

Exceptional aesthetic personalization



Garibaldi

*An elegant game of
magnificent materials*





Welcome to
PIRNAR's
digital world



523 A ALU

Colour FS 9016 / ESG glass NIGHT SKY GLOSS outside / Handle ANGULAR ALTUM NERO / Reliable locking system with SECURO finger scanner and ARMO COMFORT ELECTRO lock / Frontal ambient lighting LUX 6951



523 DUNE

Colour FS 7016 / 3D motif outside / ESG glass DARK GREY with black motif outside / Handle ANGULAR ALTUM / Scratch protection PRIVILEGELUX prepared for finger scanner / Reliable locking system with SECURO finger scanner and ARMO COMFORT ELECTRO lock / Frontal ambient lighting LUX 6951

*Individual upgrades that
emphasize character*



507 ALU

*Colour FS 7016 / Additional paint outside NATURAL OAK / Glass motif sandblasted /
Handle 9104 glossy / Scratch protection PRIVILEGELUX prepared for finger scanner /
Reliable locking system with SECURO finger scanner and ARMO COMFORT ELECTRO lock /
Protective trim 6935 glossy*



507 GLASS

*Colour 80077 / ESG glass NIGHT SKY GLOSS outside / Glass motif sandblasted / Handle
9104 glossy / Scratch protection PRIVILEGELUX prepared for finger scanner / Reliable lock-
ing system with SECURO finger scanner and ARMO COMFORT ELECTRO lock / Protective
trim 6935 glossy*

*Masterful 3D details
that captivate*



507 DUNE

Colour FS 7016 / 3D motif outside / Additional paint outside 90147 / Glass motif sandblasted / Handle 9104 glossy / Protective trim 6935 glossy



509 ALU

Colour 90147 / Additional paint outside FS 9016 / Glass motif sandblasted / Handle 9105 / Scratch protection PRIVILEGELUX prepared for finger scanner / Reliable locking system with SECURO finger scanner and ARMO COMFORT ELECTRO lock



510 ALU

Colour 70105 / Additional paint outside 70161 / Glass motif sandblasted / Handle 9501



510 DUNE

Colour 70105 / 3D motif outside / Additional paint outside 70161 / Glass motif sandblasted / Handle 9105







505 GLASS

Colour 80077 / ESG glass with black motif outside / Glass motif sandblasted / Handle 9502 / Reliable locking system with SECURO finger scanner and ARMO COMFORT ELECTRO lock



505 ALU

Colour FS 9016 / Additional paint outside 80077 / Glass motif sandblasted / Handle 9502



524 A ALU

*Colour FS 7016 / Additional paint outside wood decor
- VINTAGE OLD DARK WOOD / Handle ROUND ALTUM
/ Scratch protection PRIVILEGELUX prepared for finger
scanner / Reliable locking system with SECURO finger
scanner and ARMO COMFORT ELECTRO lock / Frontal
ambient lighting LUX 6951*



Welcome to
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*The perfect pleasure
of opening*

REMOTE
UNLOCKING
OPTION





527A DUNE

*Colour FS 7016 / 3D motif outside / Handle ROUND
ALTUM / Scratch protection PRIVILEGELUX prepared
for finger scanner / Reliable locking system with
SECURO finger scanner and ARMO COMFORT
ELECTRO lock / Frontal ambient lighting LUX 6951*



Welcome to
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With respect for your home



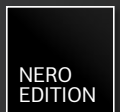
handbuilt by
PIRNAR

for the
Lewis
family

A unique game of light -
MAGMALUX collection



GERMAN
DESIGN
AWARD
SPECIAL
2019



506 GLASS

Colour FS 9005 / Additional paint outside 90147 / ESG glass with black motif outside Glass motif sandblasted / Elegant handle ROUND115 with illumination MAGMALUX / Reliable locking system with SECURO finger scanner in the handle and ARMO COMFORT ELECTRO lock / Protective trim 6434

*Attractive reflections –
CRYSTALUX collection*



517 ALU

*Colour FS 7016 / Additional paint outside - wood decor BLACK OAK / Glass motif sandblasted /
Elegant handle ANGULAR150 with illumination CRYSTALUX / Reliable locking system with
SECURO finger scanner in the handle and ARMO COMFORT ELECTRO lock / Protective trim 6434*





Easy and safe entry

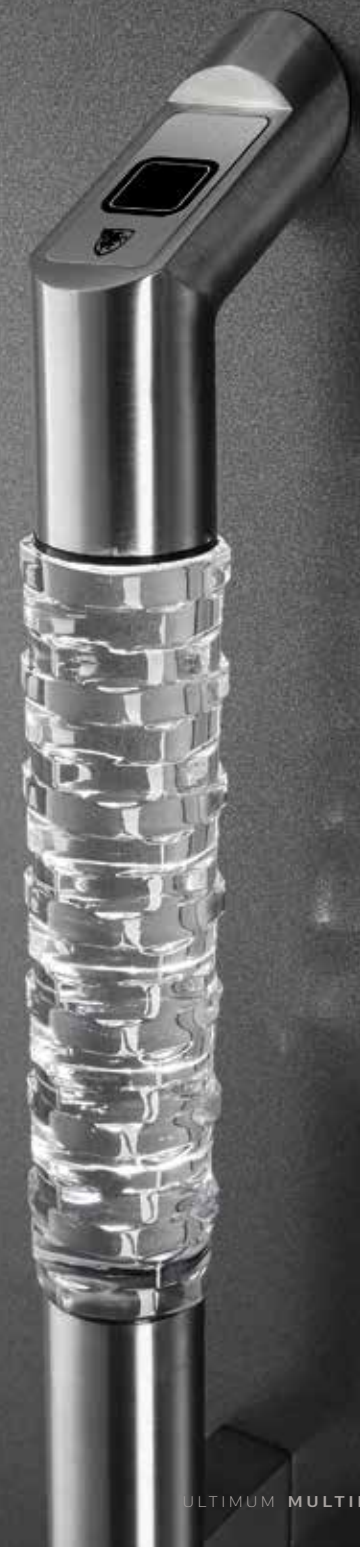


529 ALU

Colour 90147 / ESG glass DARK GREY with black motif outside / Satinato / Elegant handle 9626 with illumination CRYSTALUX / Reliable locking system with SECURO finger scanner in the handle and ARMO COMFORT ELECTRO lock / Frontal ambient lighting LUX 6951



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PIRNAR's
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530 GLASS

Double door / Colour FS 7016 / ESG glass with black motif outside / Glass completely sandblasted / Handle NAUTILUS 9628 / Reliable locking system with SECURO finger scanner and ARMO COMFORT ELECTRO lock



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*The beautiful patented leaf-shaped
handle expresses your inimitable
individuality*





PURE



607 A ALU → 34 608 A GLASS → 33 611 A GLASS → 30 612 A GLASS → 28 613 A GLASS → 31 613 A ALU → 31



624 A ALU → 24 624 ALU → 24 624 GLASS → 25 626 A ALU → 23 626 ALU → 22



628 A ALU → 36 628 ALU → 36 634 GLASS → 18 635 ALU → 19 635 GLASS → 17

MULTILEVEL



505 ALU → 51 505 GLASS → 51 506 GLASS → 56 507 ALU → 46 507 DUNE → 47 507 GLASS → 46 509 ALU → 48



510 ALU → 48 510 DUNE → 49 515 A ALU → 40 515 A DUNE → 41 515 A GLASS → 41 515 DUNE → 42 515 GLASS → 42



517 ALU → 57 523 A ALU → 45 523 DUNE → 45 524 A ALU → 52 527A DUNE → 54 529 ALU → 59 530 GLASS → 60

Let our award-winning masterpieces impress you in person! Get a real feel for them in our showroom.



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Alumil
Building excellence every day

Alumil  **SMARTIA**
M450



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SMARTIA M450

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SMARTIA M450

represents the next generation of advanced systems for minimal lift & slide and regular sliding doors.

Maximum view,
limitless solutions.

SMARTIA M450
meets the demanding
requirements of...

contemporary residences for
high thermal insulation and
modern aesthetics.



- Basic system's depth 45 mm.
- Minimal and innovative design with 25 mm of visible aluminium face width at the interlocking profile, both for lift & slide and sliding typologies.
- High thermal insulation with patented thermally efficient typologies.
- Easy to clean frame, with invisible water evacuation and less visible depth.
- It is ideal for new buildings and renovations, as it provides flexibility of construction and a wide variety of typologies.



Alumil SMARTIA
M450

TECHNICAL

CHARACTERISTICS



VISIBLE ALUMINIUM FACE WIDTH	124,5 mm LIFT & SLIDE 114 mm SLIDING
FRAME HEIGHT	45 mm
FRAME WIDTH	113 mm
SASH HEIGHT	88 mm LIFT & SLIDE 77,5 mm SLIDING
SASH WIDTH	45 mm
INTERLOCKING PROFILE WIDTH	25 / 91,5 mm LIFT & SLIDE 25 / 81 mm SLIDING
GLAZING	27 UP TO 36 mm
INSULATION	POLYAMIDES 40 & 24 mm

Alumil SMARTIA
M450

SENSE

OF FREEDOM

Minimal design that
enhances **natural light**,

thanks to the narrow interlocking profile of
only 25 mm visible aluminium face width.



A unique and innovative solution for lift & slide typologies with the narrowest interlocking profile.



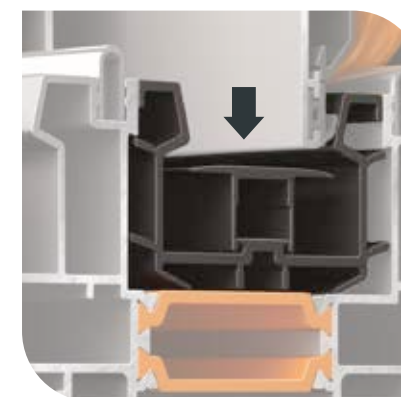
The narrow interlocking profile is available for both lift & slide and regular sliding typologies.

Alumil SMARTIA M450

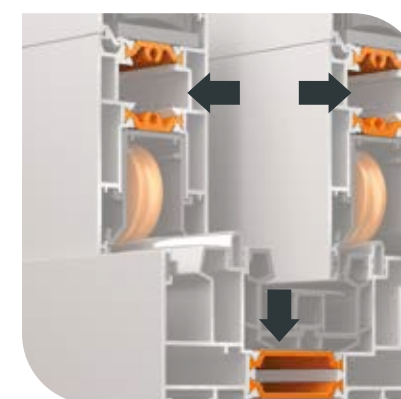
ATTENTION

TO DETAIL

Narrow depth into the frames due to **the specially designed PVC profiles**. They are installed either in the bottom frame or perimetrically to cover water evacuation and make the cleaning process easier.



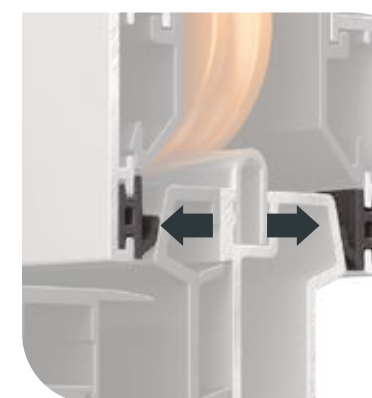
High thermal insulation performance, achieved with fiberglass reinforced polyamides of **40mm & 24mm width**. Along with the PVC profiles, they contribute to green buildings design, emphasizing on energy & money saving.



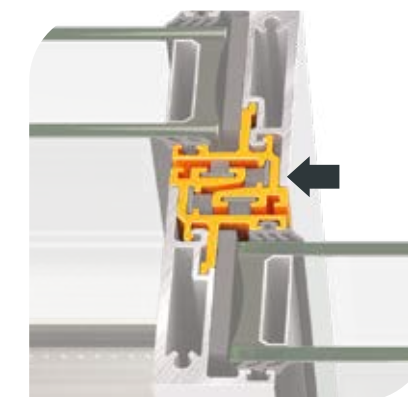
The system's sliding mechanism provides up to 4 locking points and optional cylinder use, **offering high safety & top functionality**.



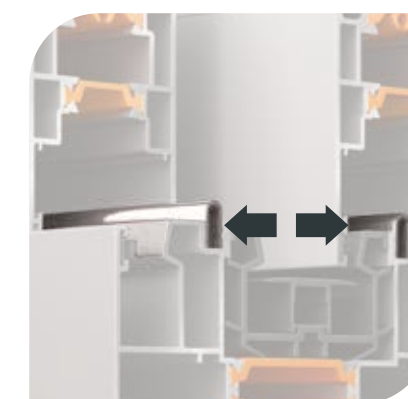
High quality gaskets **with soft touch** for lift & slide typologies, contribute significantly to the system's overall performance.



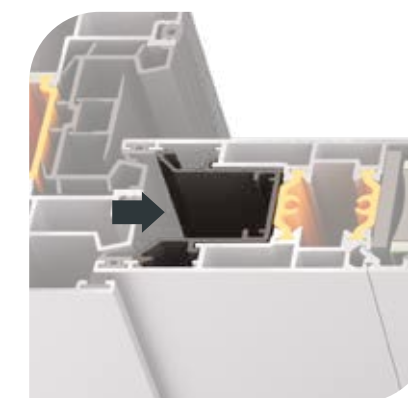
High quality PVC profiles with **UV-protection** that preserve their durability and texture under intense exposure to solar radiation.



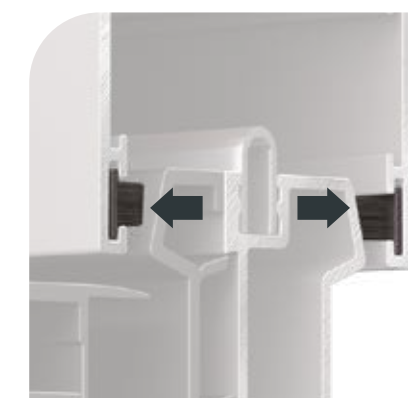
The door sash glides **easily and quietly** on the rails made of stainless steel AISI 316L.



The system's lift & slide mechanism allows the sash to open and close easily - even wider and heavier sashes, **offering high functionality & smooth gliding**.



High quality brushes **with triple membrane** for regular sliding typologies, contribute significantly to the system's overall performance.



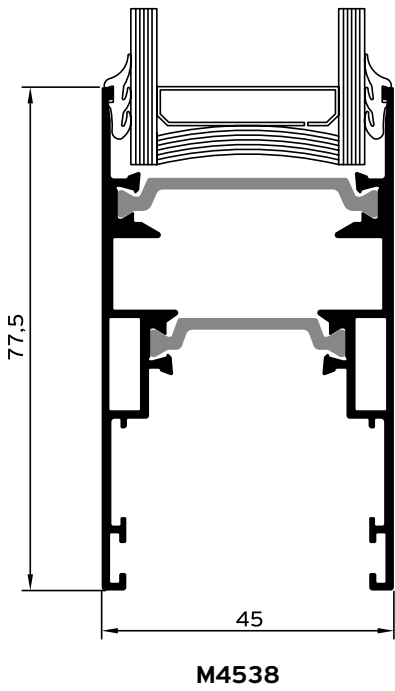
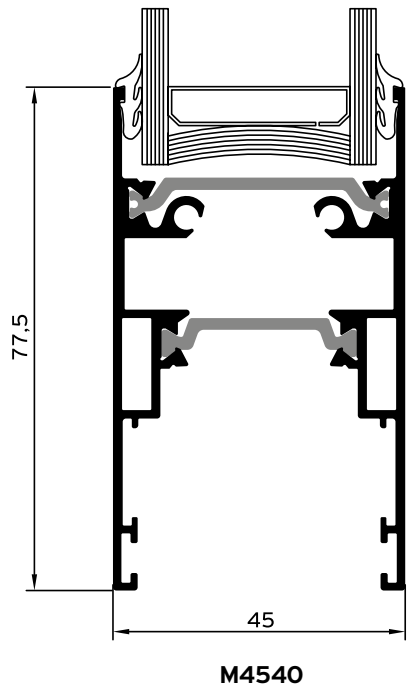
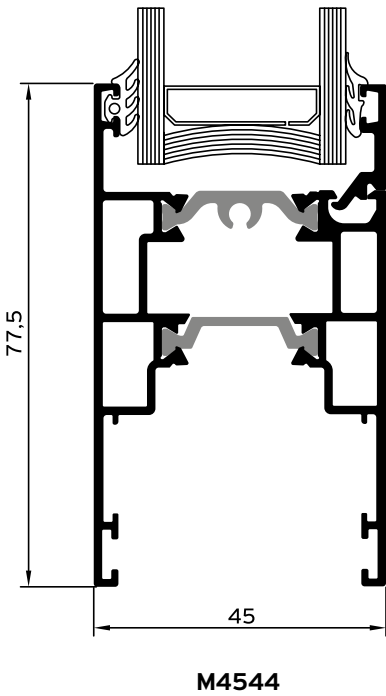
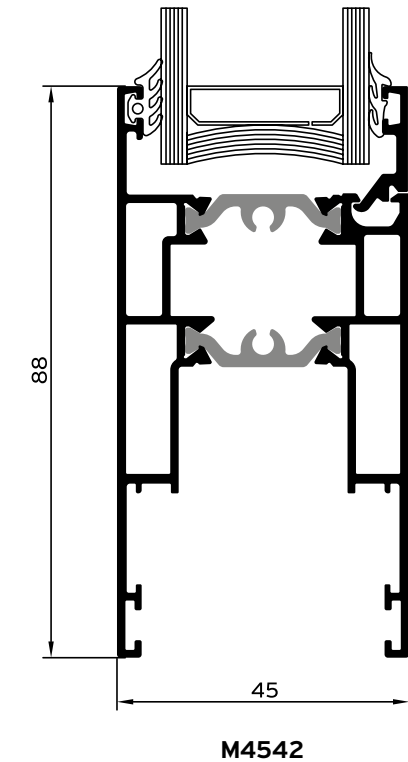
The system SMARTIA M450 is characterized by its flexibility as it offers 4 different sashes that cover every construction need. Less aluminium frame, robust profiles, ease of

fabrication, regardless of what the requirement is, there is an ideal solution to fulfill it.

PROFILES				
	M4542	M4544	M4540	M4538
MECHANISM				
LIFT & SLIDE	●			
SLIDING	●	●	●	●
LOCKING POINTS				
MULTIPLE	●	●	●	●
SINGLE				
INTERLOCKING PROFILE				
STANDARD	●	●	●	●
NARROW 25 mm	●	●	●	
GLAZING				
GLAZING BEAD	●	●		
GLAZING WIDTH	27-32	27-32	27-36	36
PERFORMANCE				
U _f	2,7	2,7	2,6	2,6

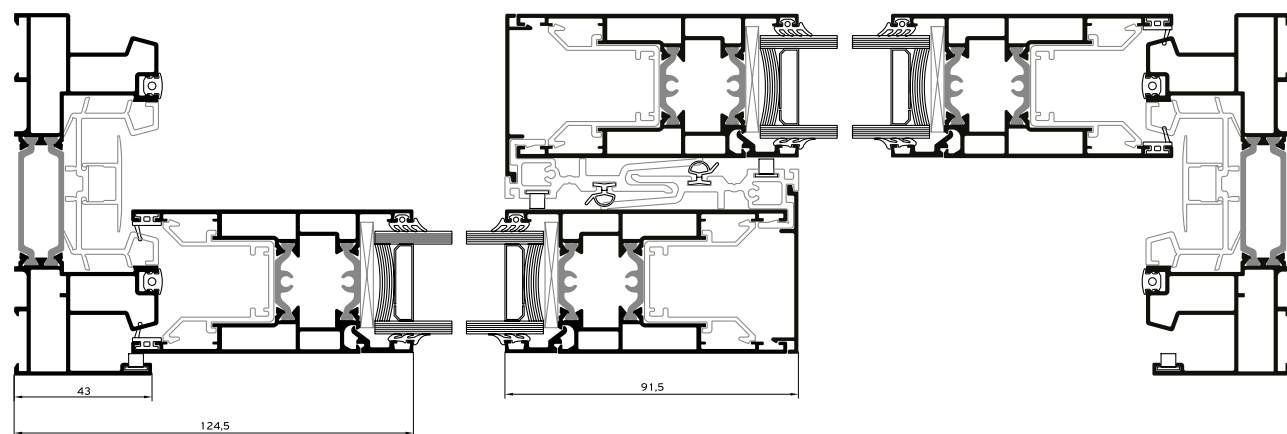
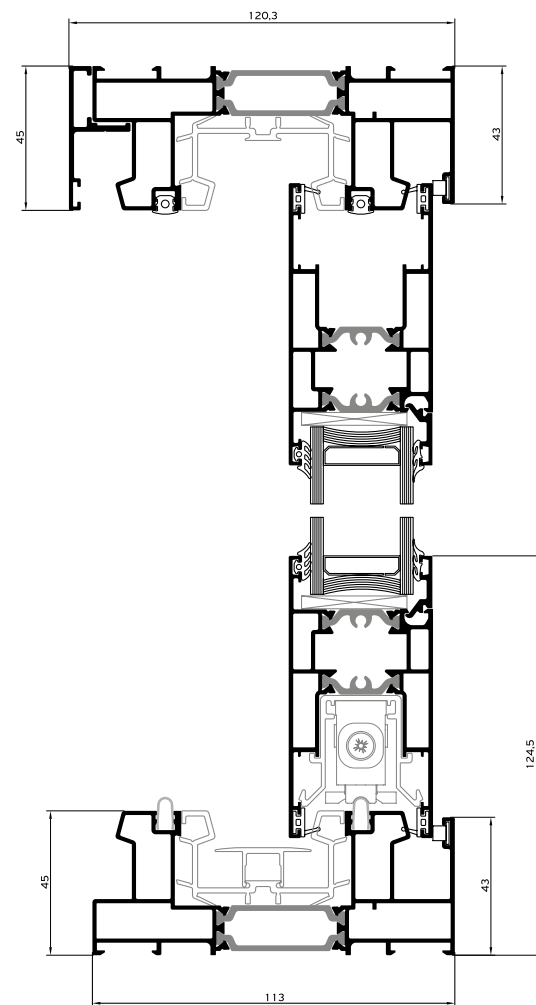
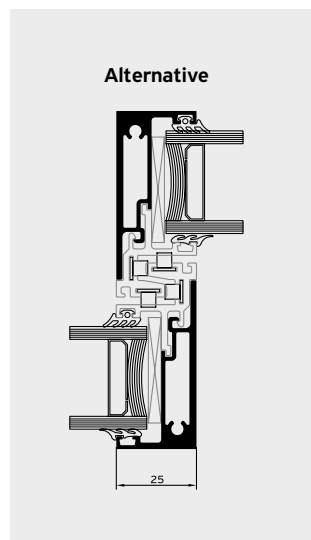
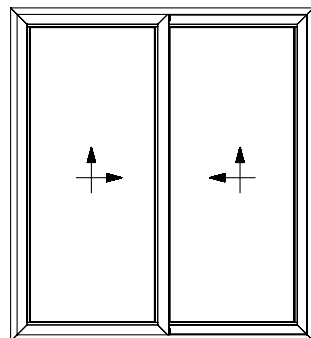
EXPLOITING

EVERY CONTEMPORARY NEED

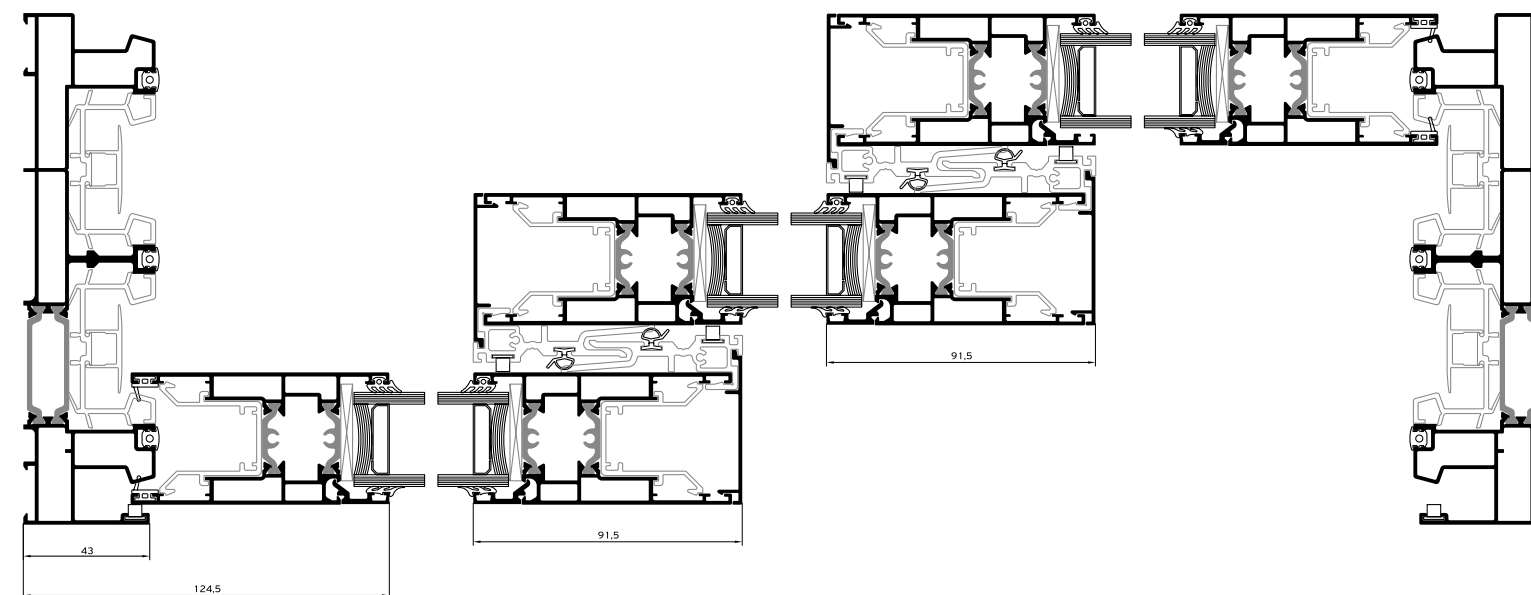
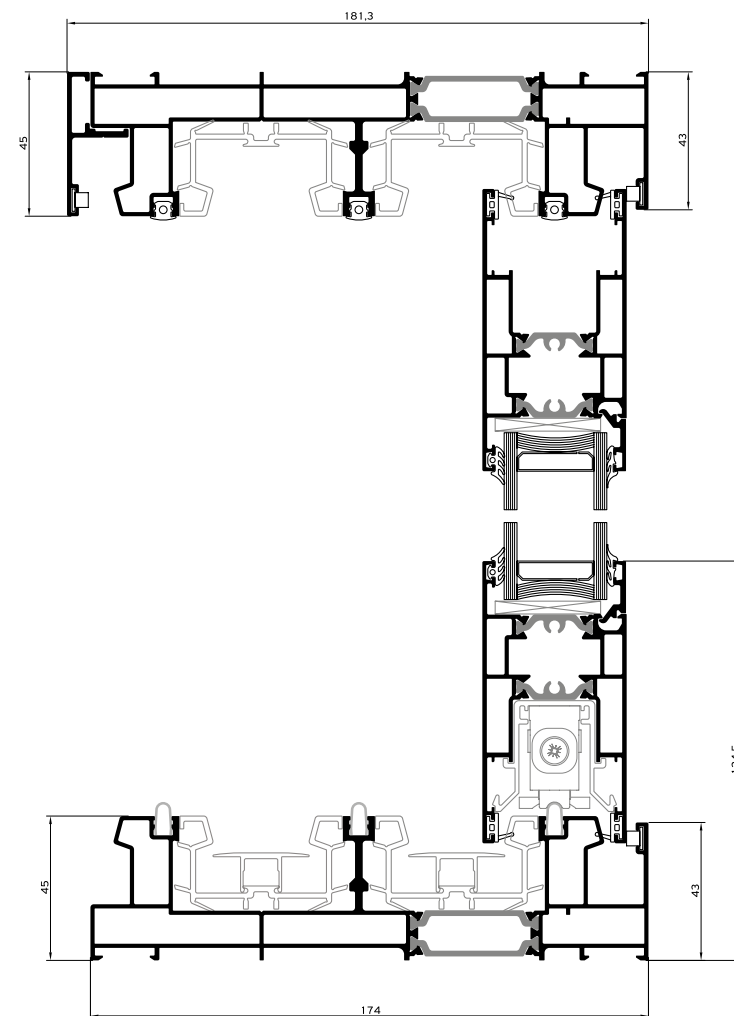
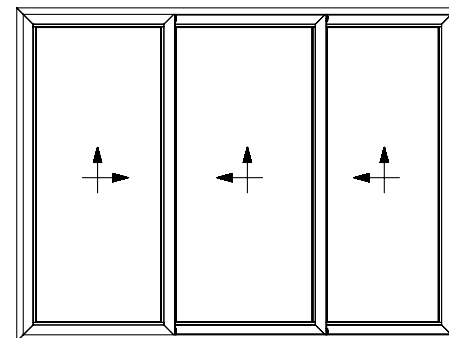


Alumil SMARTIA
M450

LIFT & SLIDE 2 Sashes / 2 Track



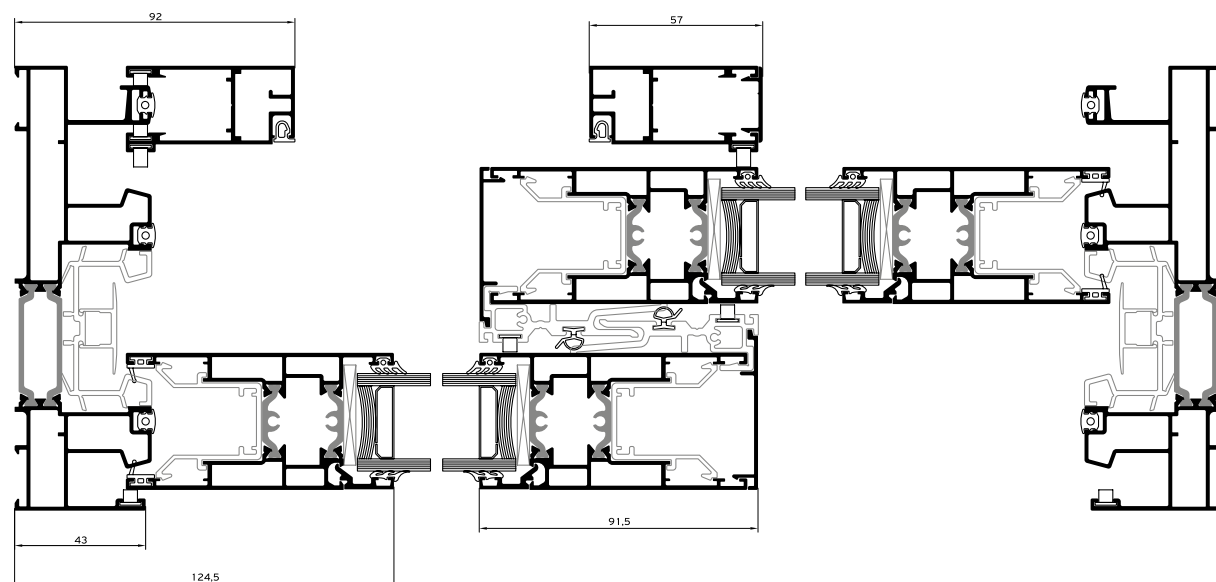
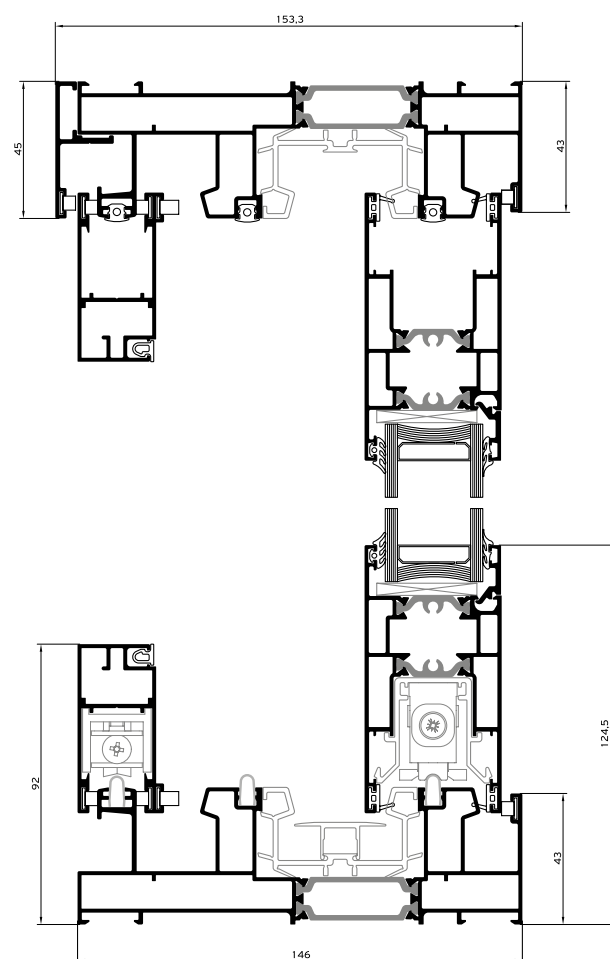
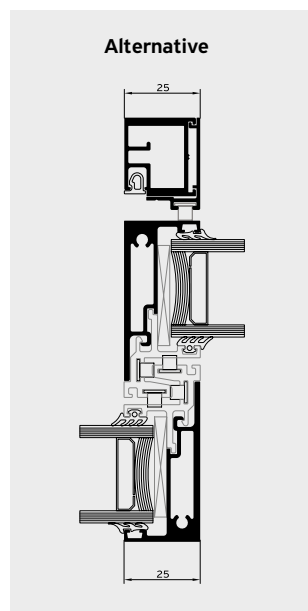
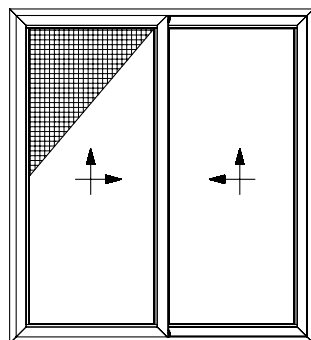
LIFT & SLIDE 3 Sashes / 3 Track



Alumil SMARTIA
M450

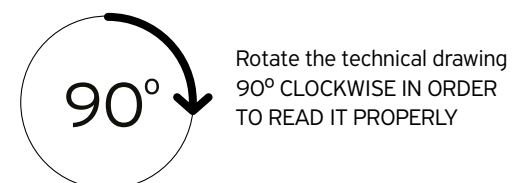
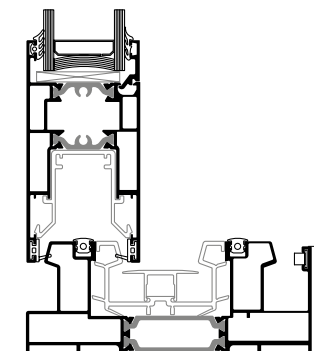
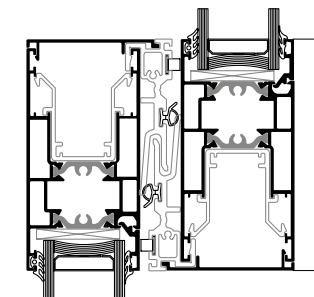
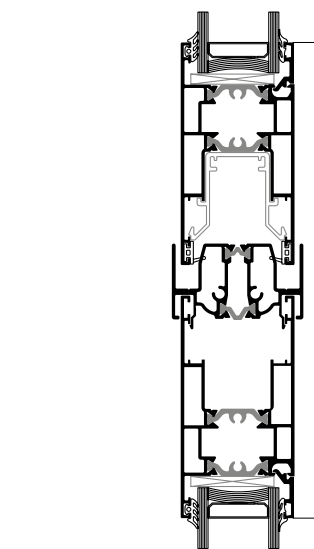
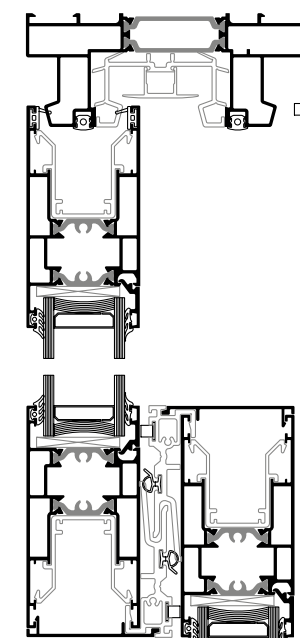
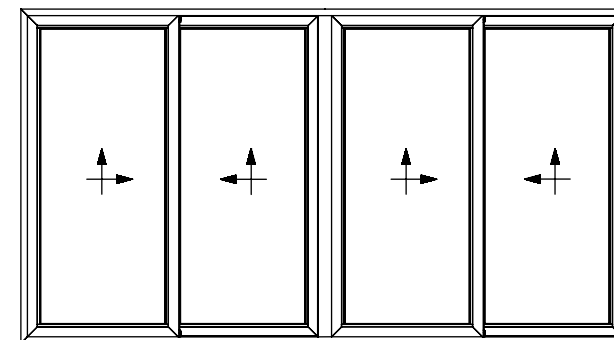
LIFT & SLIDE

2 Sashes / 2 Track /
Flyscreen



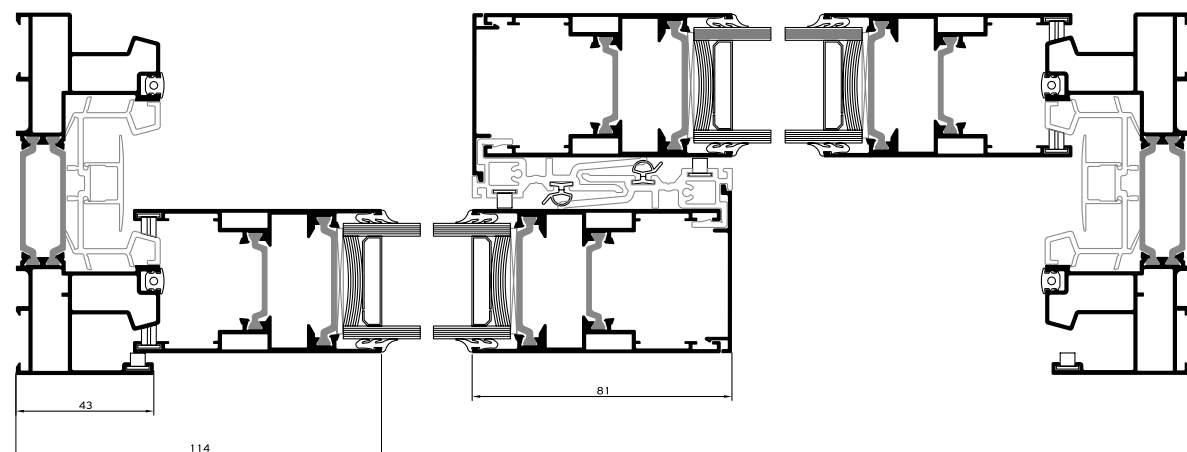
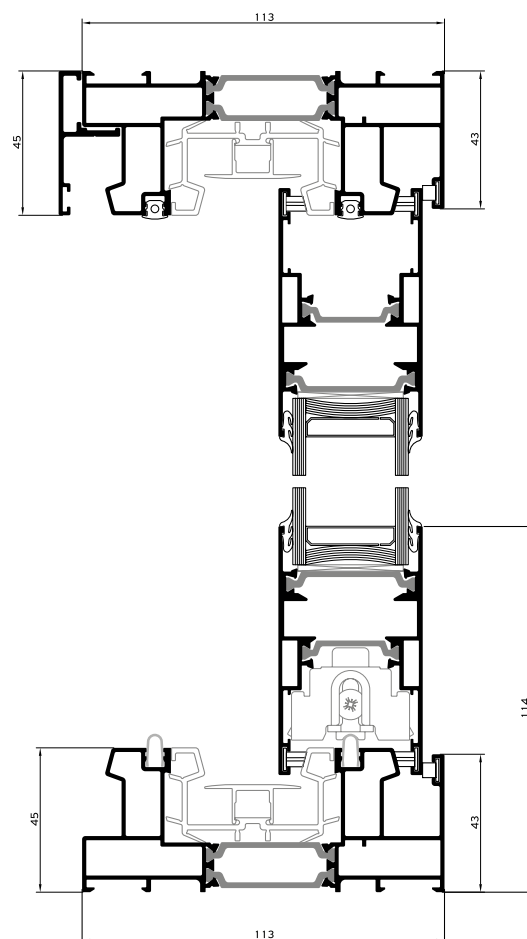
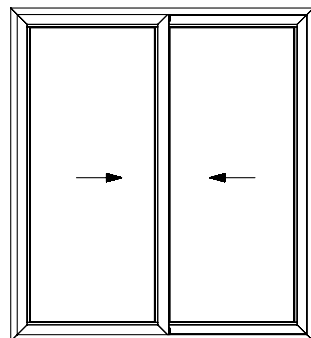
LIFT & SLIDE

4 Sashes / 3 Track

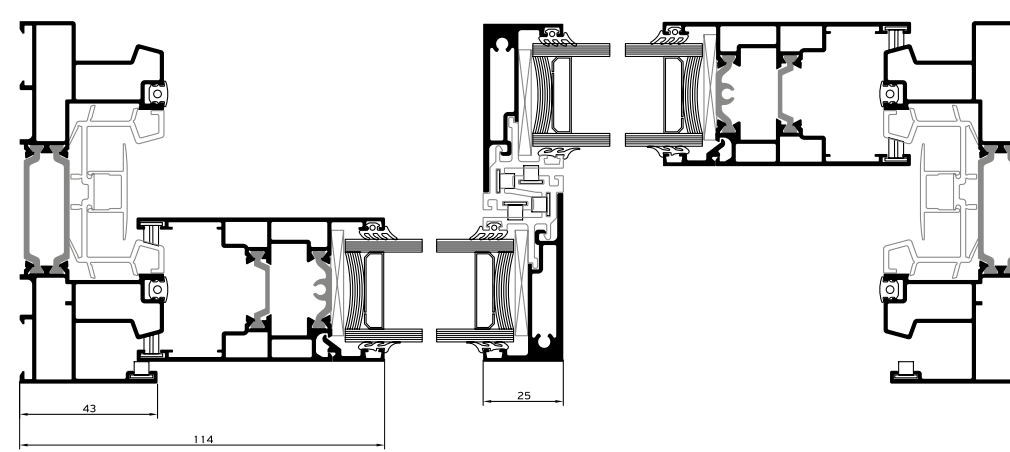
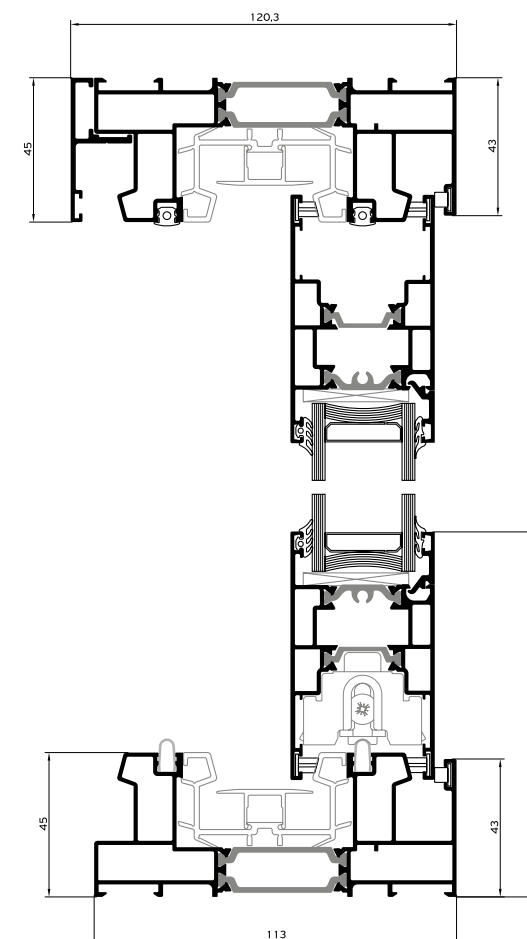
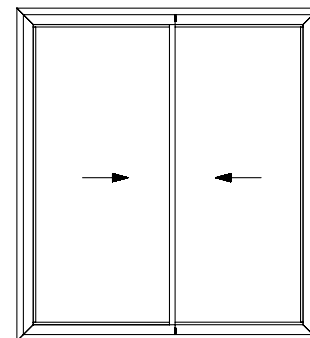


Alumil SMARTIA
M450

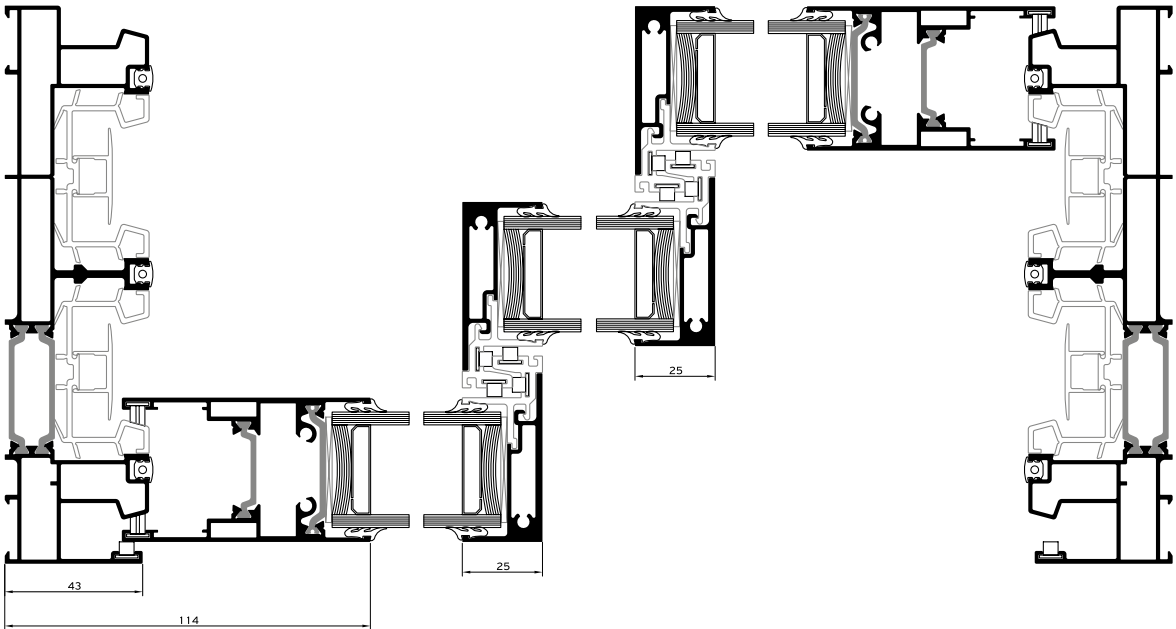
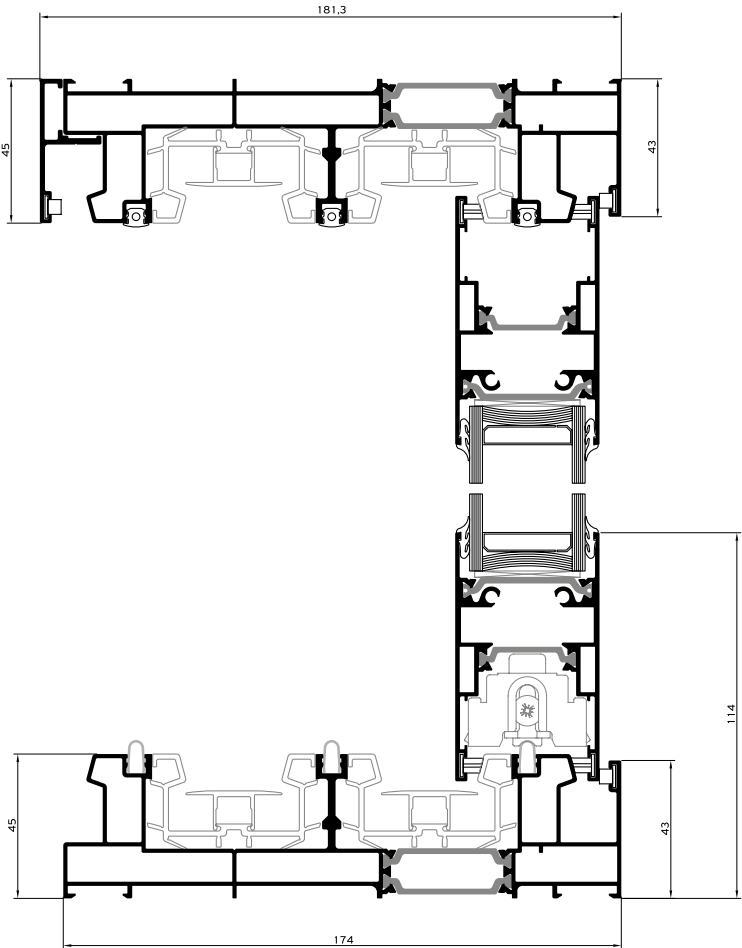
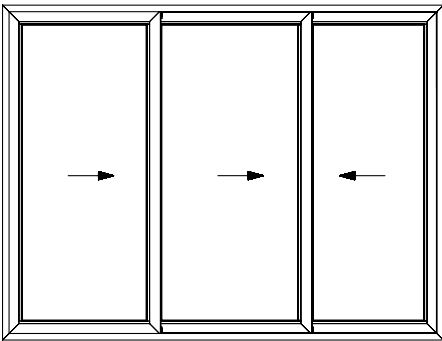
SLIDING 2 Sashes / 2 Track



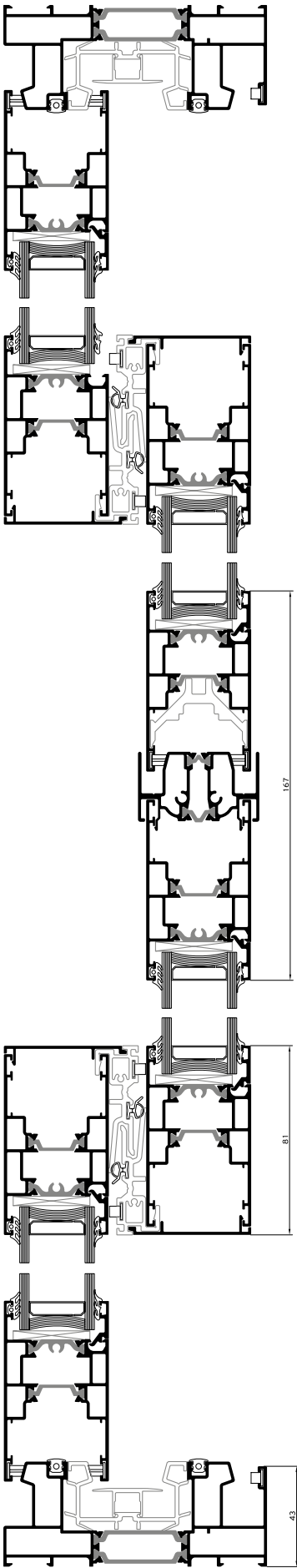
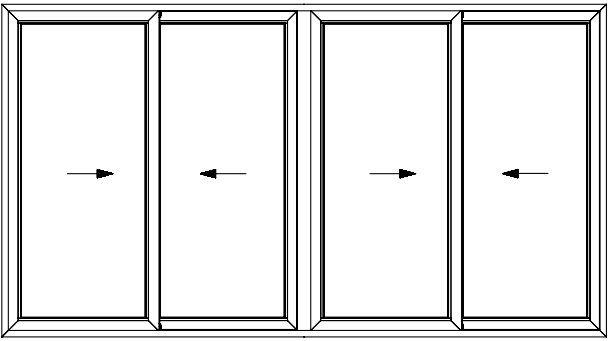
SLIDING 2 Sashes / 2 Track



SLIDING
3 Sashes / 3 Track

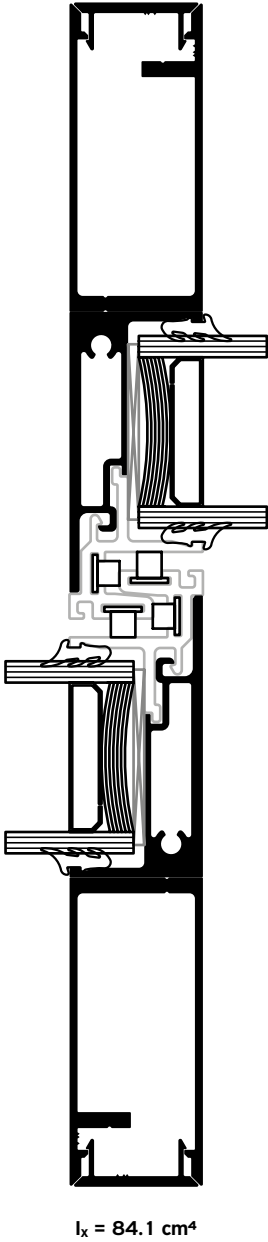
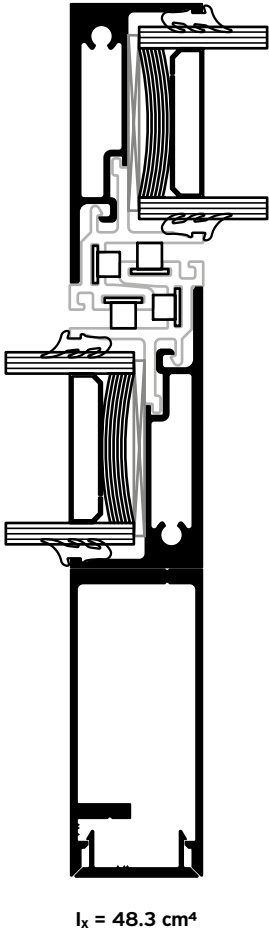
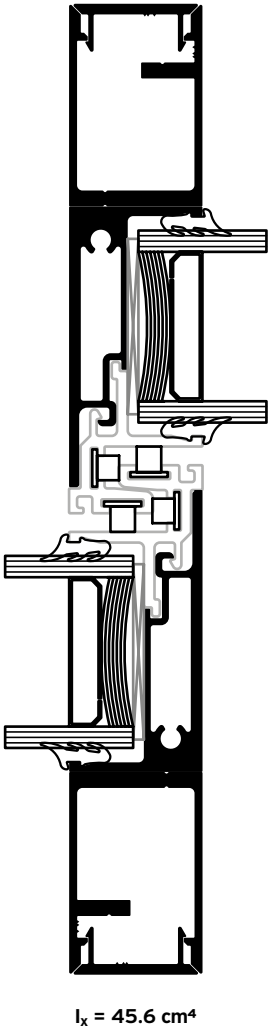
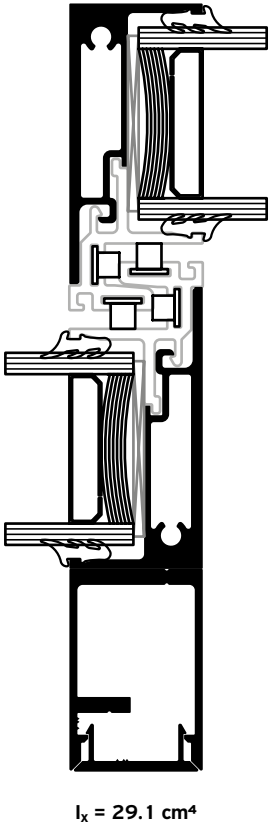
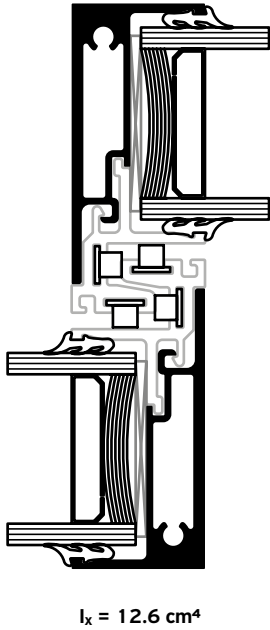
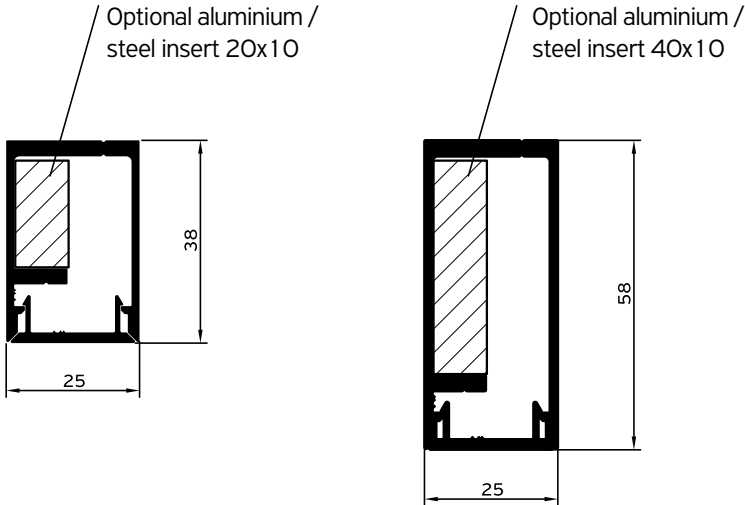


SLIDING
4 Sashes / 2 Track



90°
Rotate the technical drawing
90° CLOCKWISE IN ORDER
TO READ IT PROPERLY

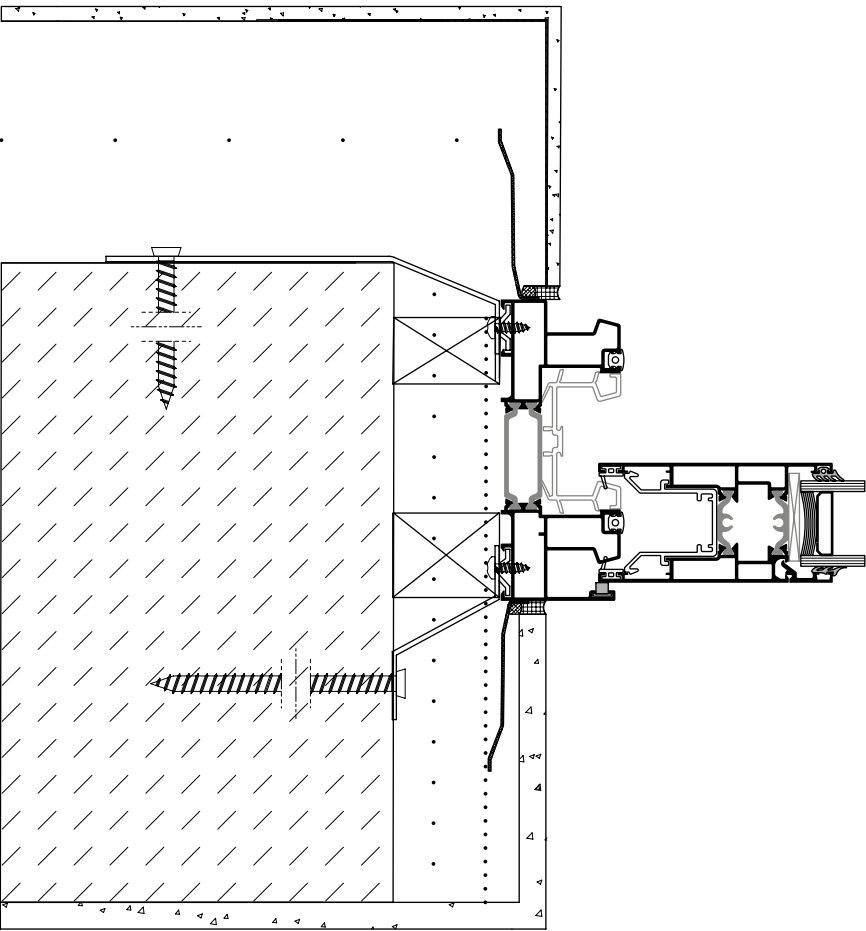
Extra reinforcement at the interlocking profile apart from aesthetics and functionality, offers robustness to the structure and resistance to wind loads for higher sashes



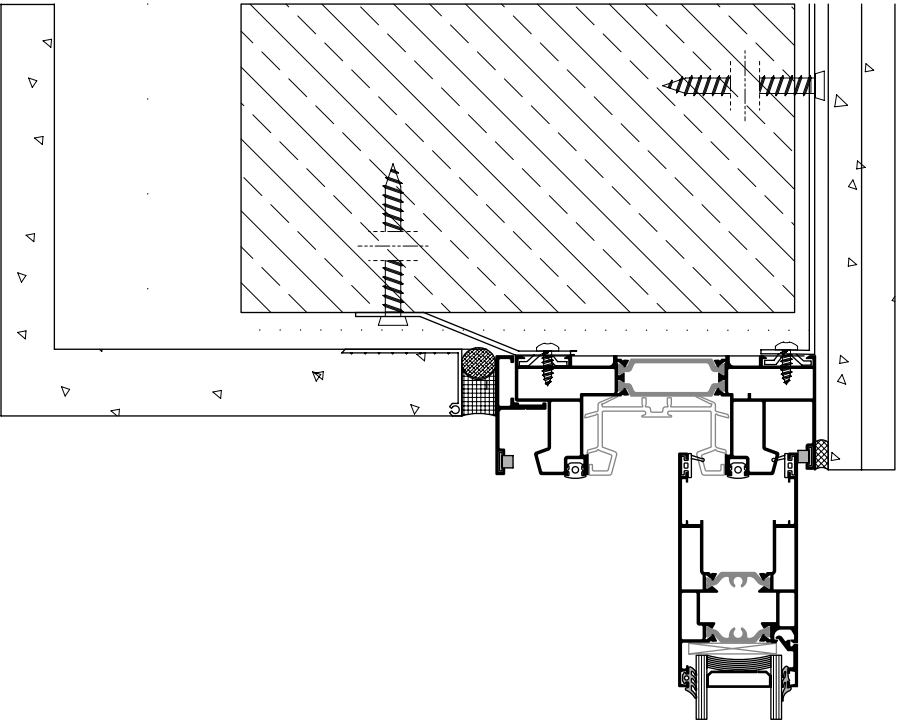
Installation

	PRECOMPRESSED MULTI-FUNCTION SEALING TAPE
	BACKER ROD
	HYBRID SEALANT OR NEUTRAL SILICONE
	STYRODUR HIGH DENSITY BOARD
	MARBLE
	POLYURETHANE FOAM
	POLYSTYRENE
	WALL CONSTRUCTION
	WALL FINISH
	REINFORCED CONCRETE
	AIR WATER VAPOR BARRIER TAPE

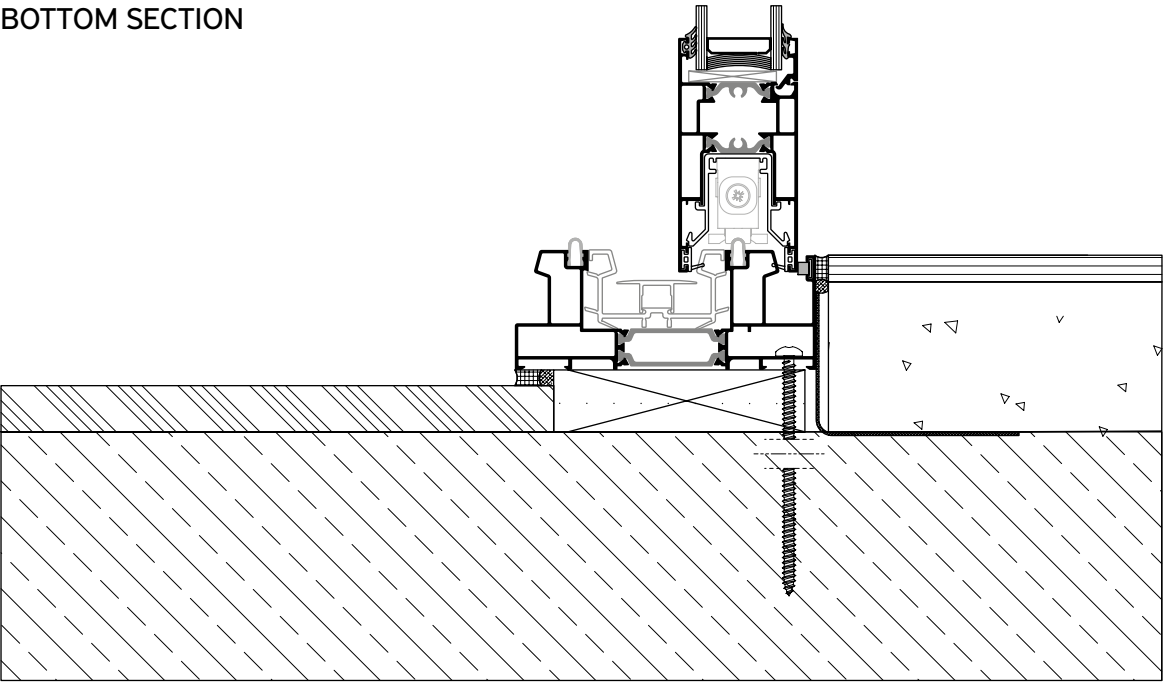
SIDE SECTION



TOP SECTION

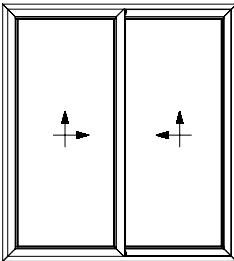


BOTTOM SECTION

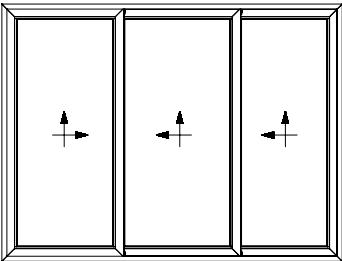


Applications

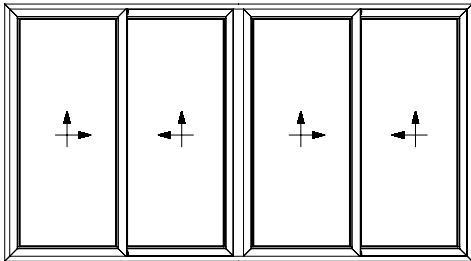
LIFT & SLIDE



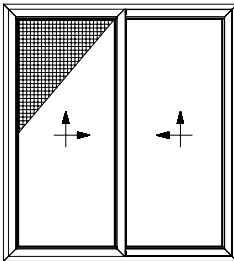
2 SASHES / 2 TRACK



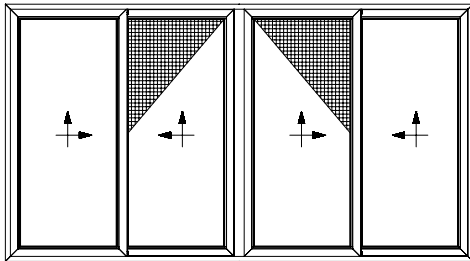
3 SASHES / 3 TRACK



4 SASHES / 2 TRACK

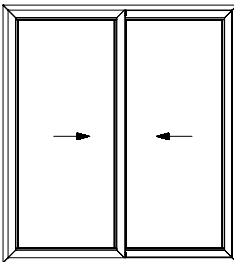


2 SASHES / 2 TRACK /
FLYSCREEN

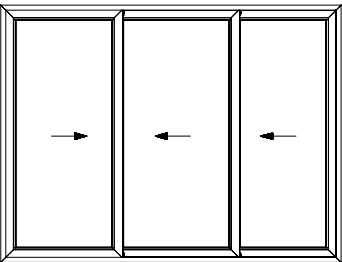


4 SASHES / 2 TRACK / FLYSCREEN

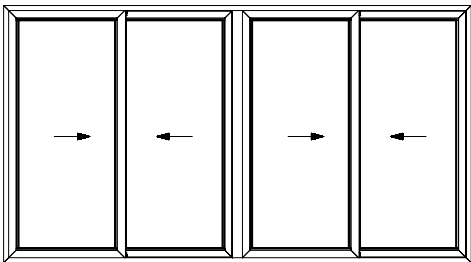
SLIDING



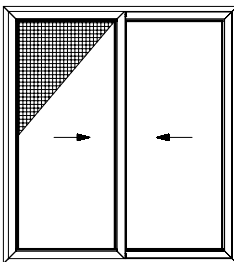
2 SASHES / 2 TRACK



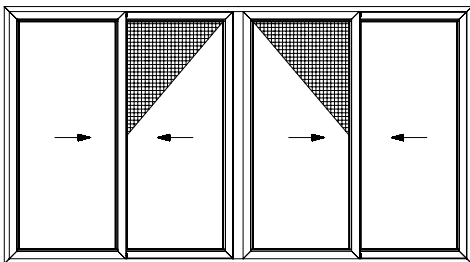
3 SASHES / 3 TRACK



4 SASHES / 2 TRACK



2 SASHES / 2 TRACK /
FLYSCREEN



4 SASHES / 2 TRACK / FLYSCREEN

Table of performance

CERTIFICATION		CLASSIFICATION								
	WATER TIGHTNESS EN 12208	1A	2A	3A	4A	5A	6A	7A	8A	9A
		(0 Pa)	(50 Pa)	(100 Pa)	(150 Pa)	(200 Pa)	(250 Pa)	(300 Pa)	(450 Pa)	(600 Pa)
	AIR PERMEABILITY EN 12207	1	2		3		4			
		(150 Pa)	(300 Pa)		(600 Pa)		(600 Pa)			
	WIND LOAD RESISTANCE MAX TEST PRESSURE EN 12210	1	2	3		4		5		
		(400 Pa)	(800 Pa)	(1200 Pa)		(1600 Pa)		(2000 Pa)		
	WIND LOAD RESISTANCE TO FRONTAL DEFLECTION EN 12210	A	B				C			
		(≤ 1/150)	(≤ 1/200)				(≤ 1/300)			

THERMAL PERFORMANCE	DIMENSIONS IN MM (W x H)	U _w in W/m² K (U _g = 0,8)	U _w in W/m² K (U _g = 1,0)	U _w in W/m² K (U _g = 1,1)
2 SASHES / 2 TRACK (SLIDING)	2300 x 2180	1,33	1,48	1,56
2 SASHES / 2 TRACK (LIFTING-SLIDING)	2300 x 2180	1,41	1,55	1,63

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DISCOVER MORE:



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SlimLine 68

Outward Opening Window System

Fabricator: Grabex



SlimLine 68 is designed to meet the demand for an outward-opening window with ultra-slim frames.

Ideal for residential applications, where the glass area is maximised to let in natural daylight, at just 65mm sash to frame width, SlimLine 68's clean lines provide a stylish yet practical solution for both contemporary and more traditional properties.

- Standard or flush frames
- Wide choice of colours
- Achieve U-values as low as 1.1W/m²K
- Quick and easy to fabricate and install



With 50 years of global product development, 7 testing centres worldwide and products that are easy to fabricate and install, you can be reassured with Reynaers Aluminium.

Together for better
reynaers.co.uk



The SlimLine 68 window system range has been designed to meet the demand for an outward-opening window with ultra slim frames.

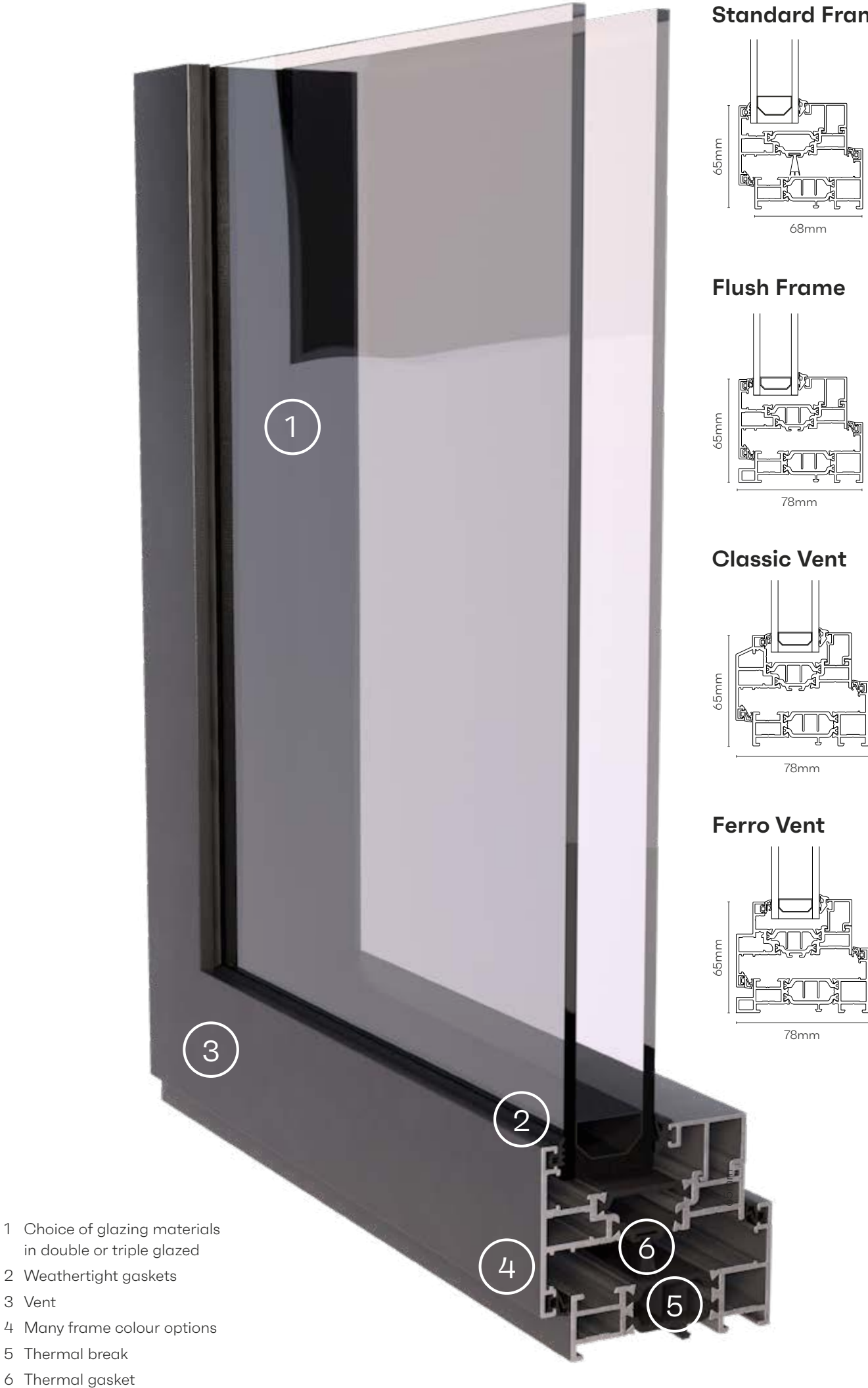
They are ideal for residential properties, where the glass area is maximised to let in lots of natural daylight. SlimLine 68's clean lines provide a stylish yet practical solution for both contemporary and more traditional properties, mimicking the sight lines of original steel-framed windows.

A range of frame and vent options are available to suit the desired look and feel of the property. The frame depth of 68mm makes them perfect replacement windows to fit within the existing plaster lines.

Glazing can be from the inside or outside and is available in various thermal options. Also available as a full flush casement for a more traditional look.

Find out more...

For full technical specifications:
call 0121 421 1999
email reynaersltd@reynaers.com
or visit reynaers.co.uk



- ## Bespoke windows to meet individual requirements

Reynaers windows and doors offer many design possibilities, including the colour of the frame and handle.

 - Make a statement with the huge range of design options
 - Wide choice of colour options for both inside and out
- ## Minimises unwanted noise

The standard SlimLine 68 window is designed to help eliminate unwanted noise. The system is flexible enough to incorporate acoustic glazing up to 43mm thick (standard vent), which makes a huge difference if you live near a busy road, a railway or an airport.
- ## Tried and tested

The SlimLine 68 window was designed by the highly experienced team of engineers at Reynaers in a purpose-built, world-class design and testing facility. As with all Reynaers products, this window has been put through the most stringent test regime, ensuring that it is one of the highest-performing and most reliable window systems available.

 - Premium quality materials
 - Highest levels of performance
 - Industry-leading weather resistance
- ## Excellent thermal performance

The SlimLine 68 offers industry-leading insulation values without compromising on the appearance of the window. The result is a window that will keep heat loss through the window to a minimum, withstand the worst that the British weather has to throw at it, and will help reduce energy bills.

 - Double and triple glazed options
 - Unique thermal insulation profiles
 - U-value as low as 1.1W/m²K
 - Window energy rating up to A (double glazing)
- ## Safe and secure

Designed and tested to the most stringent security standards, the SlimLine 68 has been awarded the Secured by Design accreditation, providing complete peace of mind to the homeowner

 - One of the most secure windows available
 - PAS24 and Secured by Design accreditation
 - Enhanced security with hinge-side security brackets
 - Multi-point locking mechanism
 - Lockable handles

SlimLine 68 frame options



Standard Frame



Flush Frame



Reverse Rebate Profile



Flush Transom/Mullion Profile



SlimLine 68 frame options

Heritage Slim Outer Frame



Standard Slim Outer Frame



SlimLine 68 Heritage

Classic Profile



Ferro with Flush Outer Frame



Technical specifications

Maximum vent height (mm) (to be read in conjunction with max. width and max. weight)	Side hung	1500
	Top hung	1470
Maximum vent width (mm) (to be read in conjunction with max. height and max. weight)	Side hung	738
	Top hung	1300
Maximum vent weight (kg) (to be read in conjunction with max. height and max. width)	Side hung	40
	Top hung	50
Minimum visible widths (mm) (outward opening window)	Frame	11
	Vent	50
Overall system depths (mm)	Frame	68
	Vent	68
Minimum visible width T-profile (mm)		50
Rebate height (mm)		18
Glass thickness (mm)		26 to 43
Glazing method		Dry glazing with EPDM or neutral silicones
Thermal insulation		Omega-shaped fibreglass reinforced polyamide strips (32 mm)
High insulation variant (HI)		Available

Double Casement

Maximum vent (mm) (not including T profile)	730 x 1370
Maximum opened dimension (mm)	1420 x 1050 (dependent on friction stays)
Air tightness, max. test pressure ⁴ EN 1026; EN 12207	Class 4
Water tightness ⁵ EN 1027; EN 12208	Class 9A E600
Wind load resistance to frame deflection ⁶ EN 12211; EN 12210	C4
Burglar resistance ⁷	PAS 24: 2016

Notes

This table shows possible performance classes and values and is a guide only.

To obtain exact performance values for your chosen system configuration please contact a member of our Technical Team.

¹ The Uf-value measures the heat flow. The lower the Uf-value, the better the thermal insulation of the frame.

² Window dimension 1.23m x 1.48m. DGI Ug=1.0W/m²K, TGI Ug=0.7W/m²K.

³ The sound reduction index (Rw) measures the capacity of the sound reduction performance of the frame.

⁴ The air tightness test measures the volume of air that would pass through a closed window at a certain air pressure.

⁵ The water tightness testing involves applying a uniform water spray at increasing air pressure until water penetrates the window.

⁶ The wind load resistance is a measure of the profile's structural strength and is tested by applying increasing levels of air pressure to simulate the wind force. There are up to five levels of wind resistance (1 to 5) and three deflection classes (A,B,C). The higher the number, the better the performance.

⁷ The burglar resistance is tested by static and dynamic loads, as well as by simulated attempts to break in using specified tools.

This variant requires specific burglar resistance accessories.

Performance data

Thermal Insulation ¹ EN ISO 10077-2	Uf-value down to 2.5W/m²K depending on the frame/vent combination and the glass thickness. Uw ≥ 1.56W/m²K for a standard window section ²
U-value – triple glazed	Uw ≥ 1.1W/m²K based on windows size and configuration as per BS EN 14351 ²
U-value – double glazed	Uw ≥ 1.4W/m²K based on windows size and configuration as per BS EN 14351 ²
Window energy rating – double-glazed	A
Acoustic performance ³ EN ISO 140-3; EN ISO 717-1	Rw (C; Ctr) = 36 (-1; -5) dB / 47 (-2; -7) dB, depending on glazing type
Air tightness, max. test pressure ⁴ EN 1026; EN 12207	600Pa (Class 4)
Water tightness ⁵ EN 1027; EN 12208	600Pa (9A) / >1050Pa (E1050)
Wind load resistance, max. test pressure ⁶ EN 12211; EN 12210	2400Pa (E2400)
Wind load resistance to frame deflection ⁶ EN 12211; EN 12210	C (s1/3000)
Burglar resistance ⁷	PAS 24 and Secured by Design

