



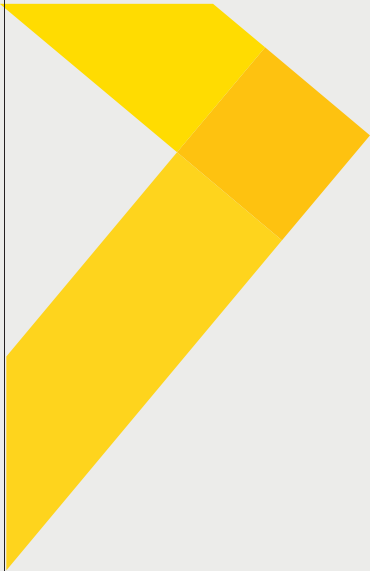
Alumil
Building excellence every day



 **SMARTIA**
M450

AT ALUMIL,
WE ARE BUILDING
EXCELLENCE
EVERY DAY.

THROUGH OUR STATE-OF-THE-ART FACILITIES AND RIGOROUS QUALITY CONTROLS ACROSS THE ENTIRE PRODUCTION LINE, WE ENSURE THE CREATION OF HIGH-QUALITY, VALUE-ADDED PRODUCTS. OUR CONTINUOUS RESEARCH AND DEVELOPMENT DRIVE THE DELIVERY OF UNIQUE SOLUTIONS WITH INNOVATIVE FEATURES THAT MEET THE DIVERSE NEEDS OF OUR CUSTOMERS.



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SMARTIA M450

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 SMARTIA
M450

MAXIMUM
VIEW,
LIMITLESS
SOLUTIONS.

SMARTIA M450 represents the next generation of advanced systems for minimal lift & slide and regular sliding doors.



SMARTIA M450 meets the demanding requirements of contemporary residences for **high thermal** insulation and **modern aesthetics**.

KEY BENEFITS

- ♦ 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.
- ♦ Easy access thanks to the low threshold, ideal for renovations (version SMARTIA M450 LT)
- ♦ 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.



SPECS

VISIBLE ALUMINIUM FACE WIDTH
124.5 & 100.5 mm

FRAME HEIGHT
25 / 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

SASH WEIGHT
UP TO 200 Kg LIFT & SLIDE /
UP TO 180 Kg SLIDING

GLAZING
21 UP TO 36 mm

INSULATION
POLYAMIDES OF 40 & 24 mm, ABS

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.



M450 LT Narrow interlocking profile combined with narrow side frame (25mm)



Modern and elegant aesthetics the alternative version with a low, thermally insulated threshold of just **25 mm** height ensures smooth and secure access, making it an ideal solution for renovation projects.

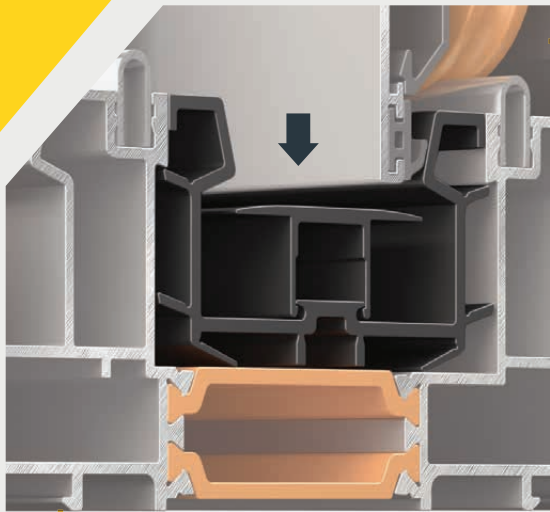
SMARTIA M450
Standard Threshold



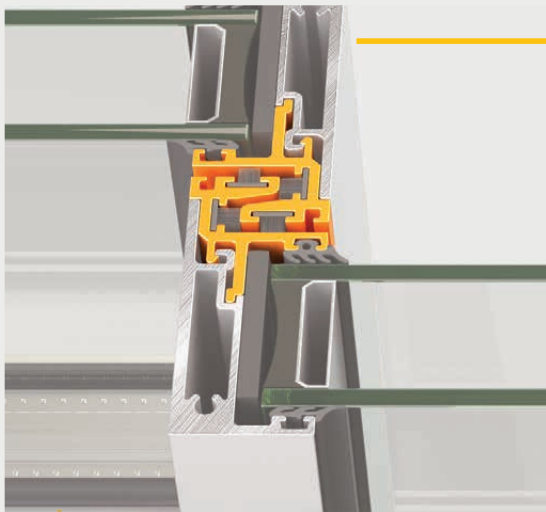
SMARTIA M450 LT
Low Threshold



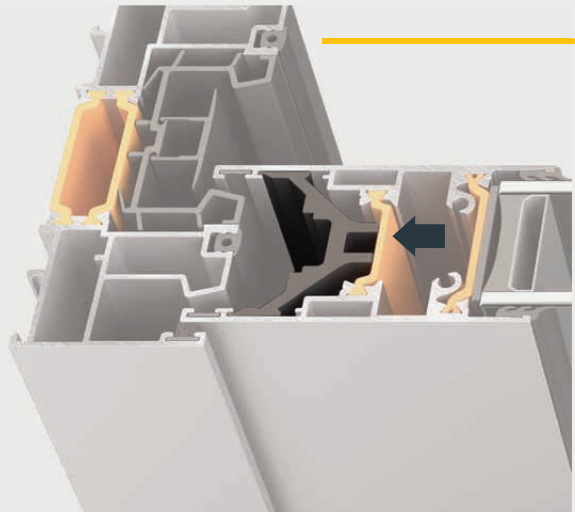
ATTENTION TO DETAIL



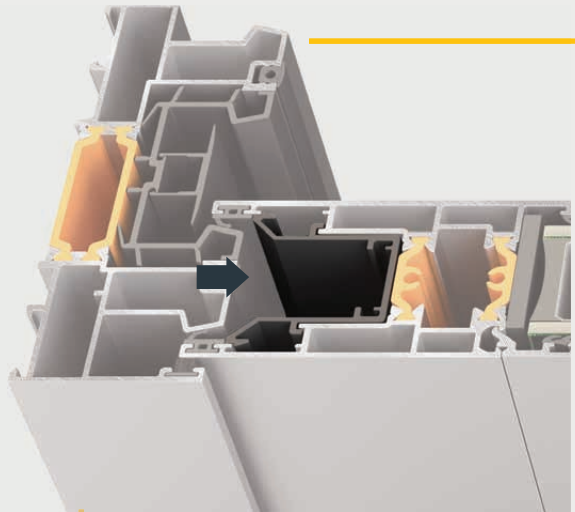
Narrow depth into the frames due to **the specially designed ABS profiles**. They are installed either in the bottom frame or perimetrically to cover water evacuation and make the cleaning process easier.



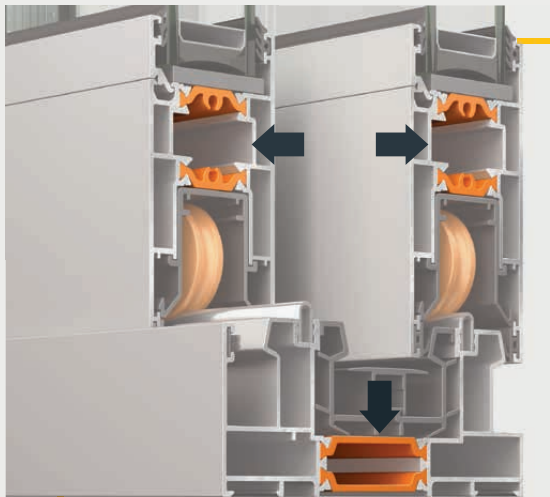
High quality ABS profiles with **UV-protection** that preserve their durability and texture under intense exposure to solar radiation.



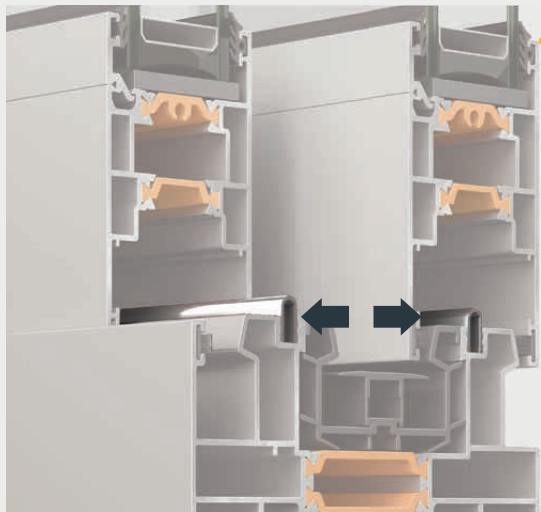
The system's sliding mechanism provides up to 4 locking points and optional cylinder use, **offering high safety & top functionality**.



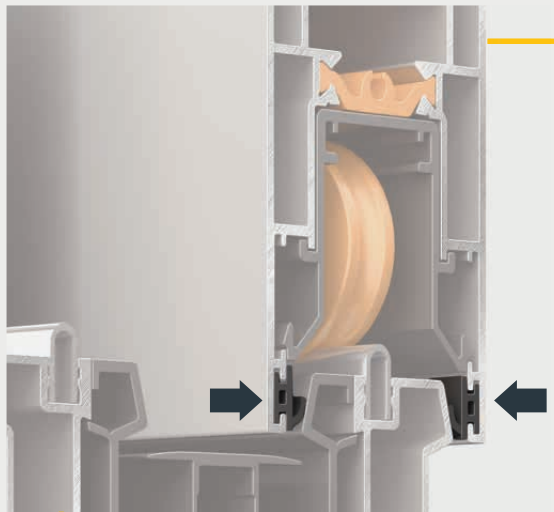
The system's lift & slide mechanism allows the sash to open and close easily - even wider and heavier sashes, **offering high functionality & smooth gliding**.



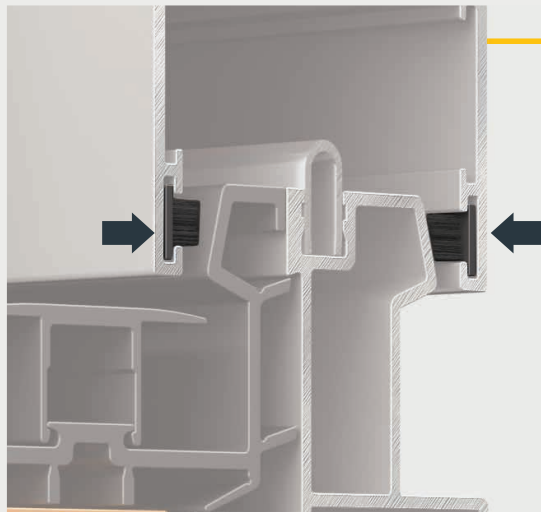
High thermal insulation performance, achieved with fiberglass reinforced polyamides of **40 mm & 24 mm width**. Along with the ABS profiles, they contribute to green buildings design, emphasizing on energy & money saving.



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

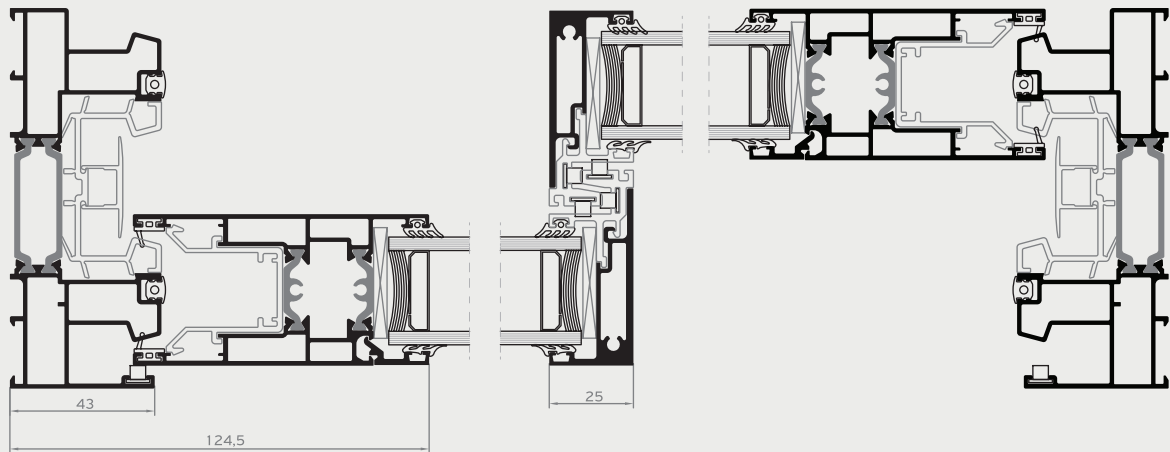
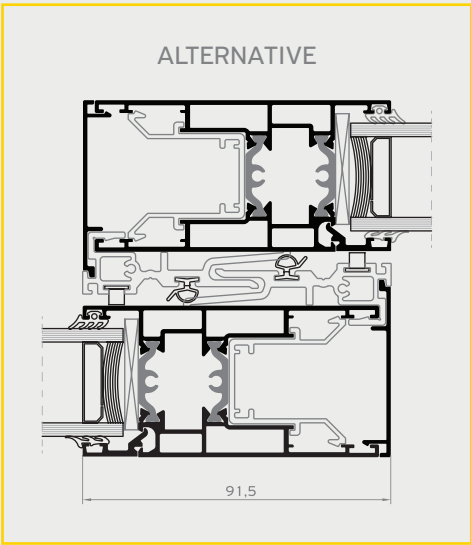
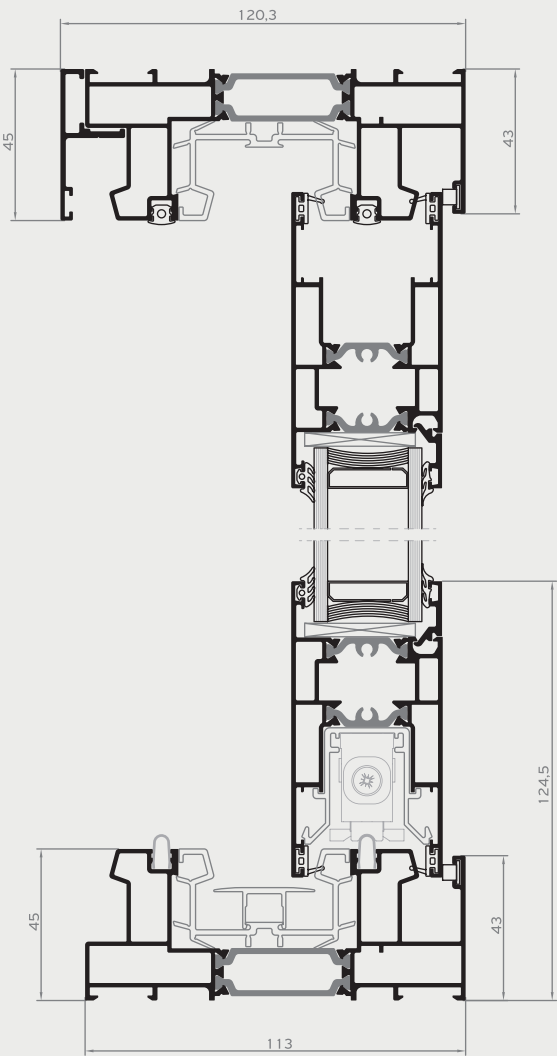
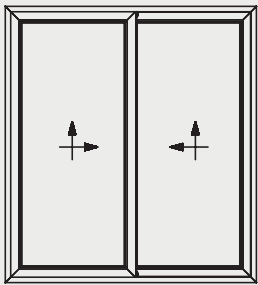


High quality gaskets **with soft touch** for lift & slide typologies, contribute significantly to the system's overall performance.

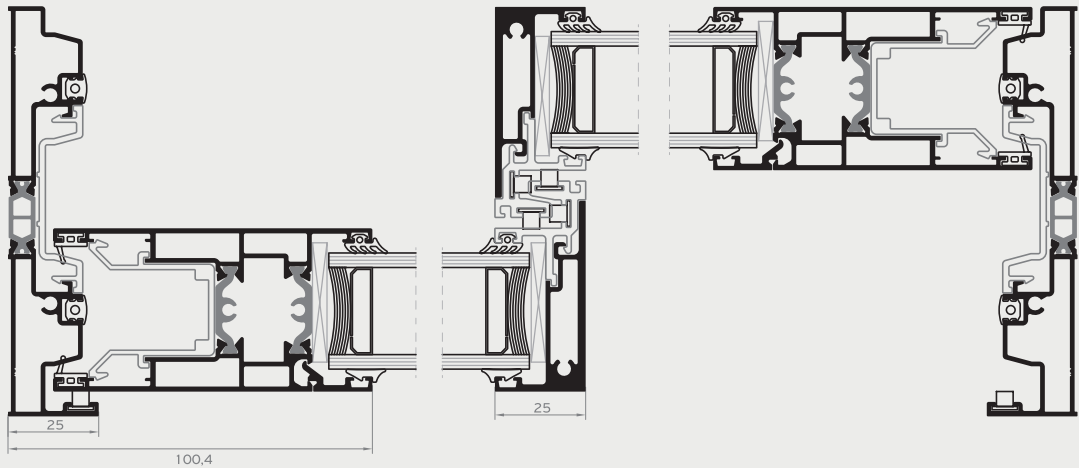
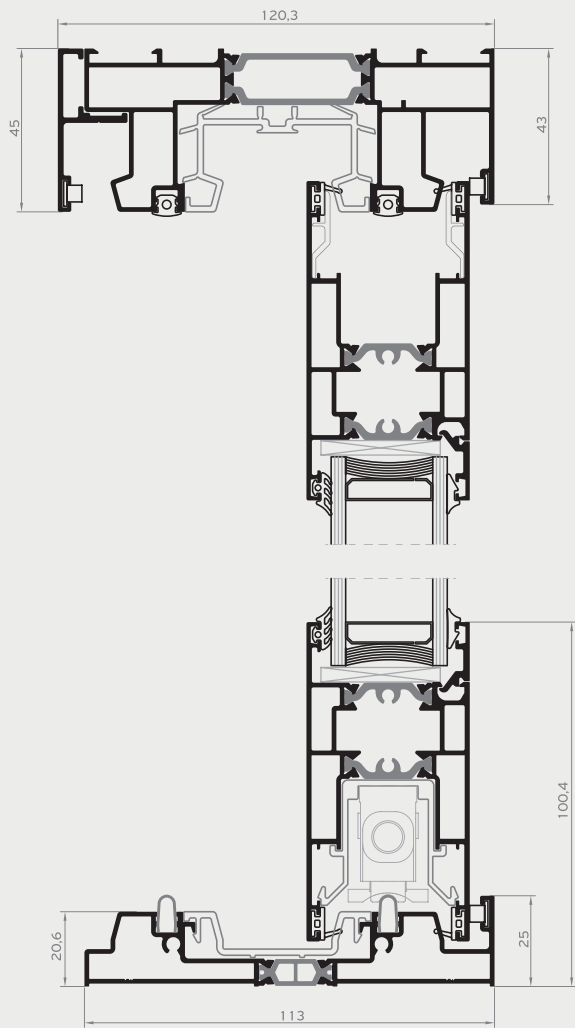
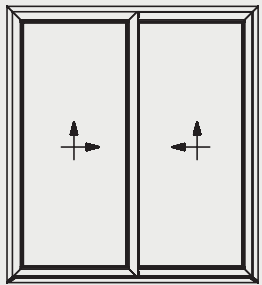


The door sash glides **easily and quietly** on the rails made of stainless steel AISI 316L.

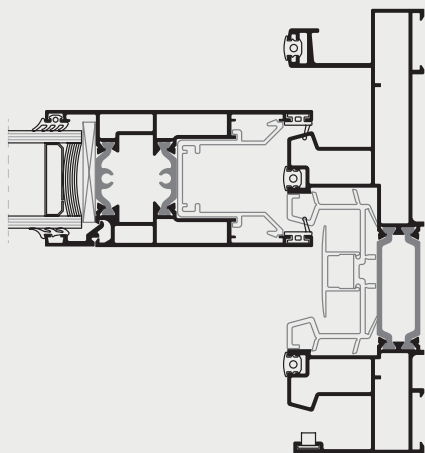
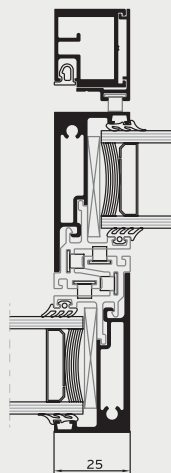
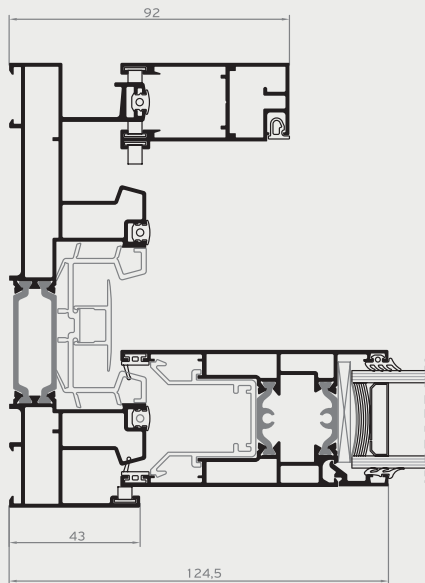
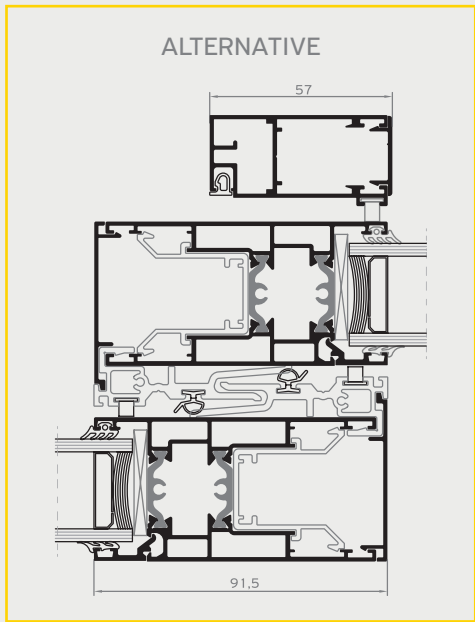
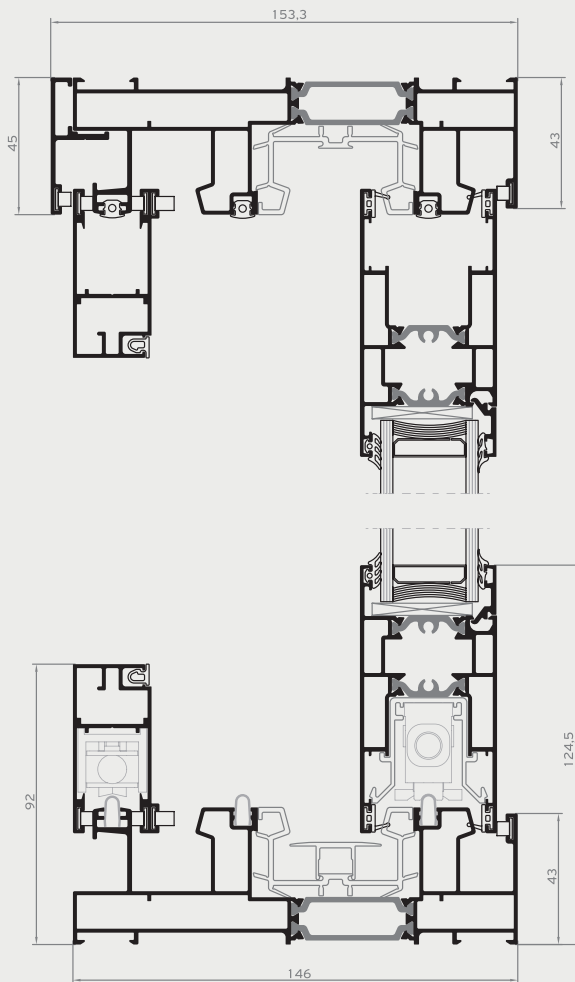
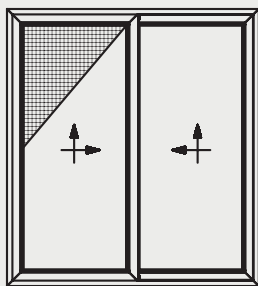
2-SASH / 2-TRACK



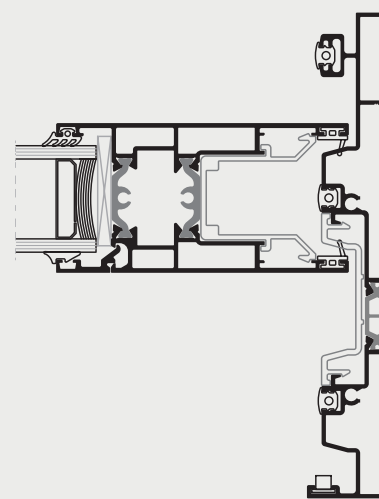
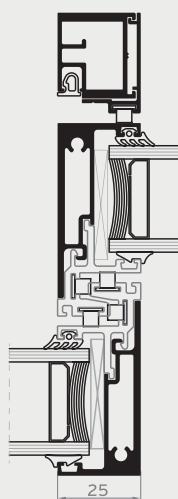
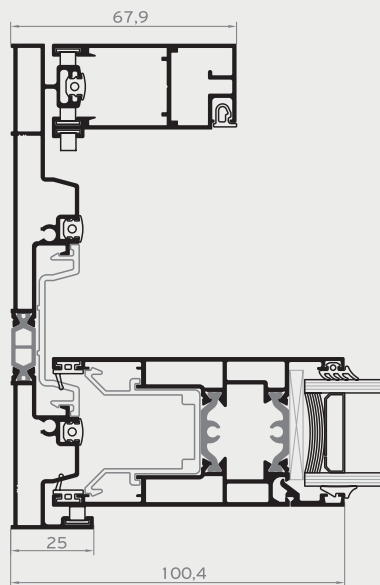
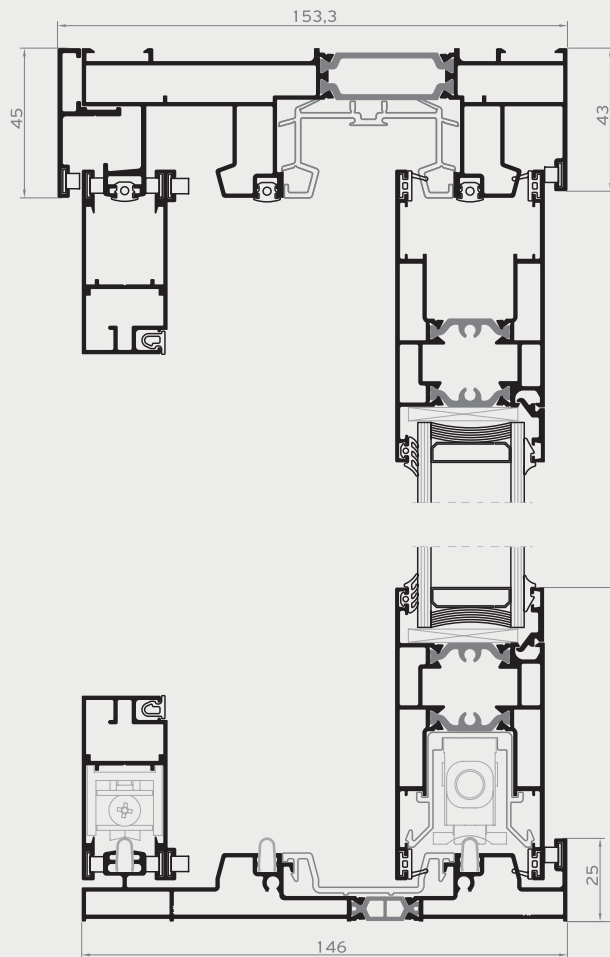
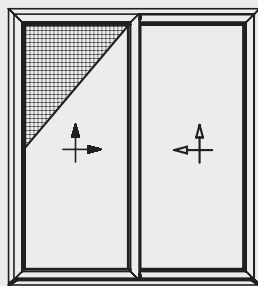
2-SASH / 2-TRACK
LOW THRESHOLD



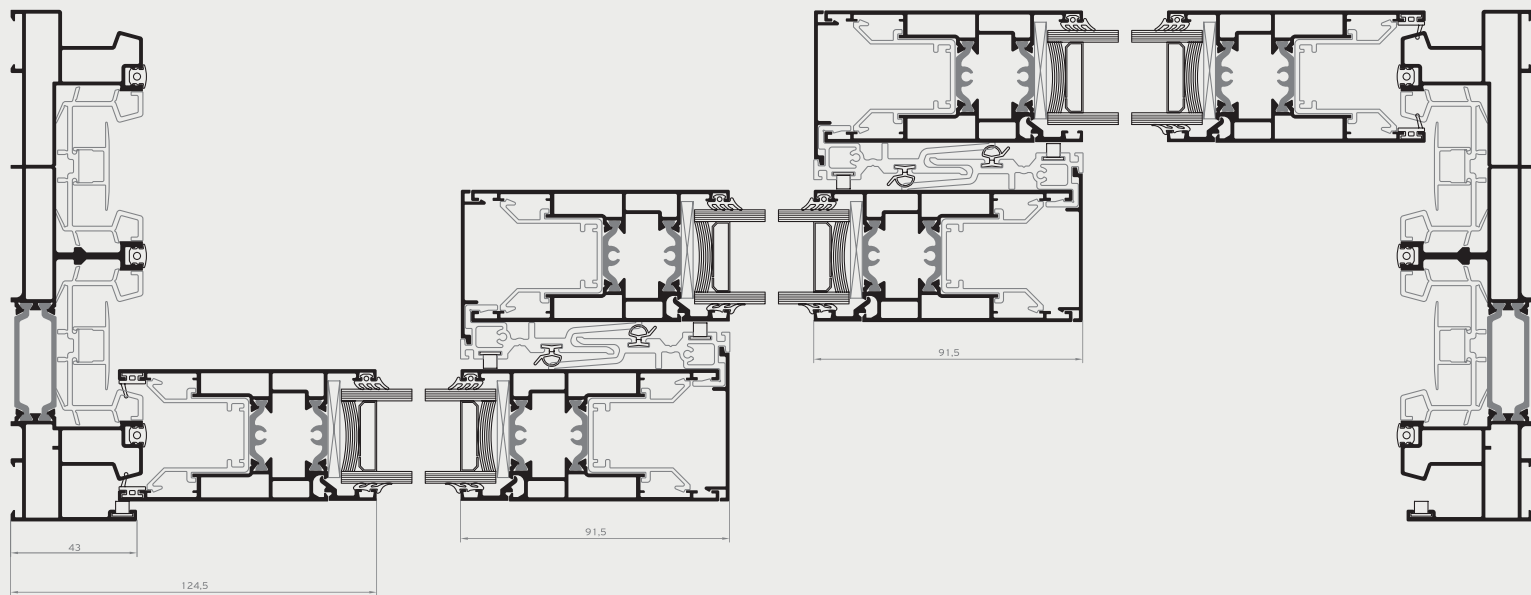
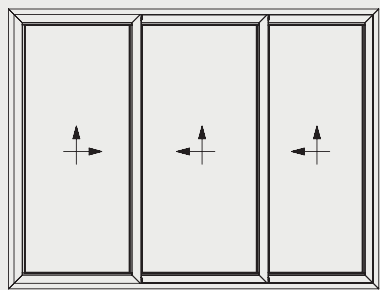
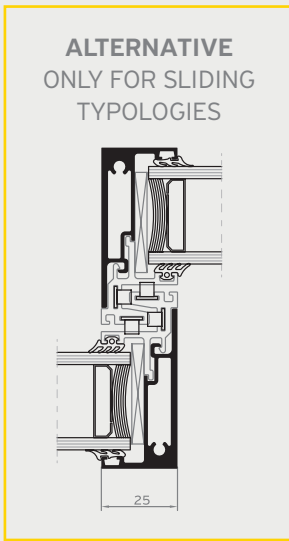
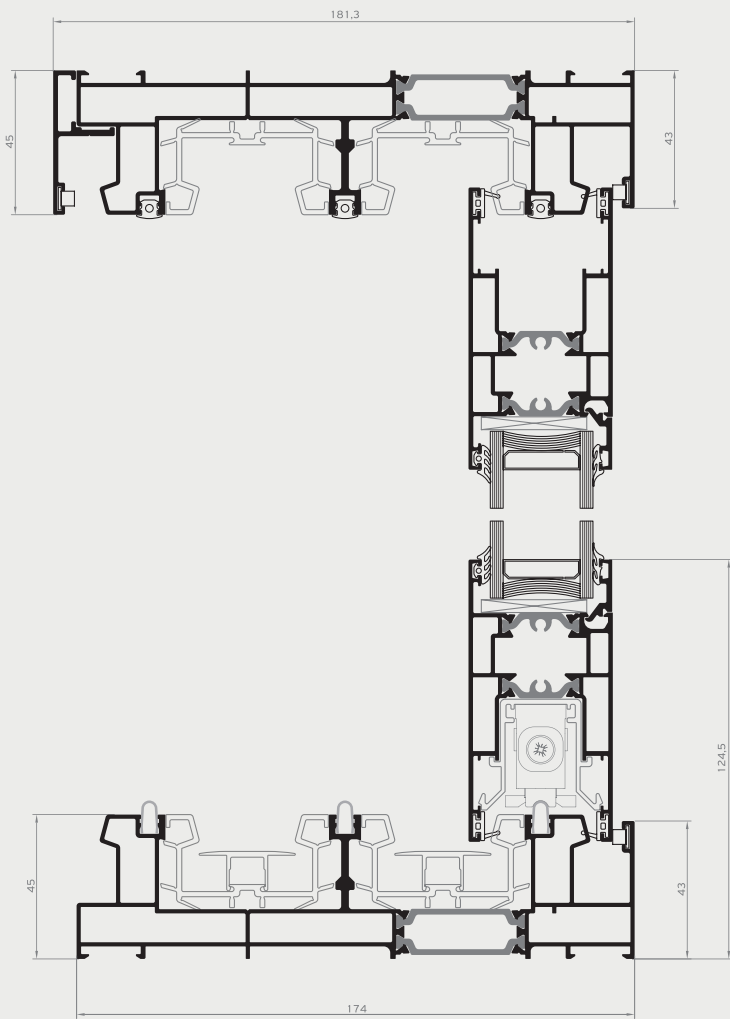
2-SASH / 2-TRACK
FLYSCREEN



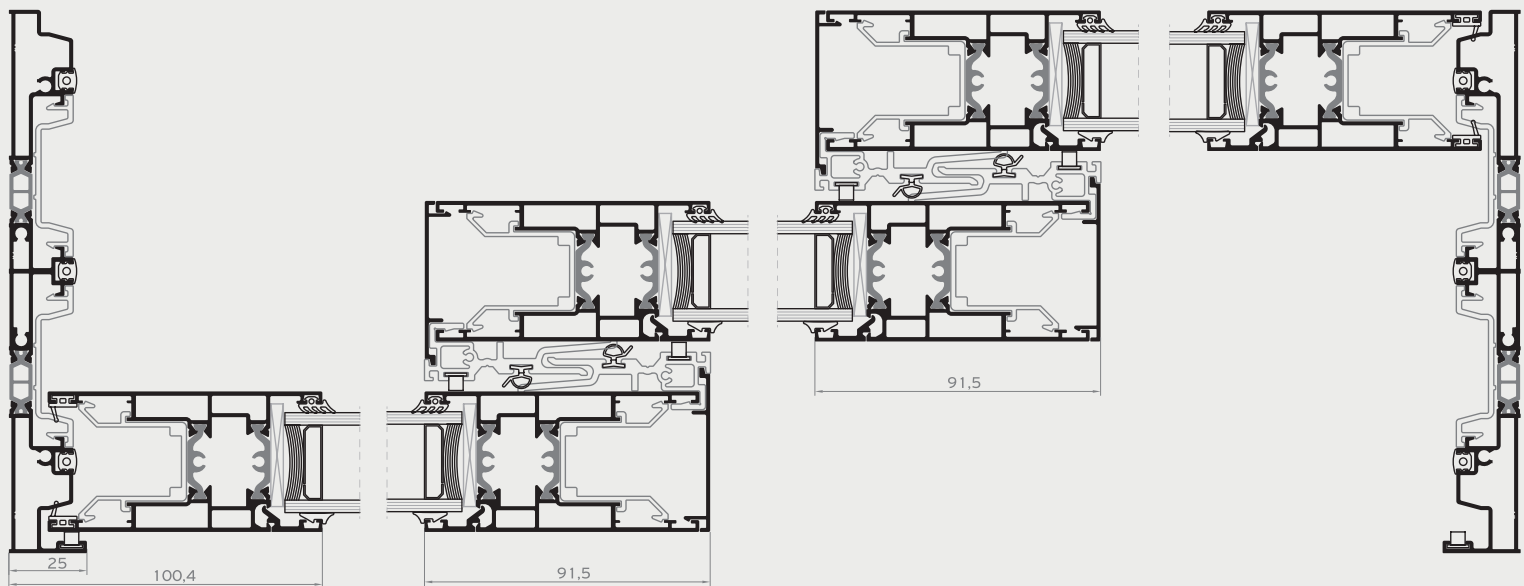
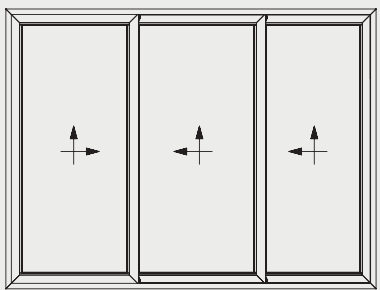
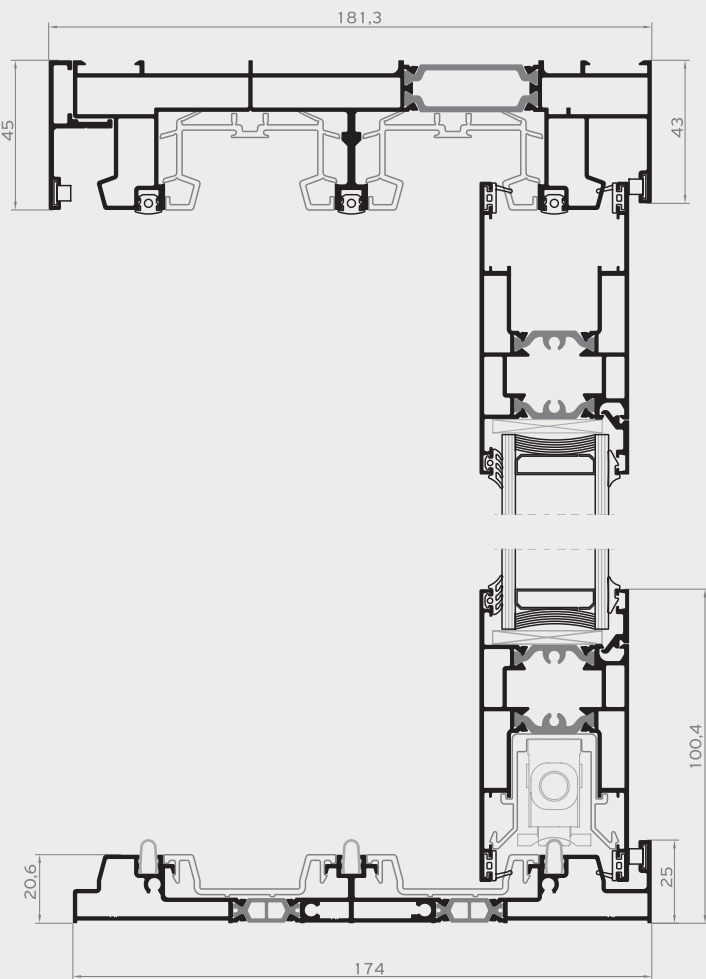
2-SASH / 2-TRACK
FLYSCREEN
LOW THRESHOLD



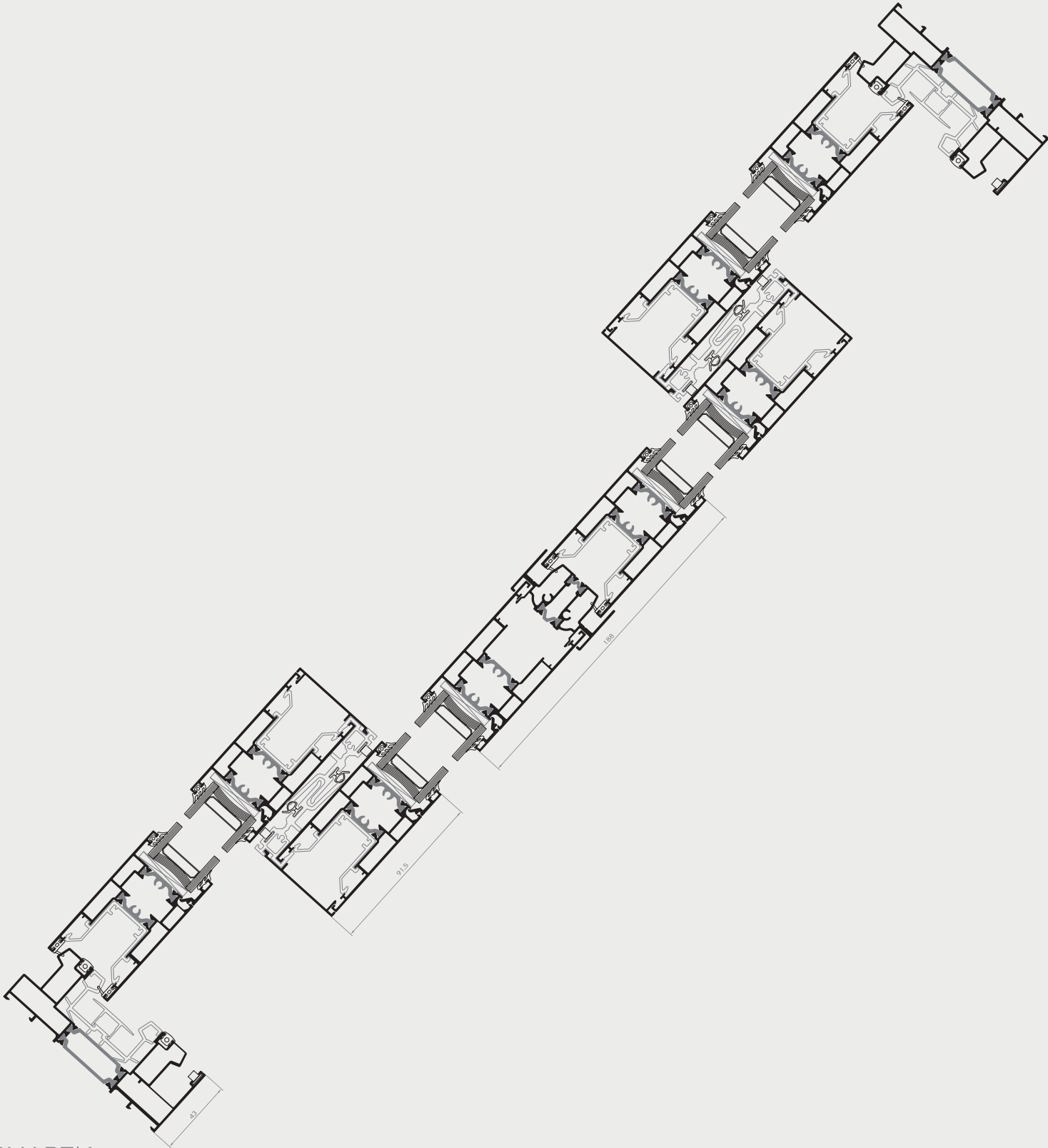
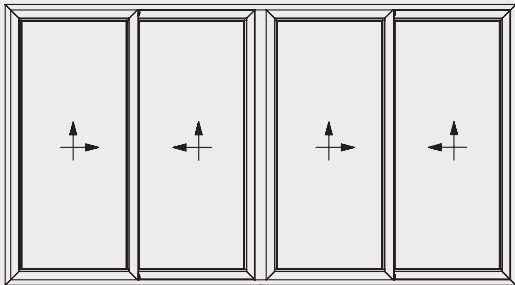
3-SASH / 3-TRACK



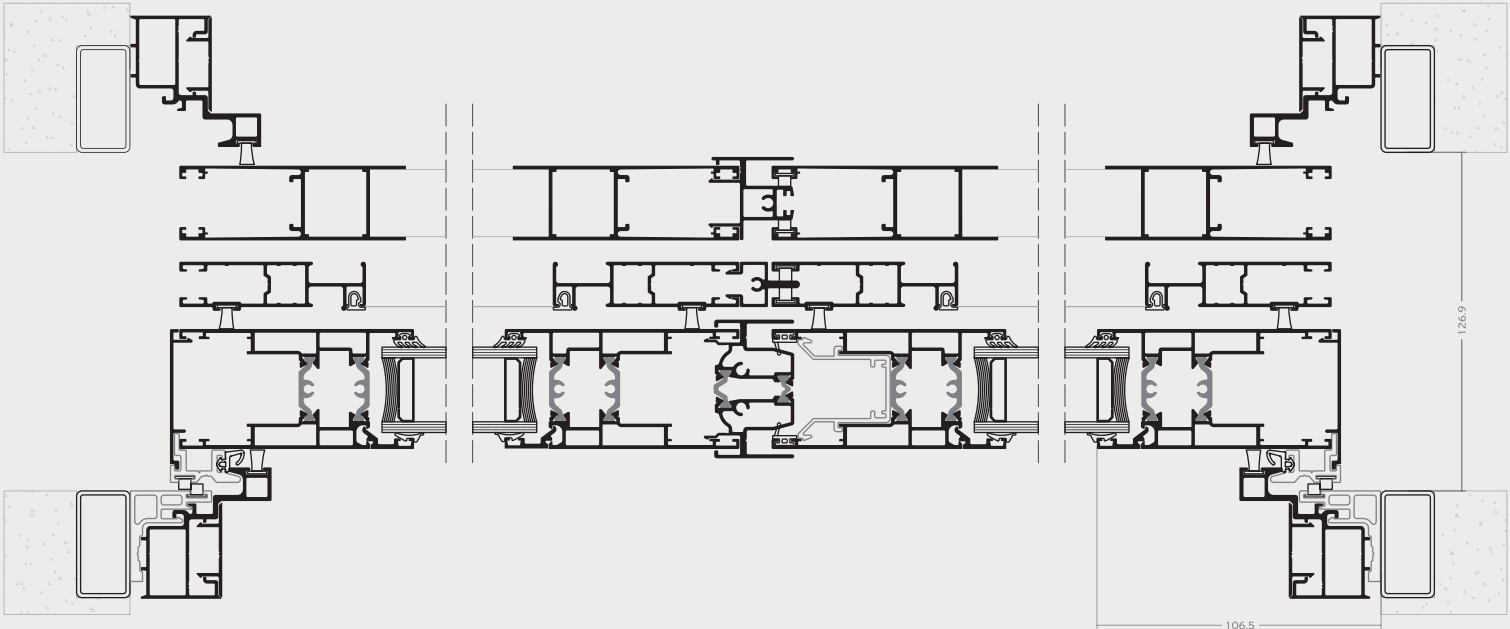
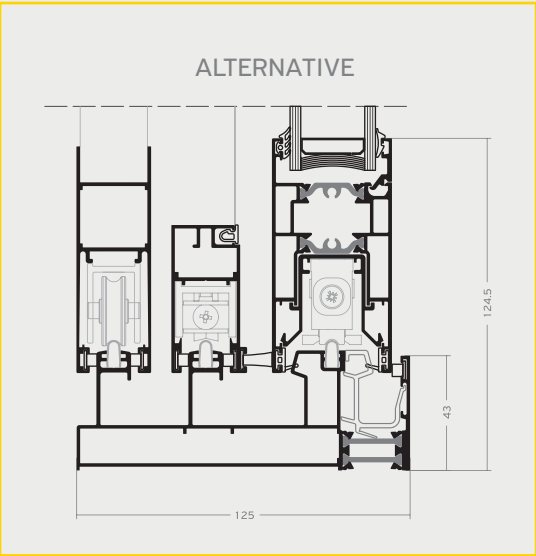
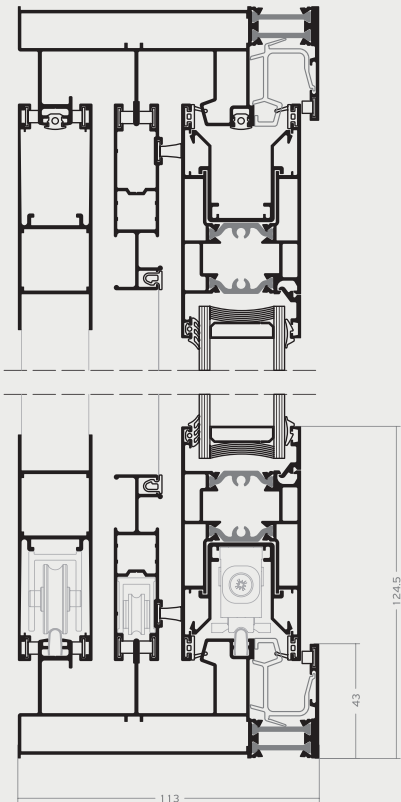
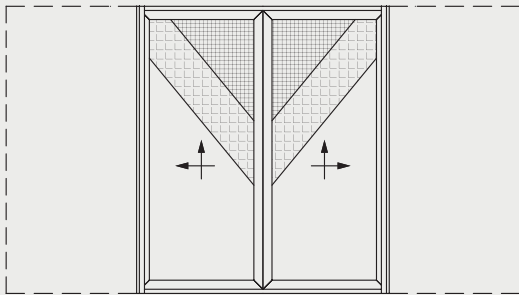
3-SASH / 3-TRACK
LOW THRESHOLD



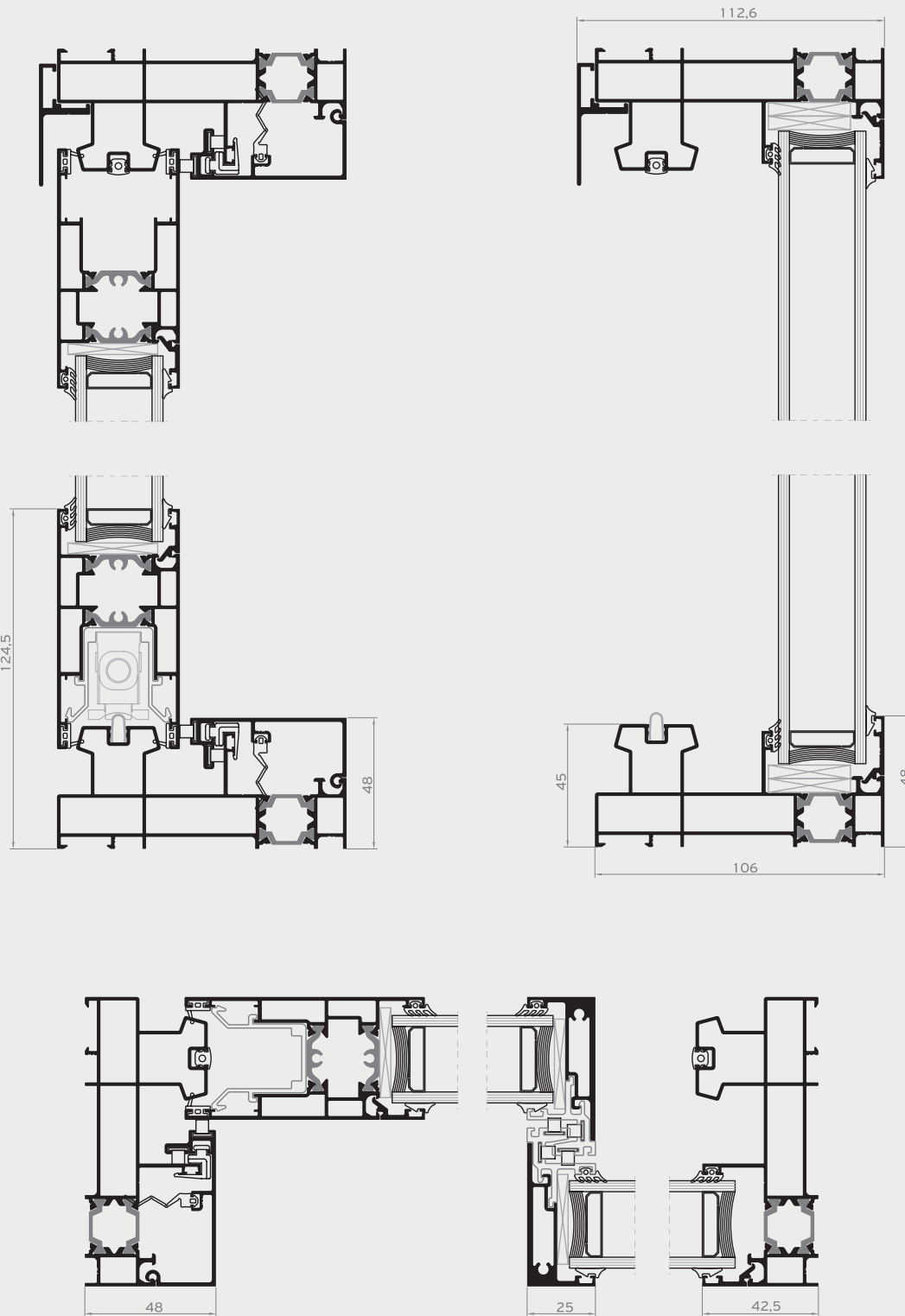
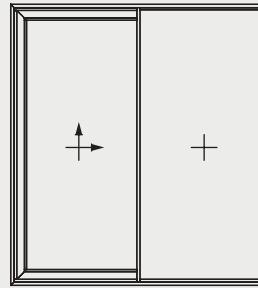
4-SASH / 2-TRACK



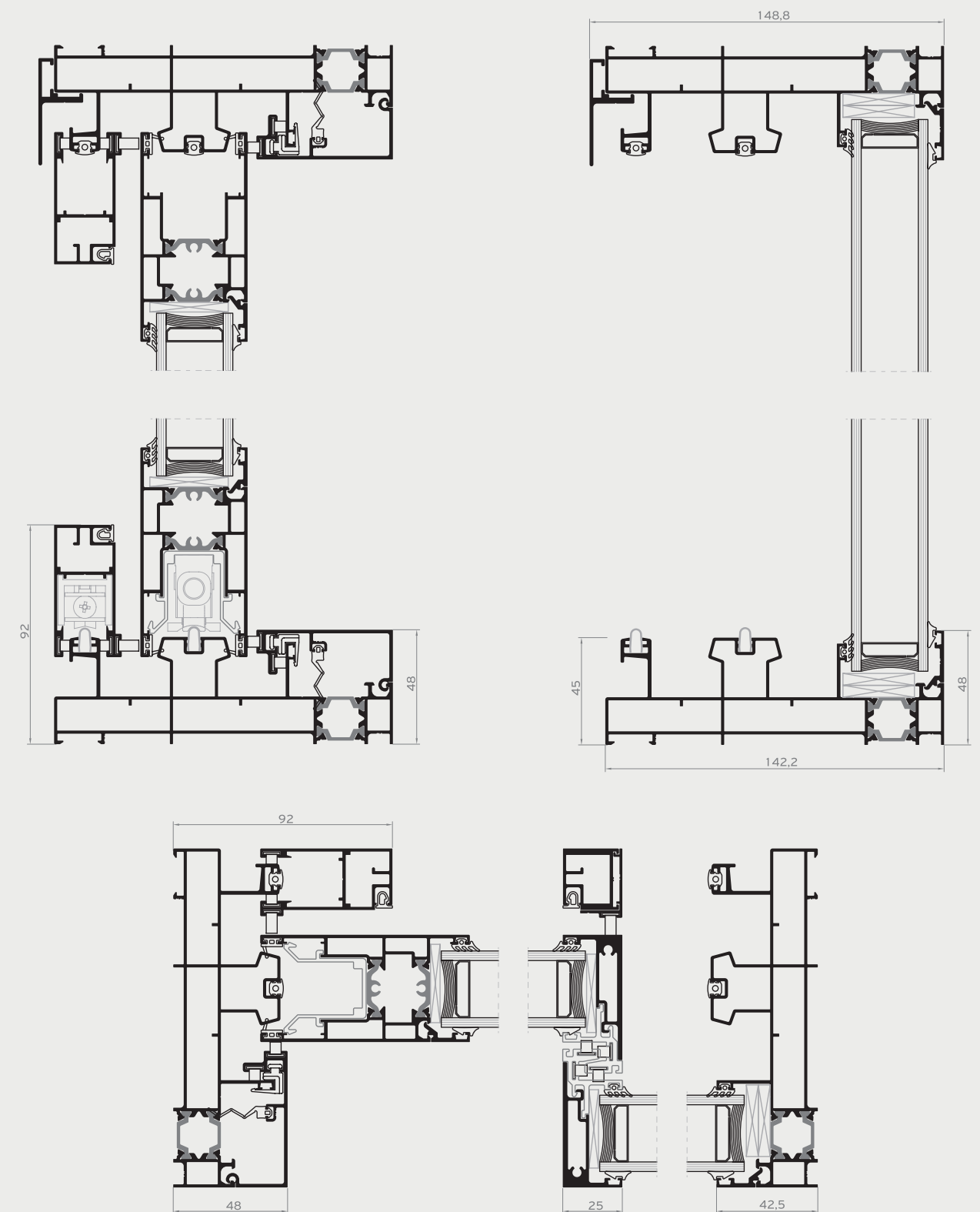
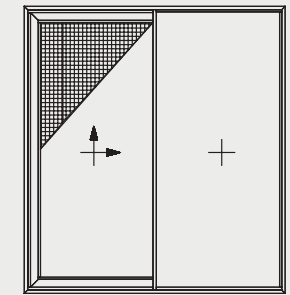
2-SASH
FLYSCREEN
SHUTTER



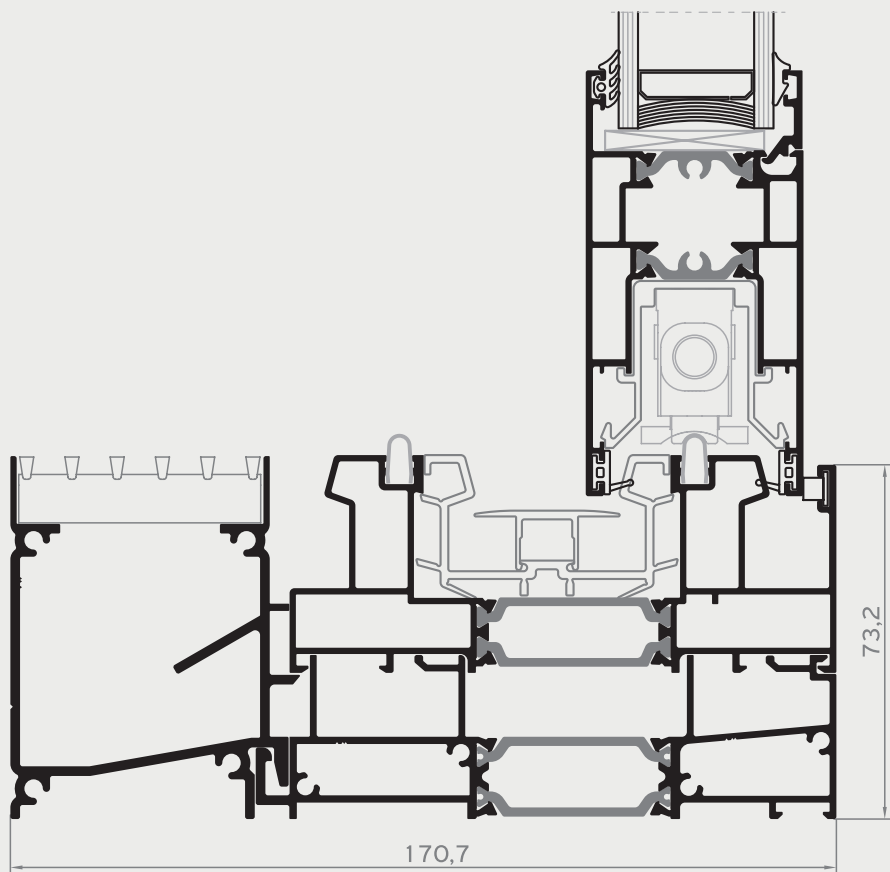
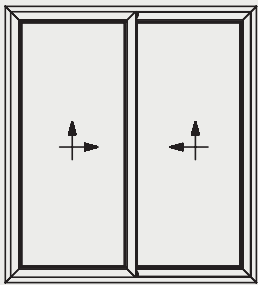
1-SASH / FIXED LIGHT



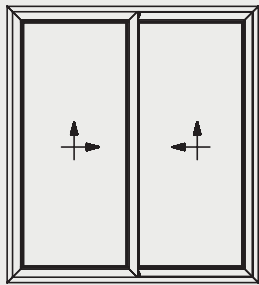
1-SASH / FIXED LIGHT FLYSCREEN



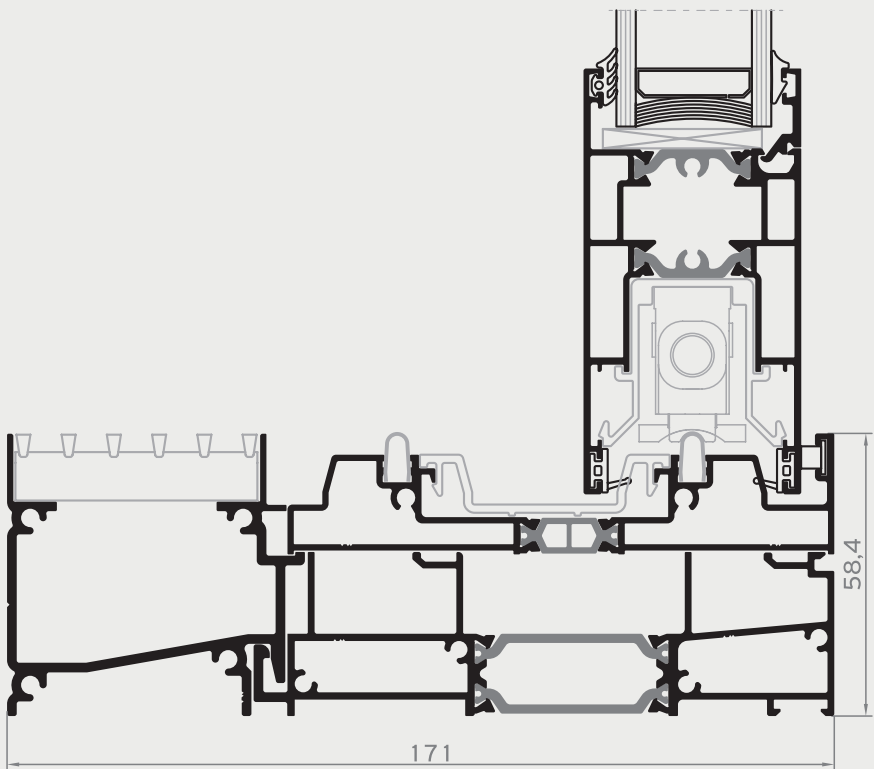
SOLUTION WITH GUTTER
2-SASH / 2-TRACK



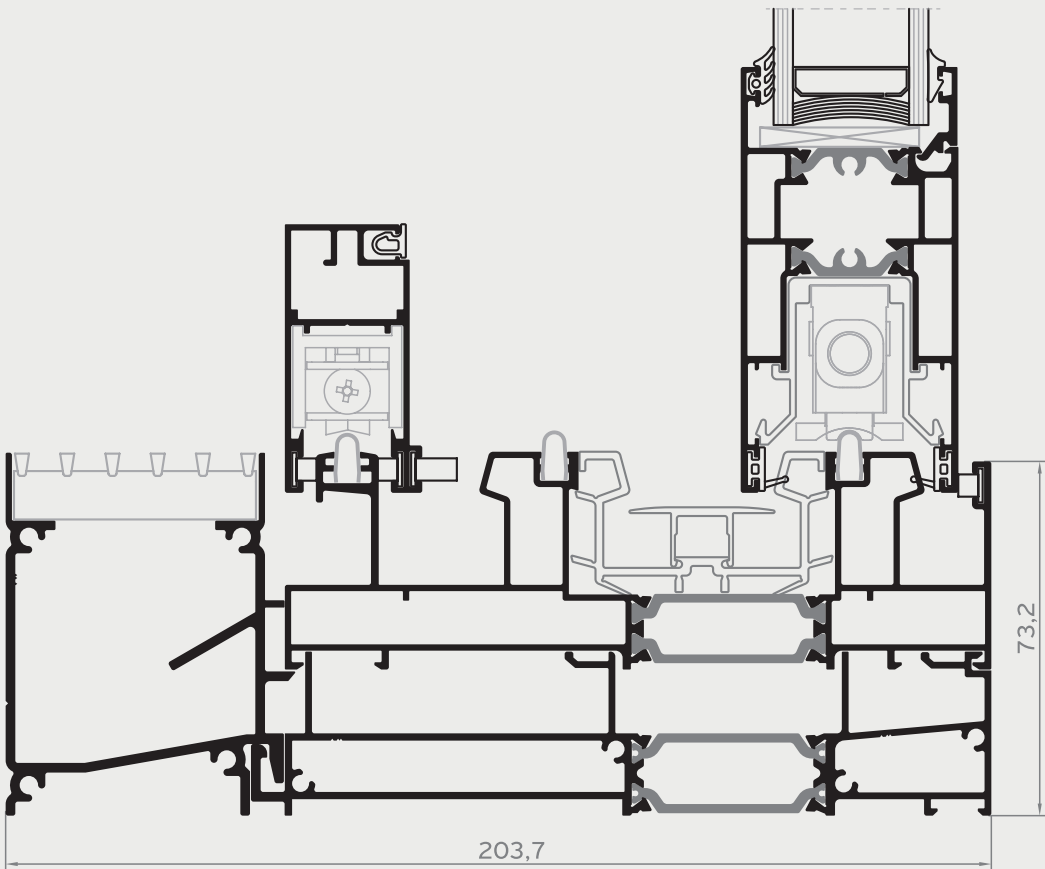
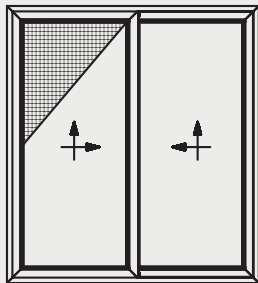
SOLUTION WITH GUTTER
2-SASH / 2-TRACK
LOW THRESHOLD



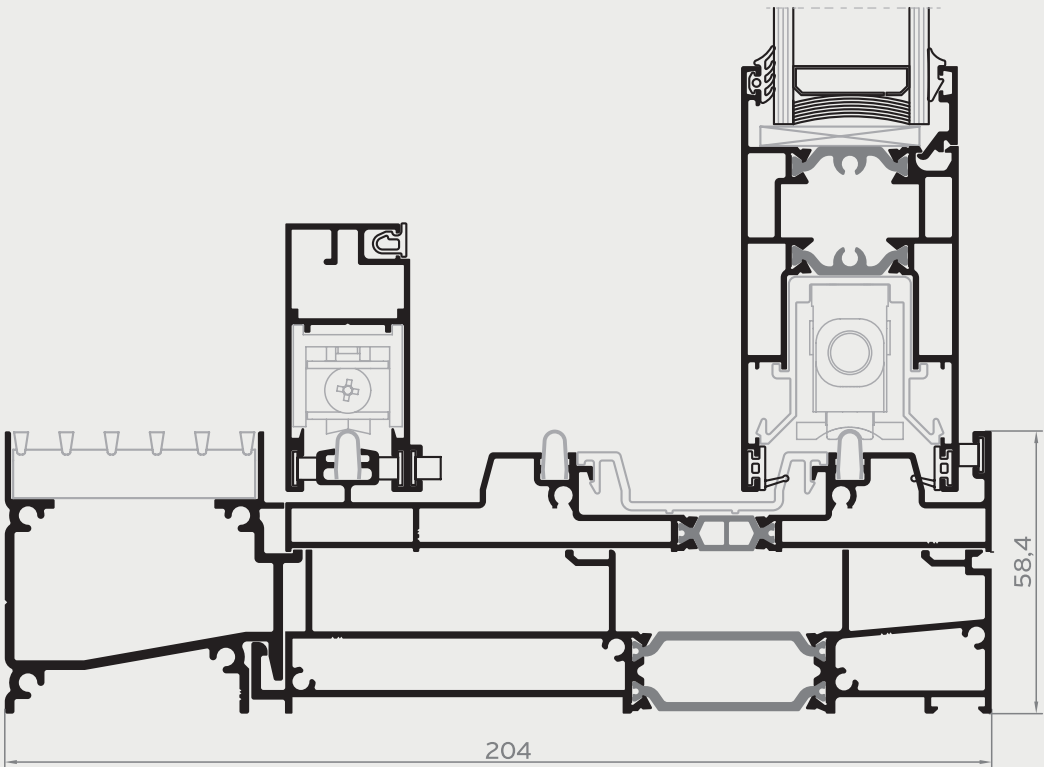
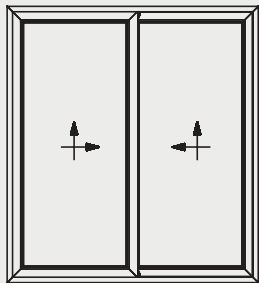
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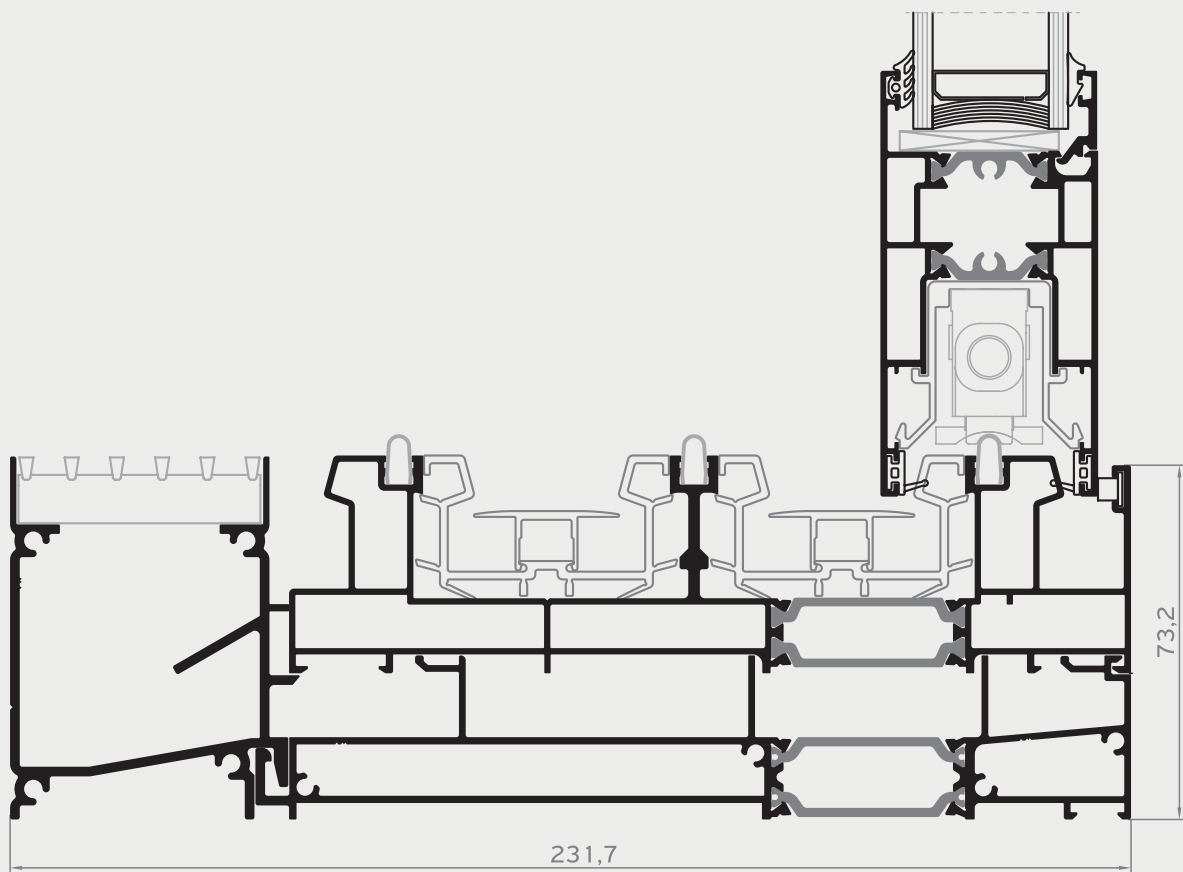
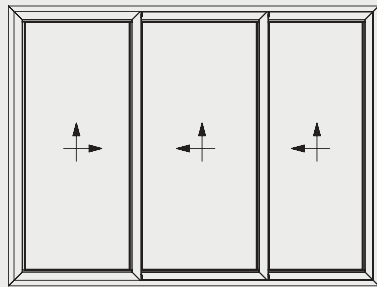
SOLUTION WITH GUTTER
2-SASH / 2-TRACK
FLYSCREEN



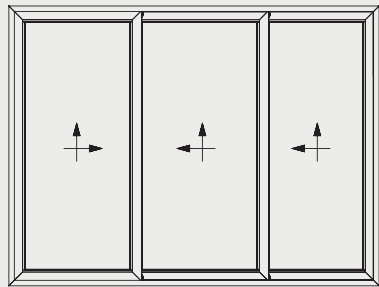
SOLUTION WITH GUTTER
2-SASH / 2-TRACK
FLYSCREEN
LOW THRESHOLD



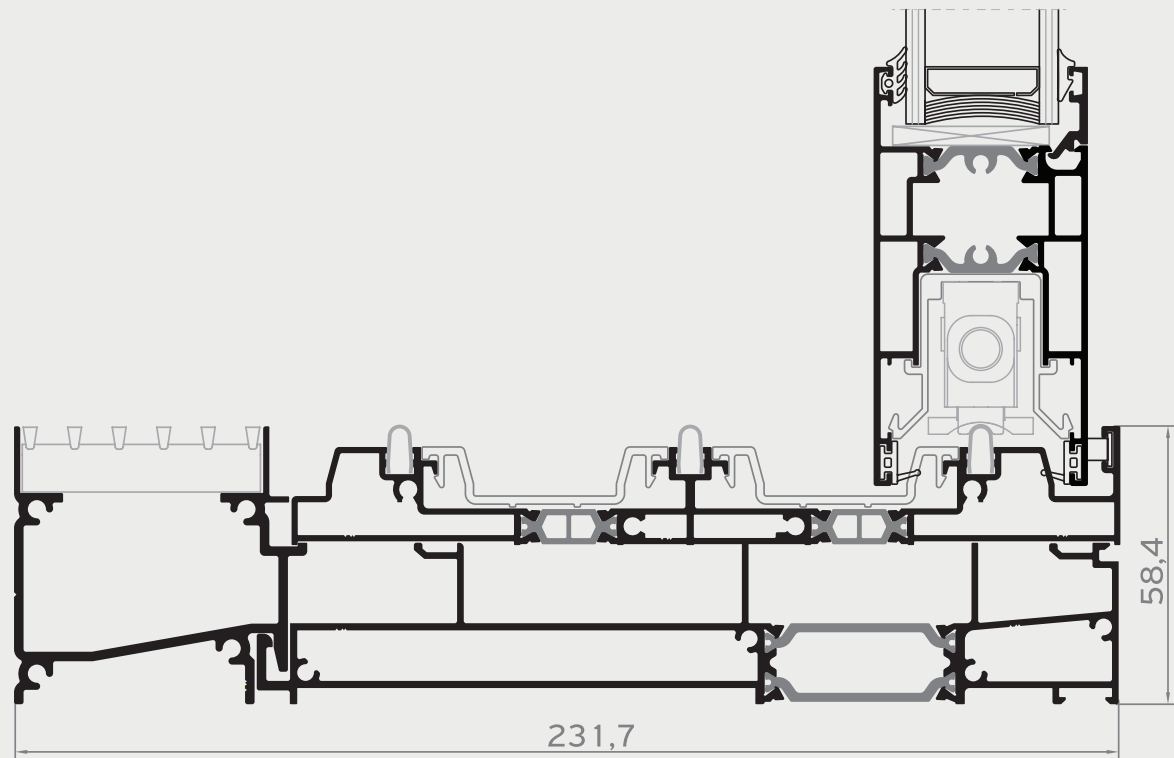
SOLUTION WITH GUTTER
3-SASH / 3-TRACK



SOLUTION WITH GUTTER
3-SASH / 3-TRACK
LOW THRESHOLD

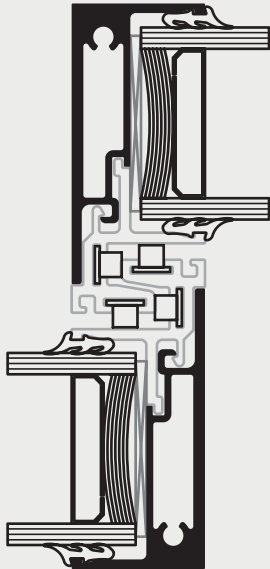
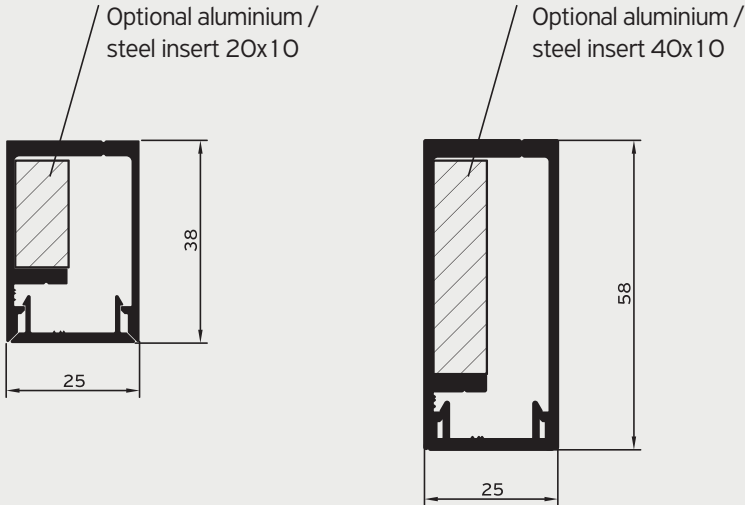


Alumil

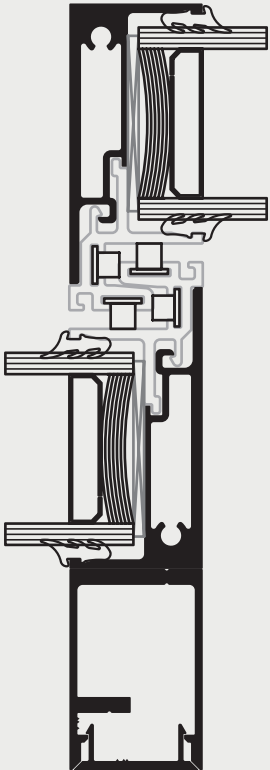


STIFFENERS

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

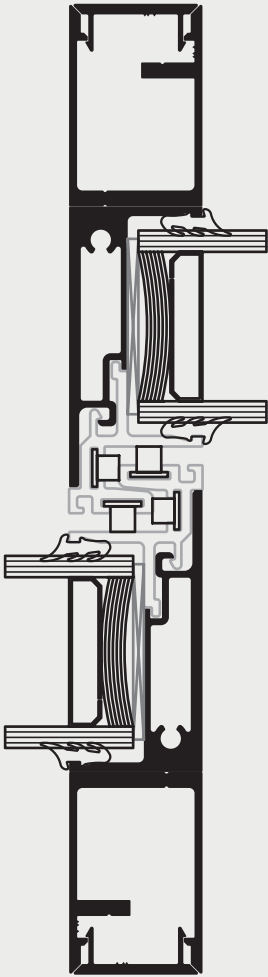


$I_x = 12.6 \text{ cm}^4$

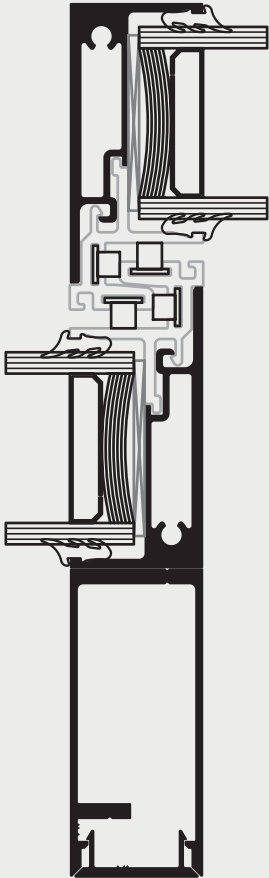


$I_x = 29.1 \text{ cm}^4$

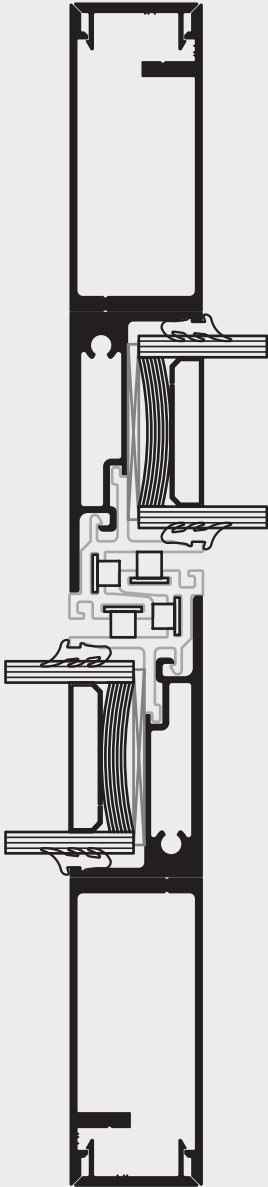
TOP SECTION



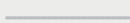
$I_x = 45.6 \text{ cm}^4$



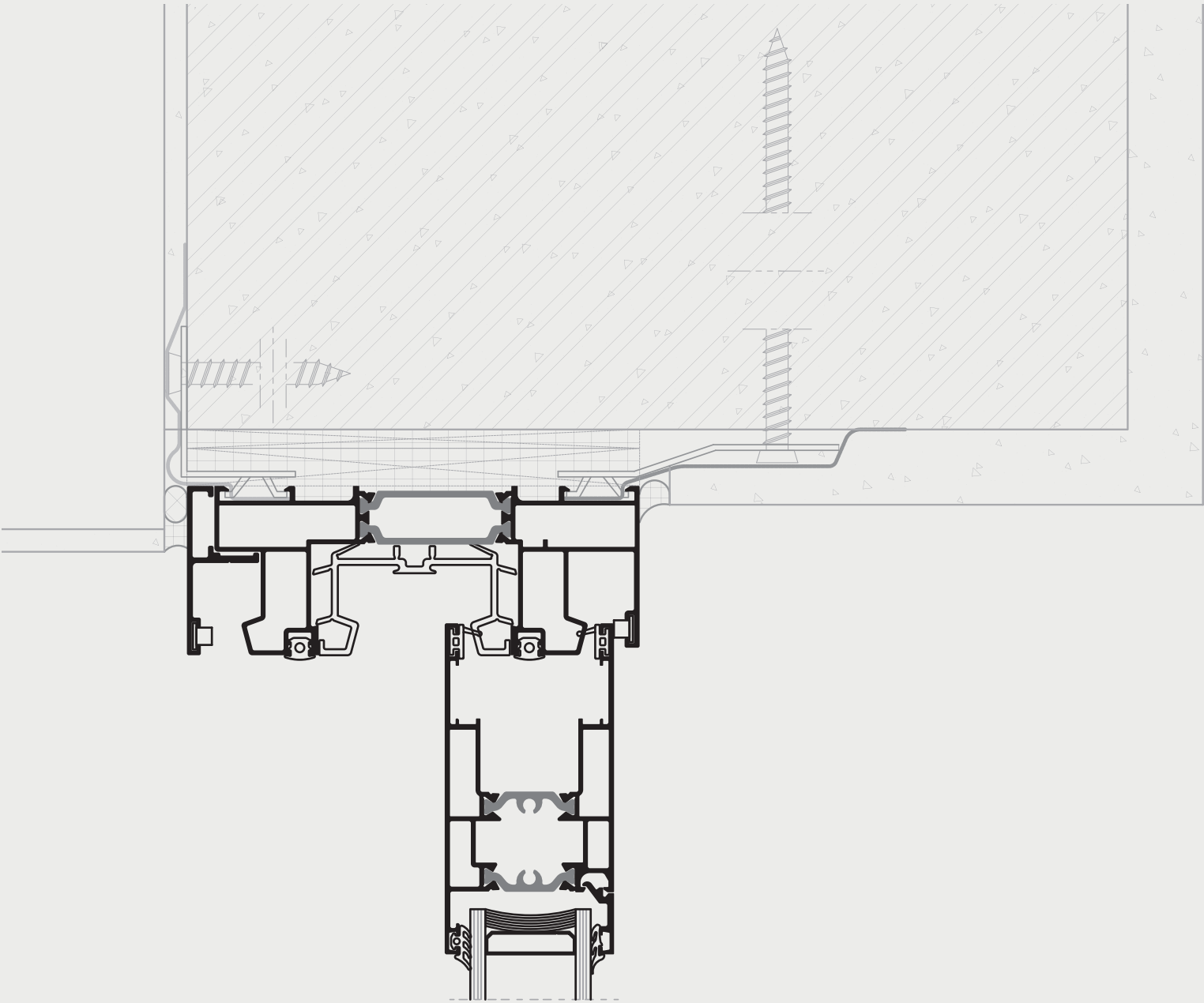
$I_x = 48.3 \text{ cm}^4$



$I_x = 84.1 \text{ cm}^4$

	HYBRID SEALANT
	INSULATION BOARD (KERDYN) 20 mm OR 30 mm
	POLYURETHANE FOAM
	FOAM 5 mm
	THERMAL INSULATION BOARD
	PLASTIC SETTING BLOCKS (SHIMS) 5 mm OR 2 mm
	FLOOR FINISH (TILES) 17 mm
	(TILE) ADHESIVE 4 mm
	SCREED (VARIES)
	REINFORCED CONCRETE SLAB 200 mm
	BRICK 250 mm
	ALUMINIUM ANGLE
	WATERTIGHTNESS TAPE OR EPDM MEM- BRANE
	AIRTIGHTNESS TAPE
	BRUSHABLE WATERPROOFING SLURRY
	FIXING LUG
	HYBRID SEALANT OR SILICONE
	BACKER ROD

TOP DETAIL

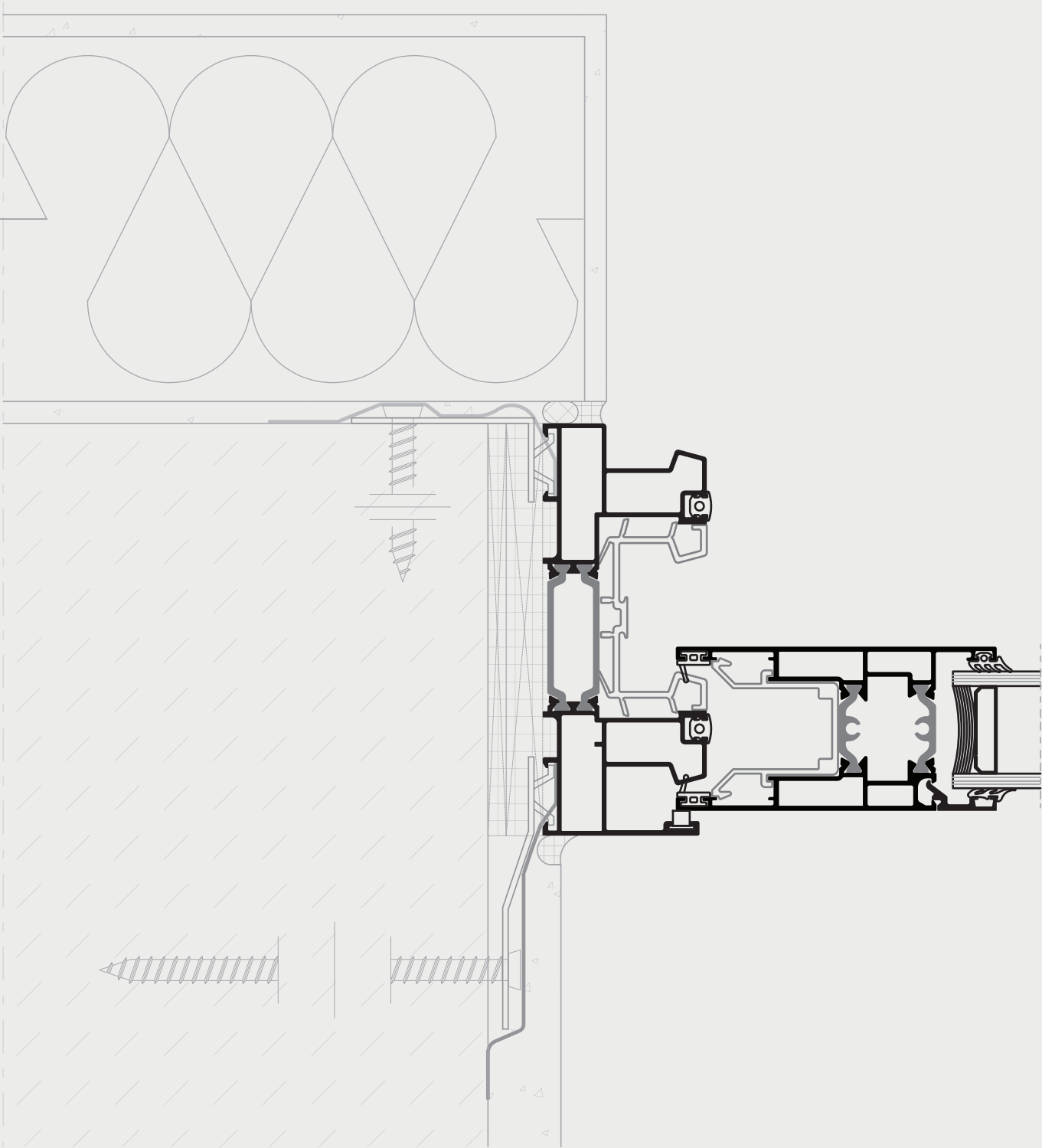


INSTALLATION

SMARTIA
M450

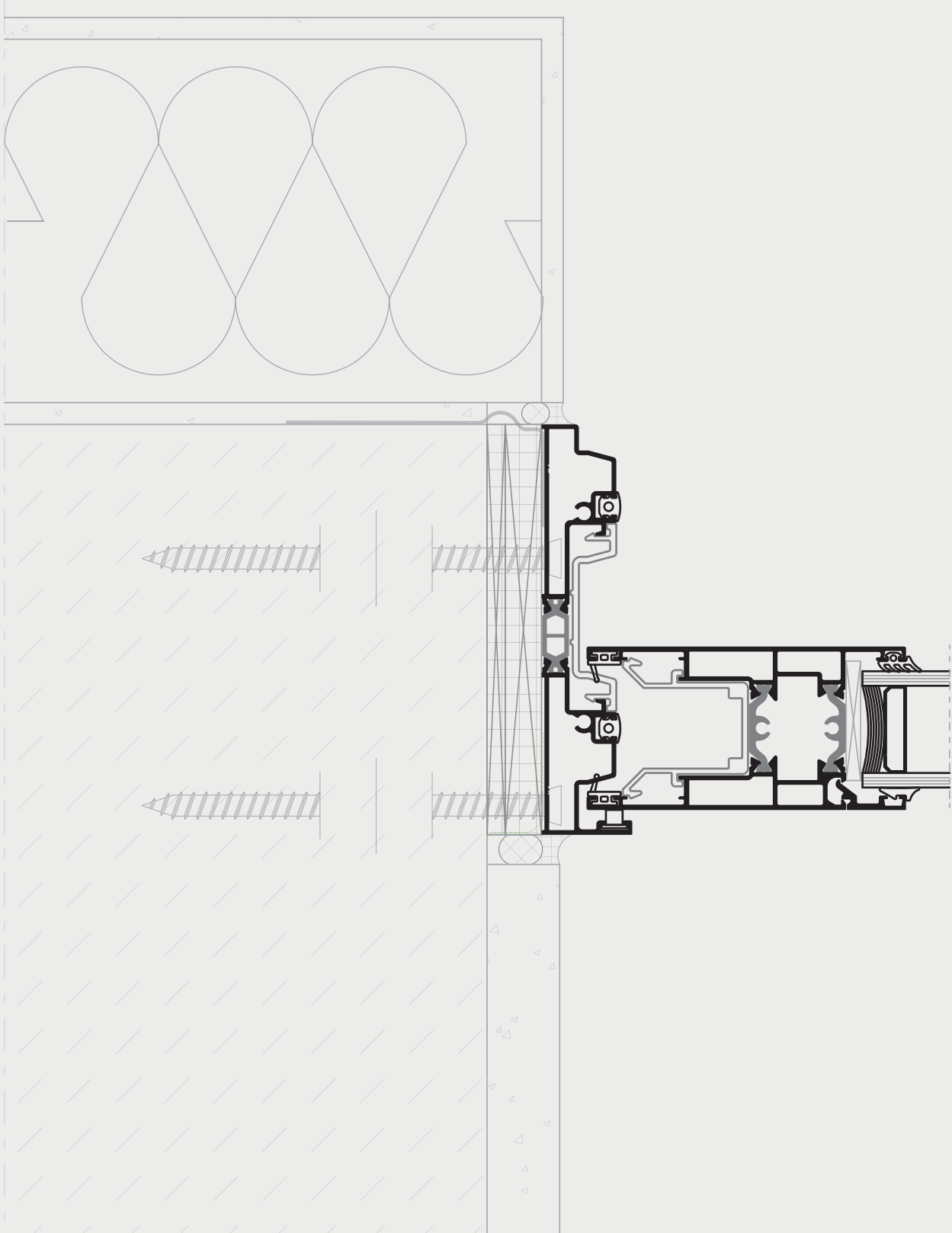


SIDE DETAIL

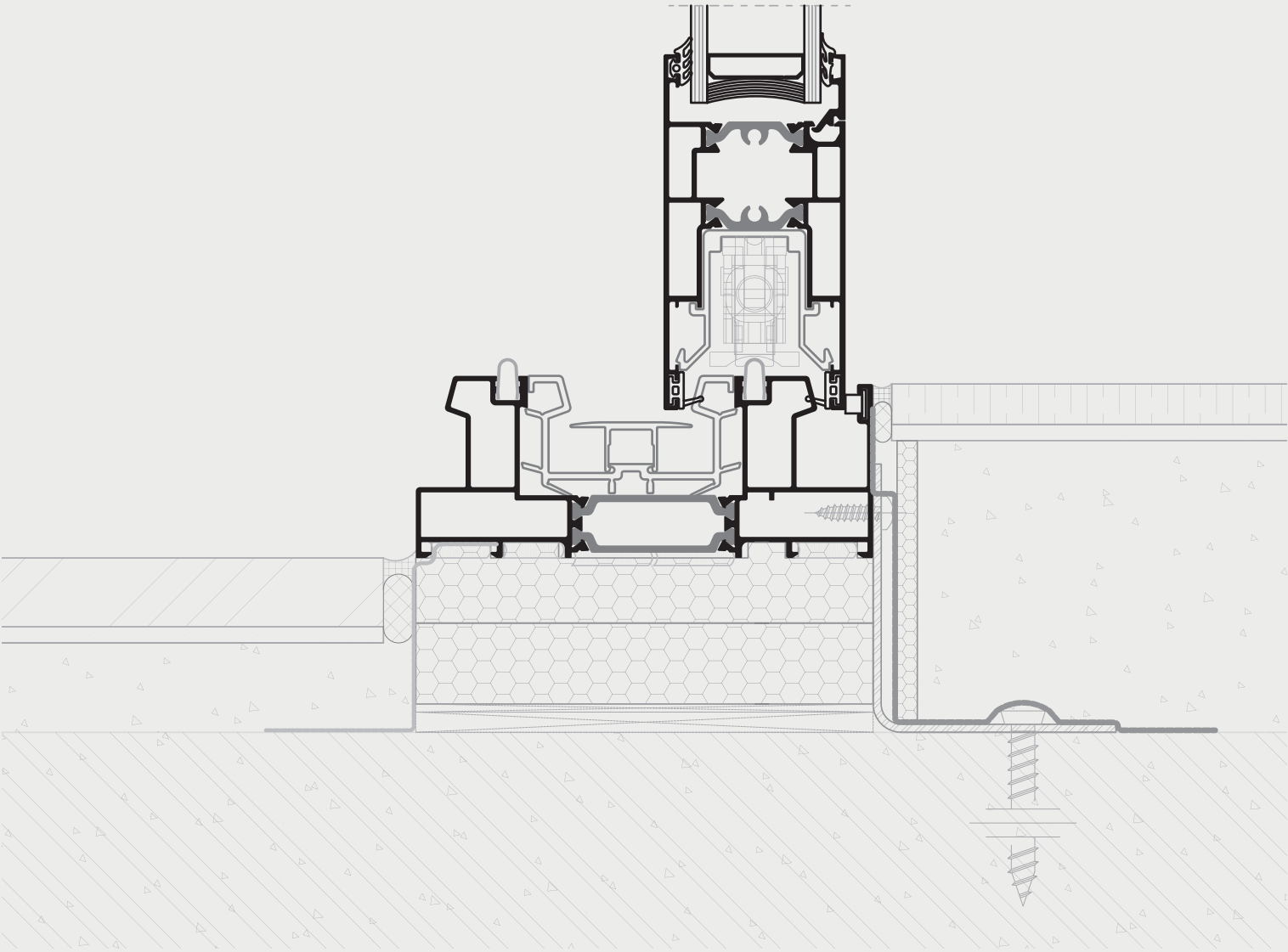


SMARTIA
M450 LT

SIDE DETAIL

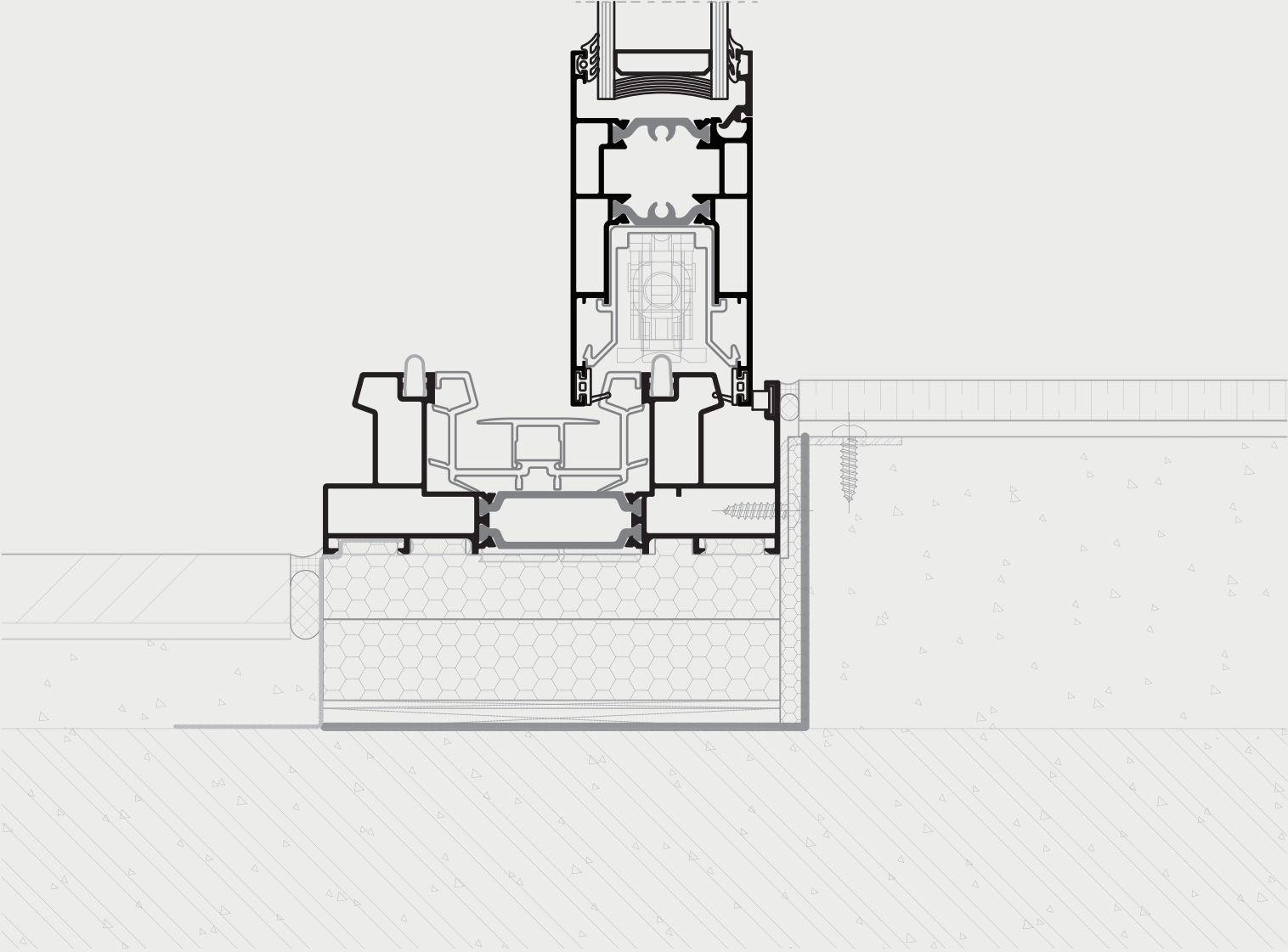


INSTALLATION PRIOR TO INTERNAL FLOOR



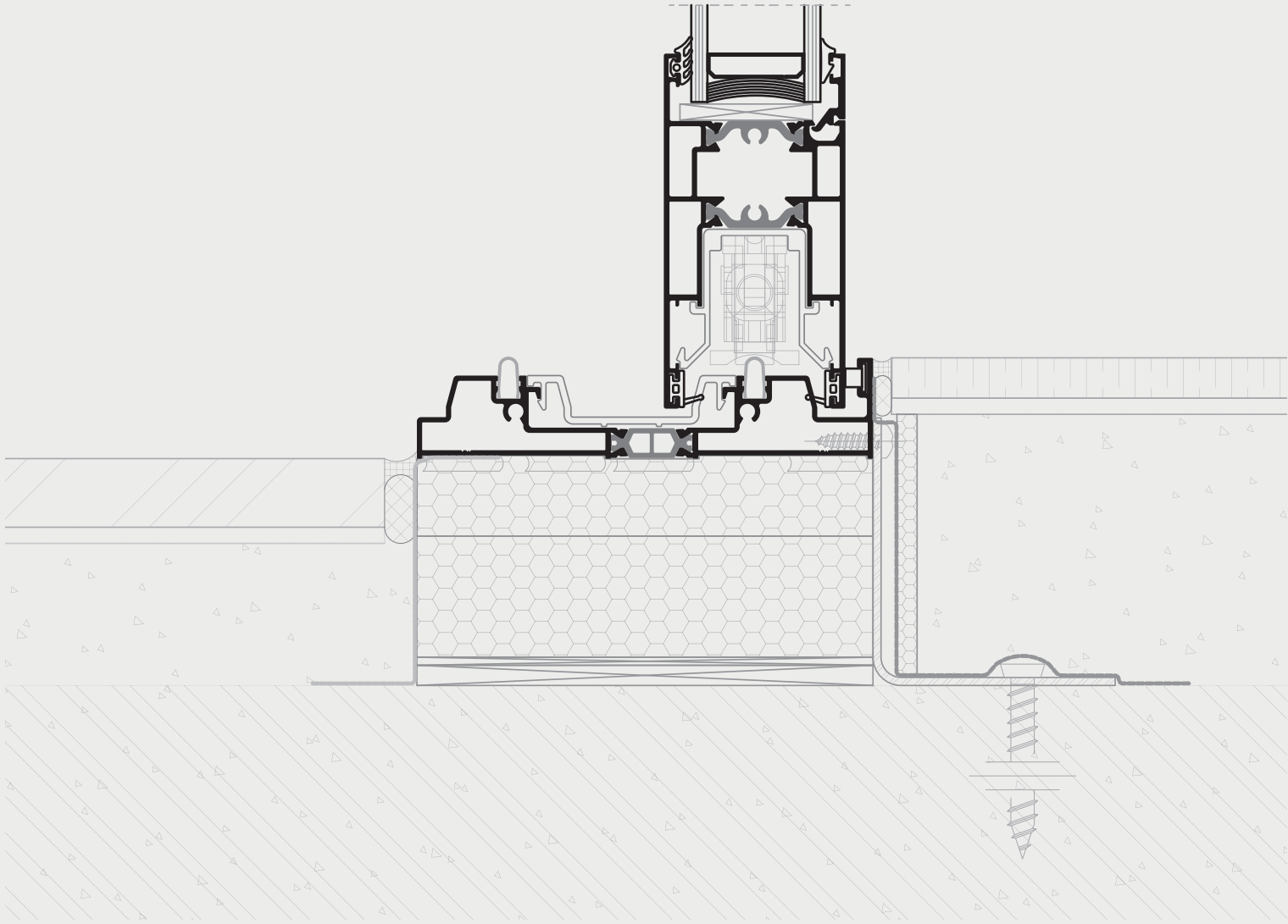
BOTTOM DETAIL

INSTALLATION AFTER INTERNAL FLOOR



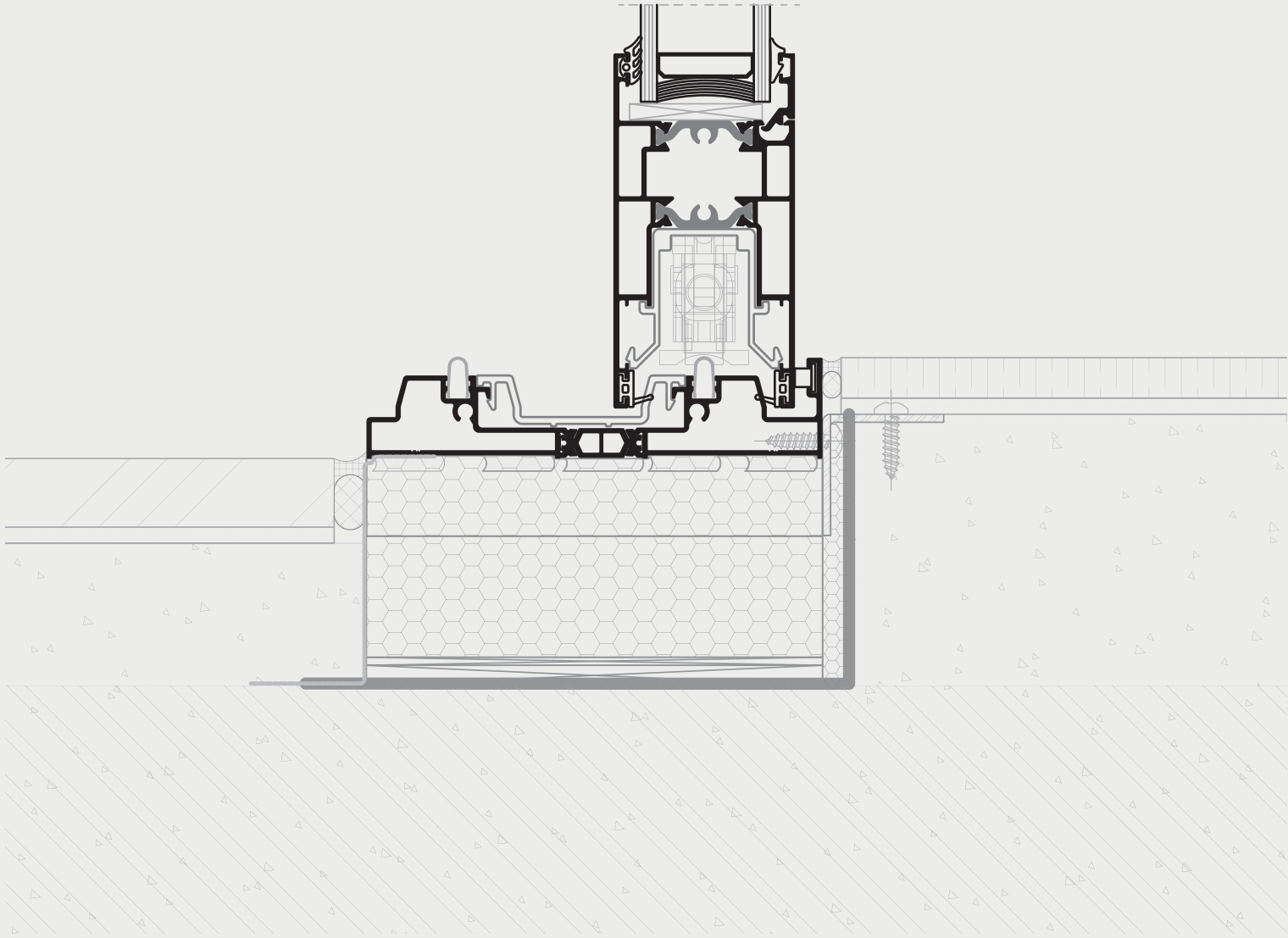
BOTTOM DETAIL

INSTALLATION PRIOR TO INTERNAL FLOOR



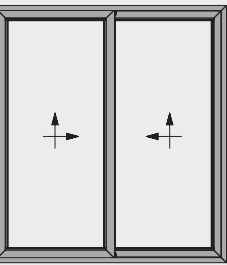
BOTTOM DETAIL

INSTALLATION AFTER INTERNAL FLOOR

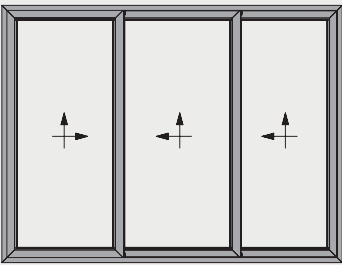


BOTTOM DETAIL

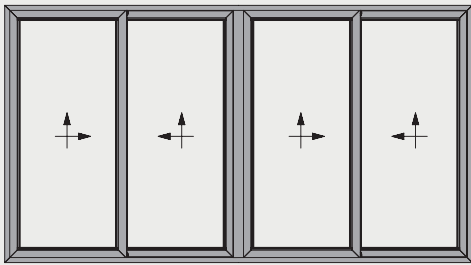
APPLICATIONS



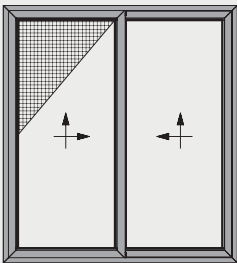
2 SASHES / 2 TRACK



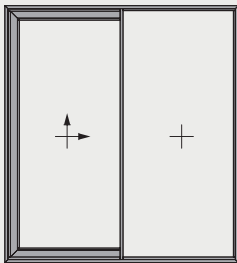
3 SASHES / 3 TRACK



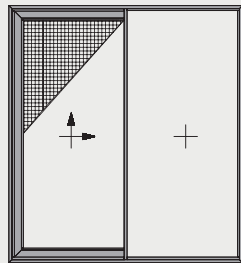
4 SASHES / 2 TRACK



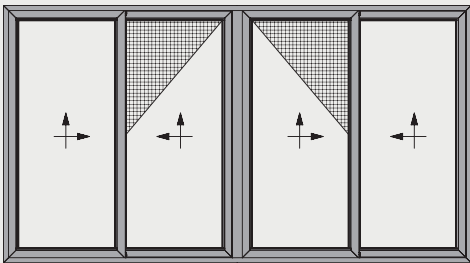
2 SASHES / 2 TRACK / FLYSCREEN



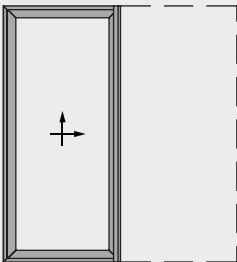
1 SASH / FIXED LIGHT



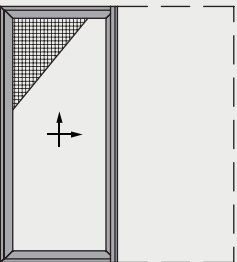
1 SASH / FIXED LIGHT / FLYSCREEN



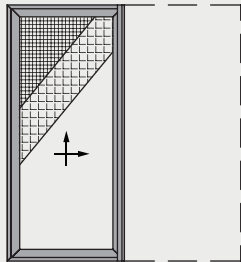
4 SASHES / 2 TRACK / FLYSCREEN



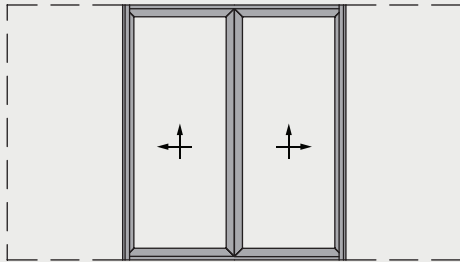
1 SASH / 1 TRACK



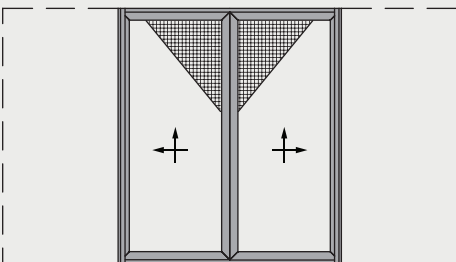
1 SASH / FLYSCREEN



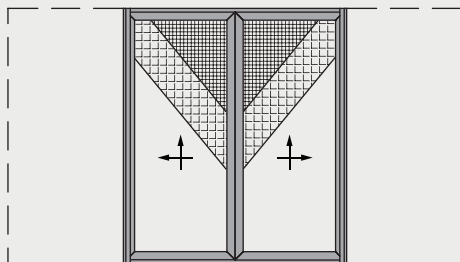
1 SASH / FLYSCREEN / SHUTTER



2 SASHES / 1 TRACK



2 SASHES / FLYSCREEN



2 SASHES / FLYSCREEN / SHUTTER

ALL TYPOLOGIES ARE AVAILABLE BOTH FOR LIFT & SLIDE AND FOR SLIDING TYPOLOGIES

TABLE OF PERFORMANCE



CERTIFICATION	CLASSIFICATION								
 WATER TIGHTNESS EN 12208	1A (0 Pa)	2A (50 Pa)	3A (100 Pa)	4A (150 Pa)	5A (200 Pa)	6A (250 Pa)	7A (300 Pa)	8A (450 Pa)	9A (600 Pa)
 AIR PERMEABILITY EN 12207	1 (150 Pa)	2 (300 Pa)	3 (600 Pa)			4 (600 Pa)			
 WIND LOAD RESISTANCE MAX TEST PRESSURE EN 12210	1 (400 Pa)	2 (800 Pa)	3 (1200 Pa)		4 (1600 Pa)		5 (2000 Pa)		
 WIND LOAD RESISTANCE TO FRONTAL DEFLECTION EN 12210	A (≤ 1/150)				B (≤ 1/200)		C (≤ 1/300)		
 SOUND REDUCTION EN 10140, EN 717	40 dB								

THERMAL PERFORMANCE	DIMENSIONS IN MM (W x H)	U _w in W/m²K (U _g = 0,8)	U _w in W/m²K (U _g = 1,0)	U _w in W/m²K (U _g = 1,1)
2 SASHES / 2 TRACK (SLIDING)	2300 x 2180	1,36	1,51	1,59
2 SASHES / 2 TRACK (LIFT & SLIDE)	2300 x 2180	1,43	1,58	1,66





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