEN-IN

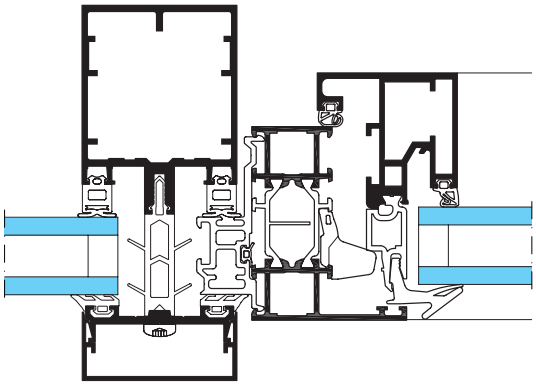
1 AND 2 LEAF WINDOW AND BALCONY DOOR







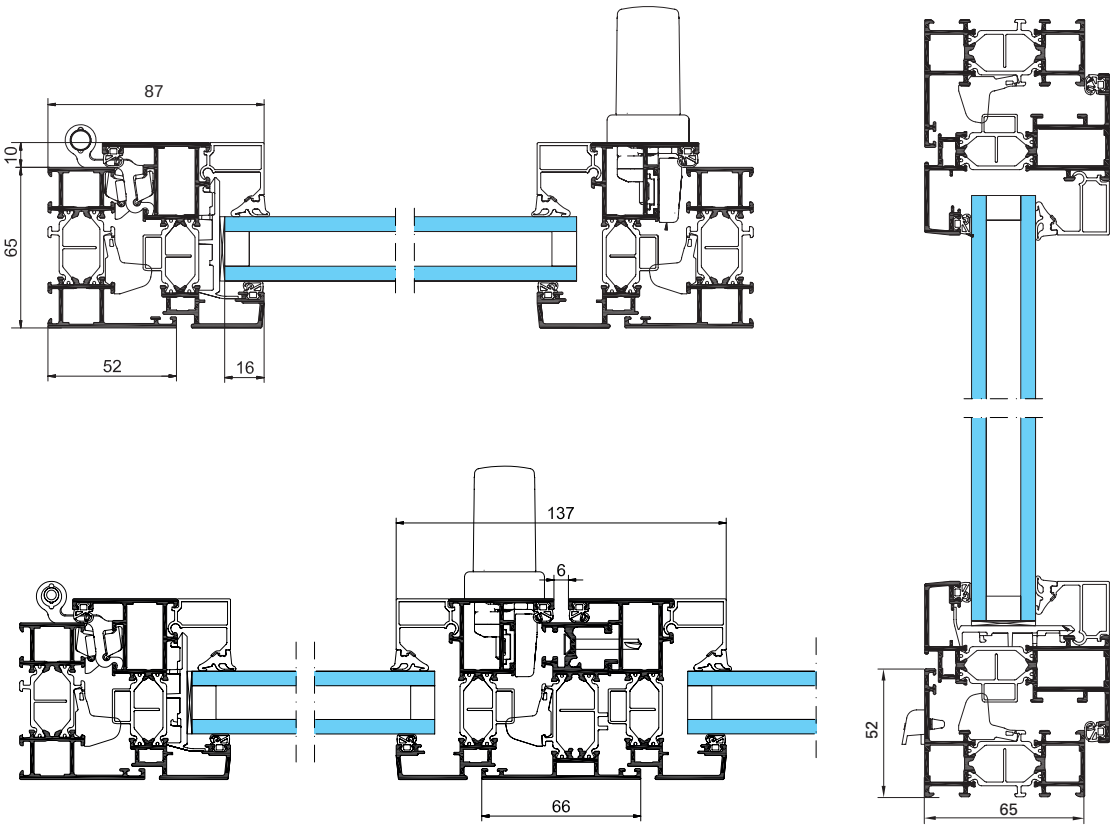
INTEGRATION INTO MX CURTAIN WALLING OPEN-IN AND OPEN-OUT



SOLEAL FY65 VISIBLE

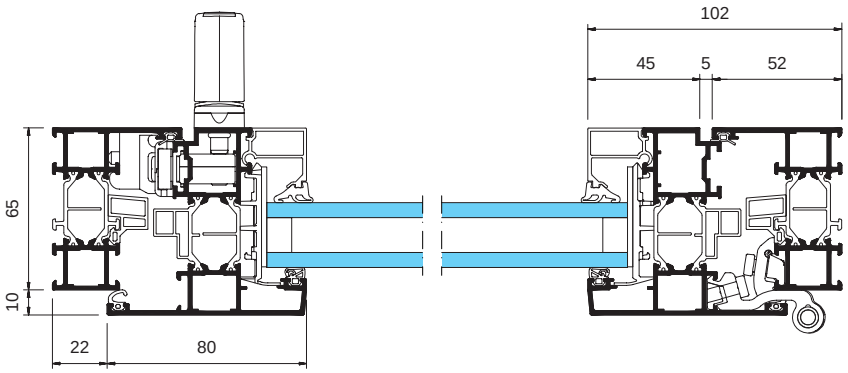
/ OPEN-IN

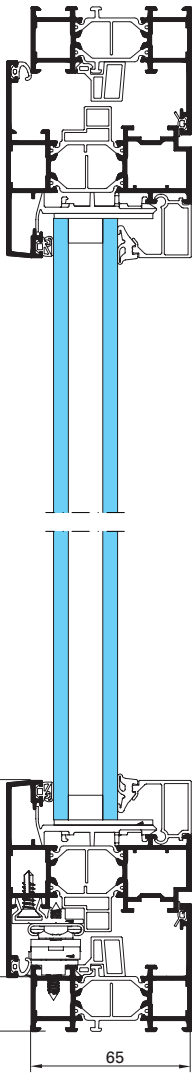
1 AND 2 LEAF WINDOW AND BALCONY DOOR

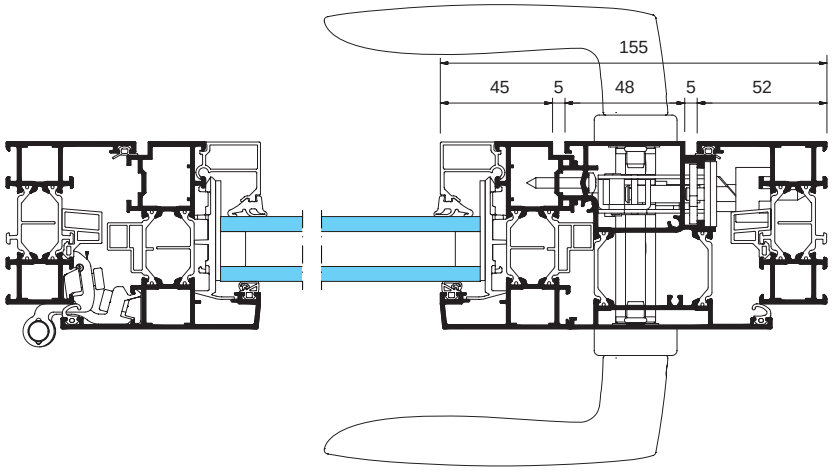


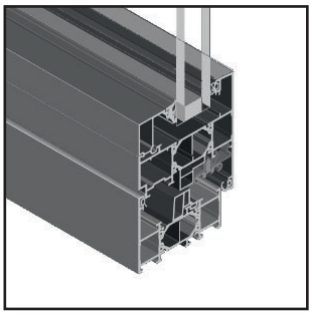
SOLEAL FY65 VISIBLE

1 AND 2 LEAF WINDOW AND BALCONY DOOR OPEN OUT



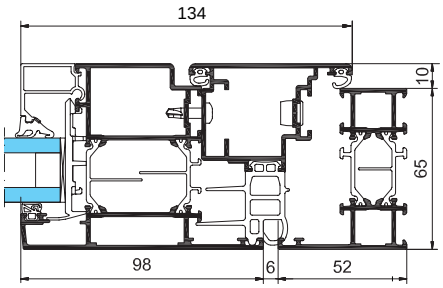




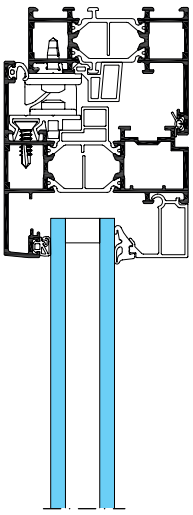


SOLEAL FY65 VISIBLE

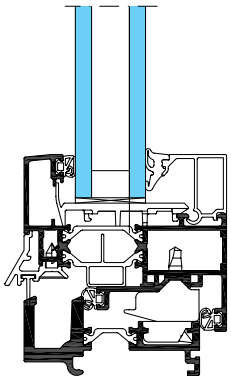
PIVOT WINDOW

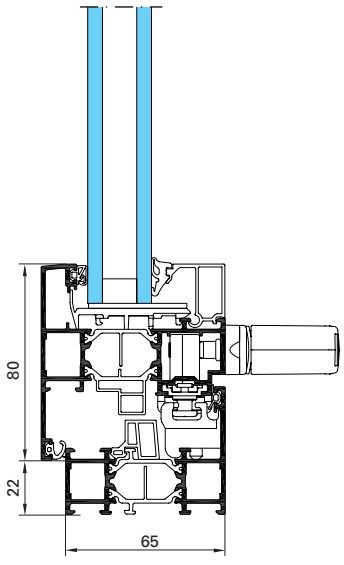


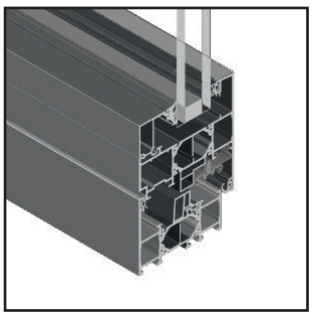
TOP-HUNG OPEN-OUT



2-LEAF BALCONY DOOR WITH THRESHOLD
OPEN-IN



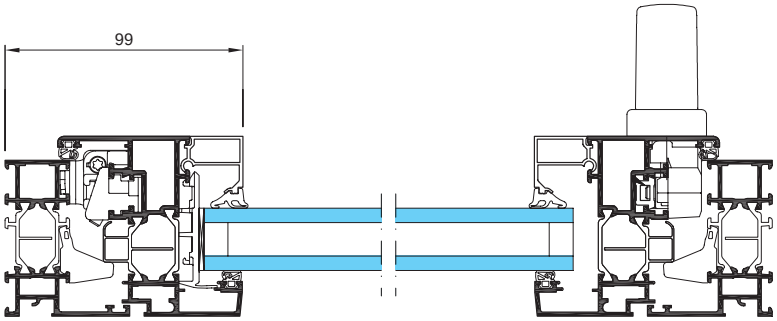


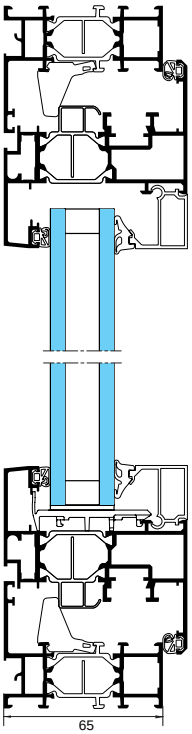


SOLEAL FY65 VISIBLE

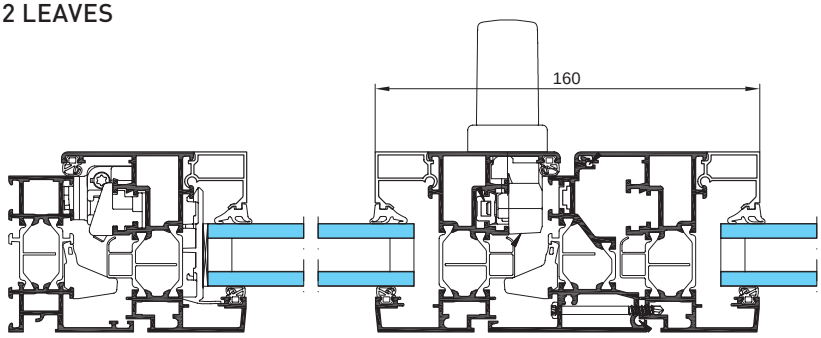
/ CONCEALED FITTINGS

1 LEAF





2 LEAVES

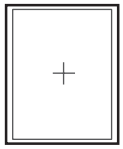


CONFIGURATIONS

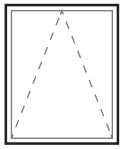
EXTERNAL VIEW DIAGRAMS

All configurations feature concealed drainage.

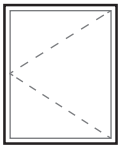
OPEN-IN



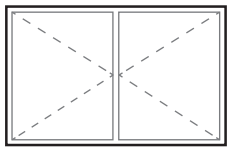
fixed



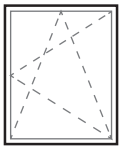
bottom-hung



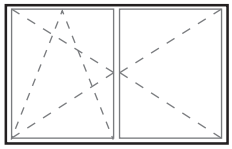
1 leaf



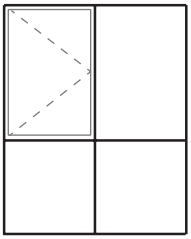
2 leaves



Turn/tilt or tilt/turn 1 leaf

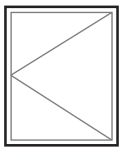


Turn/tilt or tilt/turn 2 leaves

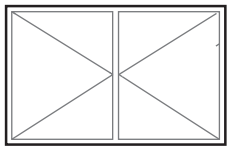


Fixed composite open-in window

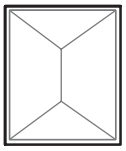
OPEN-OUT



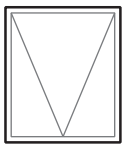
Side hung 1 leaf



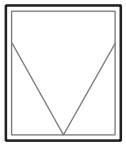
Side hung 2 leaves



Parallel opening

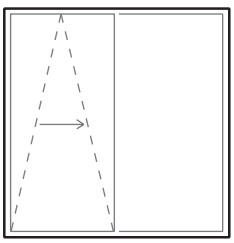


Top hung butt hinges

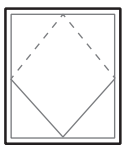


Projecting top hung

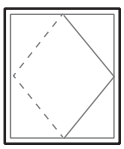
SPECIAL OPENINGS



Tilt/slide



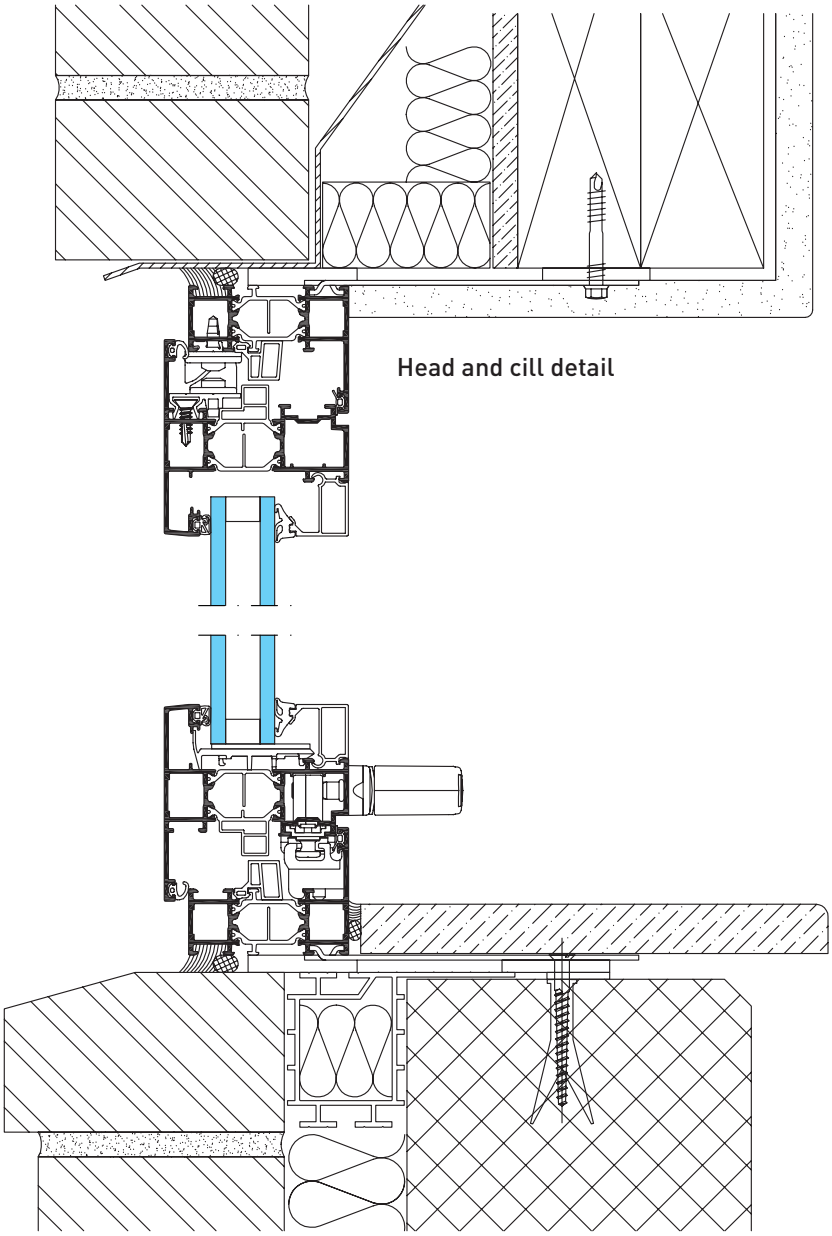
Horizontal pivot



Vertical pivot

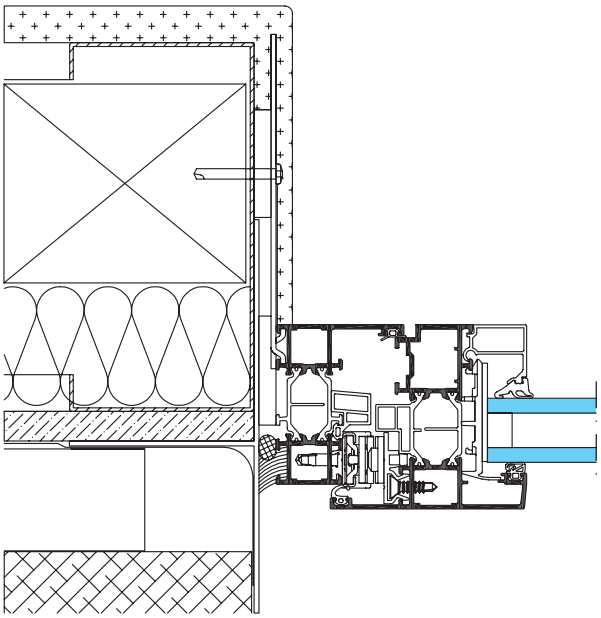
SOLEAL FY65 WINDOW
/ SITE INSTALLATION - TYPICAL PERIMETER DETAILS

SOLEAL FY65 VISIBLE OPEN-OUT

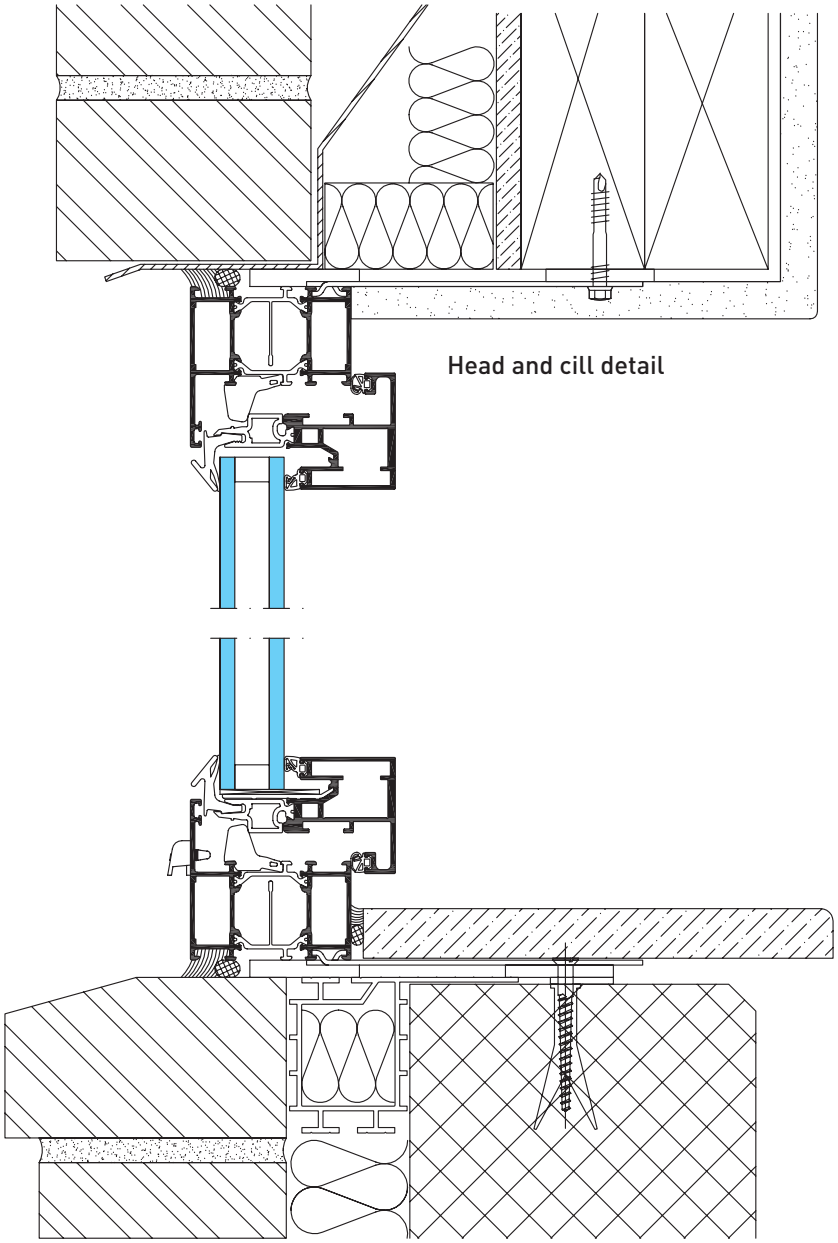


Head and cill detail

Jamb detail

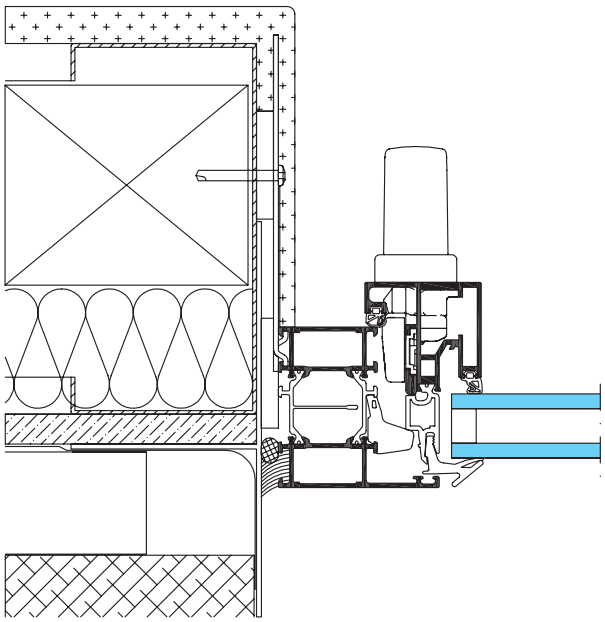


SOLEAL FY65 MINIMAL OPEN-IN



Head and cill detail

Jamb detail



SOLEAL FY65 WINDOW
/ PERFORMANCE

WEATHER PERFORMANCE A.E.V. (AIR, WATER, WIND)					
Frame under ITT (Initial Type Test)					
Configurations	Size H x W in m		Report n°	Q4	Q100
Special Openings	H x W	Classification			
Horizontal pivot (visible pivot)	1.7 x 2	A_3 E_{8A} V_{C4}	404/12/276-4 FCBA	0.41	3.54
Vertical pivot (concealed pivot)	2.2 x 1.8	A_4 E_{6A} V_{C4}	404/12/413-5 FCBA	0.08	0.72
Visible Open-in					
1 leaf Tilt/Turn window	1.6 x 1.2	A_4 E_{1050} V_{C4}	404/12/111-1 FCBA	0.06	0.52
1 leaf Tilt/Turn window	1.6 x 1.2	A_4 E_{1050} V_{C5}	404/11/231-2 FCBA	0.06	0.53
2 leaves balcony doors	2.25 x 1.6	A_4 E_{9A} V_{C2}	404/11/231-1 FCBA	0.28	2.4
1 leaf balcony door with side light	2.25 x 2	A_4 E_{9A} V_{B3}	404/12/461-3 FCBA	0.08	0.65
Visible open in-Concealed fittings					
1 leaf Tilt/Turn window	1.8 x 1.3	A_4 E_{1200} V_{C4}	404/14/29-1 FCBA	0.063	0.54
1 leaf Tilt/turn balcony door	2.5 x 1.4	A_4 E_{1200} V_{C4}	404/14/29-3 FCBA	0.015	0.13
Minimal Open-in					
1 leaf Tilt/Turn Window	1.6 x 1.2	A_4 E_{750} V_{C4}	404/12/111-2 FCBA	0.03	0.28
1 leaf balcony door with side light	2.25 x 2	A_4 E_{9A} V_{B3}	404/12/461-1 FCBA	0.02	0.15
Visible Open-out	W x H	Classification			
Top-hung (butt hinge opening frame's dimensions)	1.5 x 1.4	A_4 E_{1050} V_{C4}	404/12/276-3 FCBA	0.02	0.19
Projecting top hung	1.8 x 1.6	A_3 E_{1050} V_{C4}	404/12/276-1 FCBA	0.07	0.58

Uw: Window thermal loss
Sw: Solar factor
LTw: Light transmission

ACCOUSTIC PERFORMANCE								
Frame size W x H (1480 x 1230)								
Configurations	Glazing	Seal AS0180	Glazing performance alone			Window performance		
			RW (C;Ctr)	RA	RA,tr	RW (C;Ctr)	RA	RA,tr
SOLEAL Visible								
1 leaf tilt/turn VOF	6-16-10		37	36	34	38 (-2;-3)	36	35
1 leaf tilt/turn VOF	44.1 sil-16-12	x	46	44	40	44 (-2;-5)	42	39
Tilt/turn VOF	88.1-20-66.2	x	54	53	49	46 (-1;-3)	45	43
SOLEAL Minimal								
1 leaf tilt/turn MOF	6-16-10		37	36	34	37 (-1;-3)	36	34

MOF = Minimal Opening Frame
VOF = Visible Opening Frame

THERMAL PERFORMANCE*

SOLEAL FY65 Visible

	Size W x H in m		With Ug = 1,1 + Warm edge	With Ug = 1,0 + Warm edge	With Ug = 0,8 + Warm edge	With Ug = 0,6 + Warm edge	With Ug = 0,5 + Warm edge
			Glazing 24 mm	Glazing 24 mm	Glazing 32 mm	Glazing 42 mm	Glazing 48 mm
			SW-V	SW-V	SW-V	SW-V	SW-V
Window							
1 leaf	1.25 x 1.48	Uw (W/m².K)	1.4	1.3	1.1	1.0	0.9
		Sw	0.48	0.39	0.41	0.41	0.41
		TLw	0.61	0.54	0.54	0.54	0.54
2 leaves	1.53 x 1.48	Uw (W/m².K)	1.5	1.4	1.2	1.1	1.0
		Sw	0.45	0.36	0.38	0.38	0.38
		TLw	0.56	0.50	0.50	0.50	0.50
Balcony door							
1 leaf	1.25 x 2.18	Uw (W/m².K)	1.4	1.3	1.1	0.9	0.9
		Sw	0.50	0.40	0.42	0.42	0.42
		TLw	0.63	0.56	0.56	0.56	0.56
2 leaves	1.53 x 2.18	Uw (W/m².K)	1.4	1.4	1.2	1.0	1.0
		Sw	0.47	0.37	0.39	0.39	0.39
		TLw	0.59	0.52	0.52	0.52	0.52
Special Opening Configurations							
Tilt/turn horizontal and vertical pivot	1.53 x 1.48	Uw (W/m².K)	1.7	1.6	1.4	1.3	1.2
		Sw	0.42	0.34	0.35	0.35	0.35
		TLw	0.5	0.45	0.45	0.45	0.45

SOLEAL FY65 Visible - Concealed fittings

	Size W x H in m		With Ug = 1,1 + Warm edge	With Ug = 1,0 + Warm edge	With Ug = 0,8 + Warm edge	With Ug = 0,6 + Warm edge	With Ug = 0,5 + Warm edge
			Glazing 24 mm	Glazing 24 mm	Glazing 32 mm	Glazing 42 mm	Glazing 48 mm
			SW-V	SW-V	SW-V	SW-V	SW-V
Window							
1 leaf	1.25 x 1.48	Uw (W/m².K)	1,5	1,4	1,4	1,1	1,1
		Sw	0,47	0,37	0,39	0,39	0,39
		TLw	0,58	0,52	0,52	0,52	0,52
2 leaves	1.53 x 1.48	Uw (W/m².K)	1,6	1,5	1,5	1,3	1,2
		Sw	0,43	0,34	0,36	0,36	0,36
		TLw	0,53	0,47	0,47	0,47	0,47
Balcony door							
1 leaf	1.25 x 2.18	Uw (W/m².K)	1.5	1.3	1.2	1.0	1.0
		Sw	0.49	0.39	0.41	0.41	0.41
		TLw	0.61	0.54	0.54	0.54	0.54
2 leaves	1.53 x 2.18	Uw (W/m².K)	1.4	1.4	1.3	1.2	1.1
		Sw	0.45	0.36	0.38	0.38	0.38
		TLw	0.56	0.49	0.49	0.49	0.49

THERMAL PERFORMANCE*						
SOLEAL FY65 Minimal						
Open-in Configurations	Size W x H in m		With Ug = 1,1 + Warm edge	With Ug = 1,0 + Warm edge	With Ug = 0,8 + Warm edge	With Ug = 0,6 + Warm edge
			Glazing 26 mm	Glazing 26 mm	Glazing 32 mm	Glazing 42 mm
			SW-V	SW-V	SW-V	SW-V
Window						
1 leaf	1.25 x 1.48	Uw (W/m².K)	1.4	1.4	1.2	1.0
		Sw	0.50	0.40	0.43	0.43
		TLw	0.64	0.56	0.57	0.57
2 leaves	1.53 x 1.48	Uw (W/m².K)	1.5	1.4	1.2	1.1
		Sw	0.47	0.38	0.41	0.41
		TLw	0.60	0.54	0.54	0.54
Balcony door						
1 leaf	1.25 x 2.18	Uw (W/m².K)	1.4	1.3	1.1	1.0
		Sw	0.51	0.41	0.45	0.45
		TLw	0.66	0.58	0.59	0.59
2 leaves	1.53 x 2.18	Uw (W/m².K)	1.5	1.4	1.2	1.0
		Sw	0.49	0.39	0.42	0.42
		TLw	0.62	0.55	0.56	0.56
Balcony door with threshold						
1 leaf	1.25 x 2.18	Uw (W/m².K)	1.4	1.4	1.2	1.0
		Sw	0.51	0.41	0.45	0.45
		TLw	0.66	0.58	0.59	0.59
2 leaves	1.53 x 2.18	Uw (W/m².K)	1.5	1.4	1.2	1.1
		Sw	0.49	0.40	0.43	0.43
		TLw	0.62	0.55	0.56	0.56

SOLEAL FY65 Minimal - Clip-on Trim						
Open-in Configurations	Size W x H in m		With Ug = 1,1 + Warm edge	With Ug = 1,0 + Warm edge	With Ug = 0,8 + Warm edge	With Ug = 0,6 Warm edge
			Glazing 26 mm	Glazing 26 mm	Glazing 32 mm	Glazing 42 mm
			SW-V	SW-V	SW-V	SW-V
Window						
1 leaf	1.25 x 1.48	Uw (W/m².K)	1.4	1.4	1.2	1.0
		Sw	0.50	0.40	0.43	0.43
		TLw	0.64	0.56	0.57	0.57
Balcony door						
1 leaf	1.25 x 2.18	Uw (W/m².K)	1.4	1.3	1.1	1.0
		Sw	0.51	0.41	0.45	0.45
		TLw	0.66	0.58	0.59	0.59
2 leaves	1.53 x 2.18	Uw (W/m².K)	1.5	1.4	1.2	1.0
		Sw	0.49	0.39	0.42	0.42
		TLw	0.62	0.55	0.56	0.56

* Performance data obtained with SW-V Spacer

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 6060 T5 EN 12020, EN 573-3, EN 515 and EN 775-1 to 9 alloys.
- 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 powder coating finishes in a wide range of colours in accordance with "QUALICOAT" instructions.
- The SOLEAL FY65 window is also available in coated finishes with exclusive Technal colours for a stylish and contemporary look.

IMAGINE WHAT'S NEXT

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By Hydro