air–lux®

No compromise.

System-Catalogue

air-lux SW 75 sliding window

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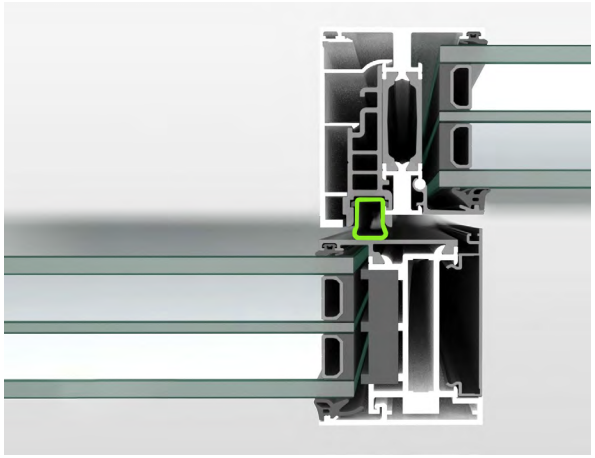
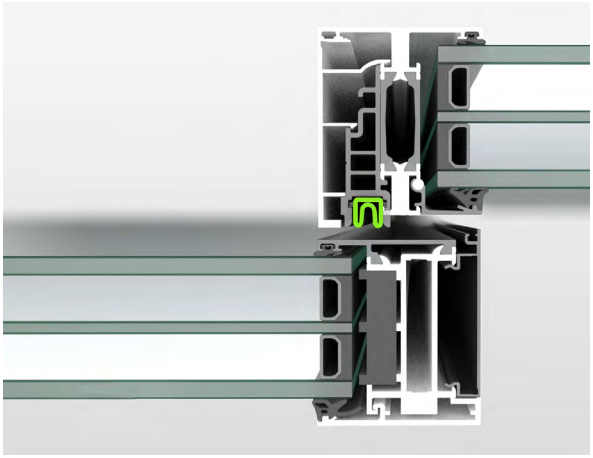
air-lux SW 75 system

100% impermeable, excellent running characteristics
that could previously only be achieved with side-hung windows. When the gasket is open (gasket is deflated), the gasket is rolled up and the sliding window can be moved with minimum effort. Unlike in systems with brush or slide gasket, no trade-offs need to be made between tightness and running characteristics.



Inflated gasket
When the button is pressed, air is pumped into the gasket. The gasket presses against the sliding sash and tightly seals the gap between the sliding sash and the frame.



Deflated gasket
To open the window, press the button. This deflates the gasket, which causes it to detach from the sliding sash. The sliding window can now be opened.

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air-lux.com/sliding-window

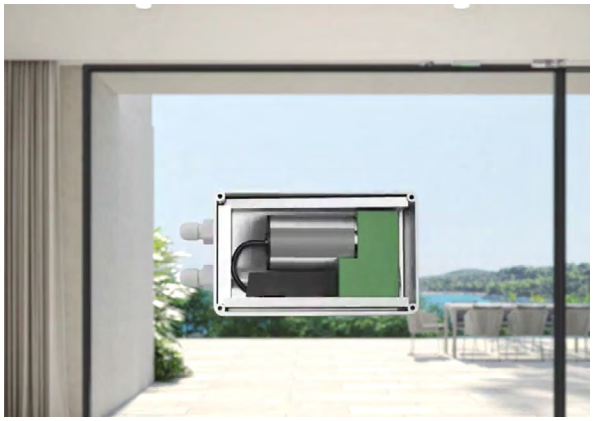
air-lux SW 75 system

Button
The button is the central control and display element and is used for unlocking, locking and status display in addition to fault and error display.

Motherboard
The motherboard is an electronic component used in every window to process electrical signals, trigger actions and control the window's functions.
It contains circuits, microcontrollers and interfaces to connect sensors, process data and send control commands to other parts of the window.

Locking bolt
The sliding window features a locking system with an electrically controlled locking bolt. In the event of a power failure an open window, whether manual or motorized, can be manually pushed into the closed position. Once in the closed position, the locking bolt will automatically lock. The locking bolt is also available with VdS class C certification.

air-lux SW 75 system



Compressor
The virtually silent, built-in compressor is at the heart of the patented sealing system. It maintains a constant pressure of less than 1 bar through continuous monitoring, ensuring 100% air and water tightness at all times.

Roller
The roller and stainless-steel track guarantee optimal running properties of the sliding window. The integrated roller can transfer loads of up to 1,800 kg per sash to the track.

Features of the air-lux SW 75

Thanks to the patented, pneumatic air-lux sealing system, there are no longer any compromises when it comes to sliding windows. air lux guarantees 100% air and water tightness and outstanding operational function of sliding window weights of up to 1800 kg.

- Manual or motorized sliding window up to 25 m²
- Robust yet elegant frames
- High glass content for optimum transparency
- Can be used as an individual element, in strip windows, in mullion-transom construction or in façade elements.
- Accommodates structural deflection up to 40 mm in the lintel area and up to 20 mm in the base area

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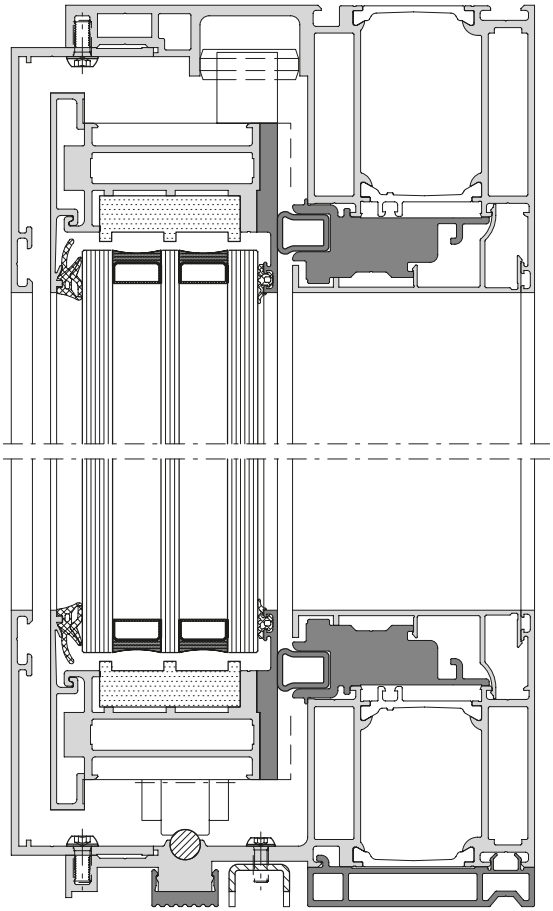
ARCHITECTS' DARLING AWARDS 2018 BRONZE Heinze

german brand award '18 gold

SR 2021 Fabulous Companies of the year

Besondere Auszeichnung INNOVATIONSPREIS ARCHITEKTUR + BAUWESEN

System



Characteristics and benefits

- Sliding window system with thermally insulated profiles for maximum transparency and natural light transmission
- Inflatable gasket eliminates friction when opening and closing
- Floor-to-ceiling installation
- Exterior sliding sash design ensures clean interior lines
- Compatible with Schüco AWS 75.SI+ and AD-UP 75
- Manual or motorized options available
- All components concealed in the frame
- Zero threshold

Tests and standards*

Wind load resistance in accordance with DIN EN 12210 up to class C4/B4
Air permeability in accordance with DIN EN 12207 up to class 4
Water tightness against driving rain in accordance with DIN EN 12208 up to class EI 1500
Burglar resistance in accordance with DIN EN 1627* up to class RC3
Thermal insulation in accordance with DIN EN ISO 10077-2** from 0.8 W/(m²K)
Sound insulation in accordance with EN ISO 10140 up to 43 dB
Operating forces in accordance with DIN EN 13115 up to class 2

* Depending on the design (see test certificate)

** Calculation basis: schema A
Element dimensions:
W × H 6,000 mm × 2,500 mm /
Glass: 0.5 W/(m²K), 0.034 psi

The air-lux SW 75 system may only be installed by certified or trained metalwork partners

Opening types

Description of schemas

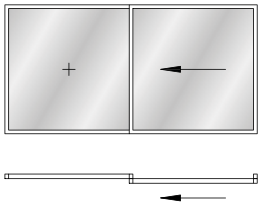
1 sliding element left/right 1 fixed section	Schema A
1 sliding element left/right 1 fixed section in front of wall	Schema A pocket
1 central sliding element 2 fixed sections	Schema G
2 sliding elements left/right 1 fixed section	Schema K
2 central sliding elements 2 fixed sections	Schema C

Coding

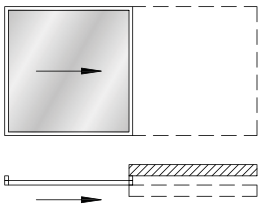
Pocket	Pocket
Corner	1
Exterior corner	1.1
Interior corner	1.2
Exterior corner free angle	1.3
Interior corner free angle	1.4
Tilted	2
Tilted outward	2.1
Tilted inward	2.2
Curved	3
Curved outward	3.1
Curved inward	3.2
Vertical	5
Vertical sliding element top	5.1
Vertical sliding element bottom	5.1
Roof	6
Skylight	6.1
Skylight	6.2

Sliding window opening types

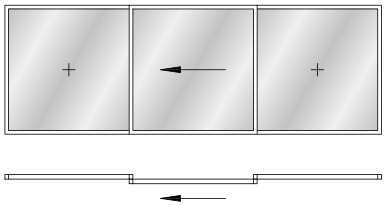
The air-lux sliding window is a single-track system in which the sliding sash moves on the exterior in front of the fixed glazing. All schema are drawn from the exterior point of view.



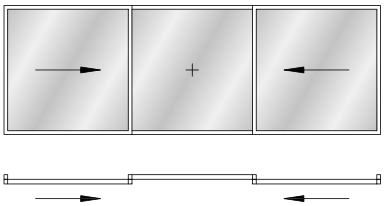
Schema A



Schema A pocket

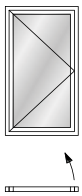


Schema G

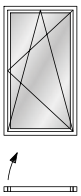


Schema K

air-lux can be used to combine window and door elements.

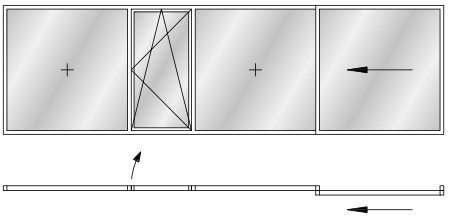


Doors



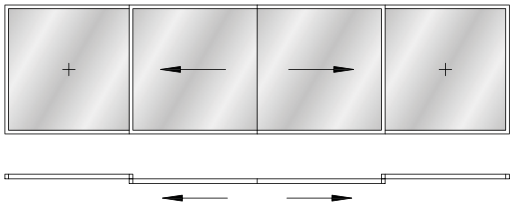
Tilt-and-turn windows

Ventilation sashes

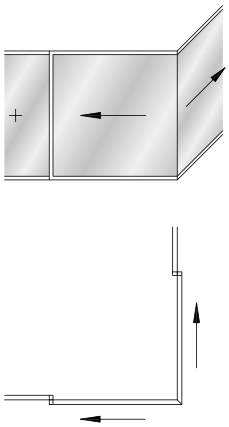


Sliding window schema A and tilt-and-turn window

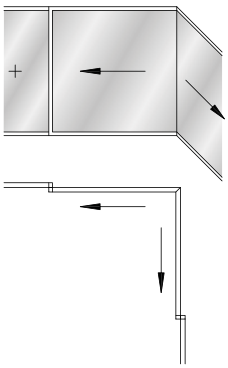
Sliding window opening types



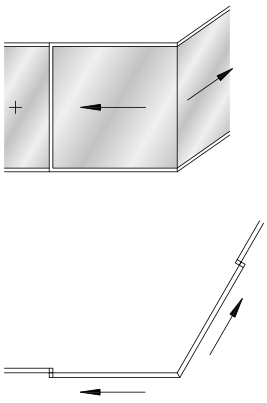
Schema C



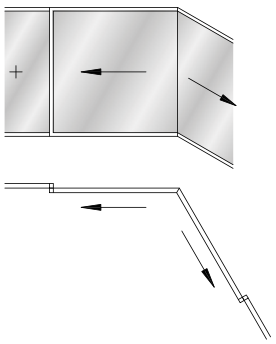
Schema C 1.1



Schema C 1.2

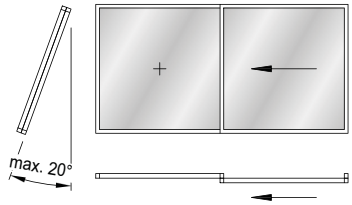


Schema C 1.3

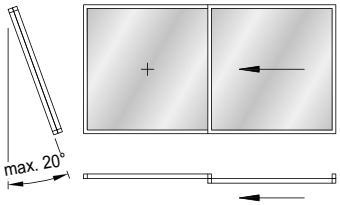


Schema C 1.4

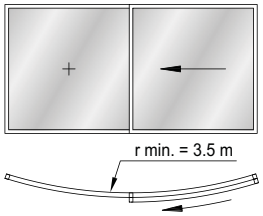
Special solutions



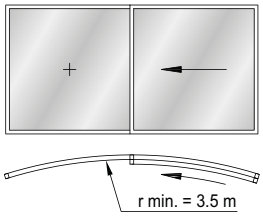
Schema A 2.1



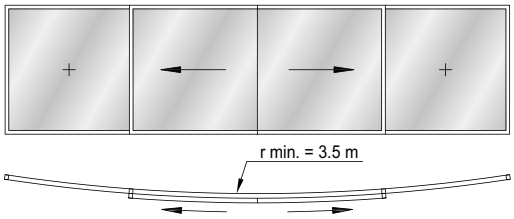
Schema A 2.2



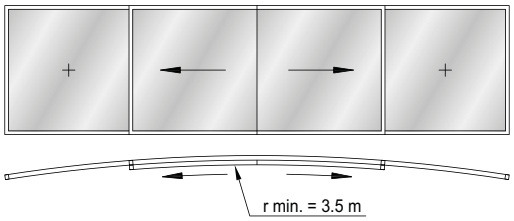
Schema A 3.1



Schema A 3.2

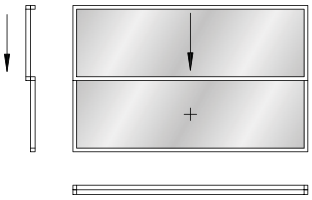


Schema C 3.1

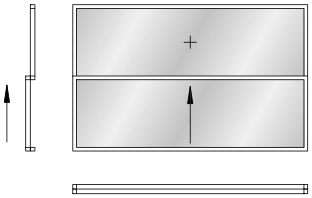


Schema C 3.2

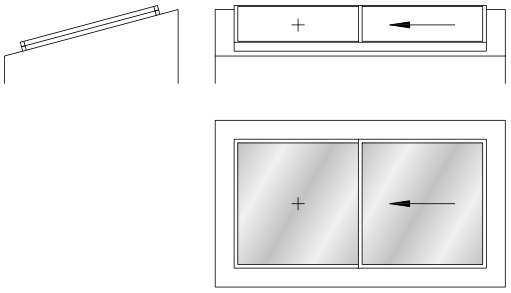
Special applications



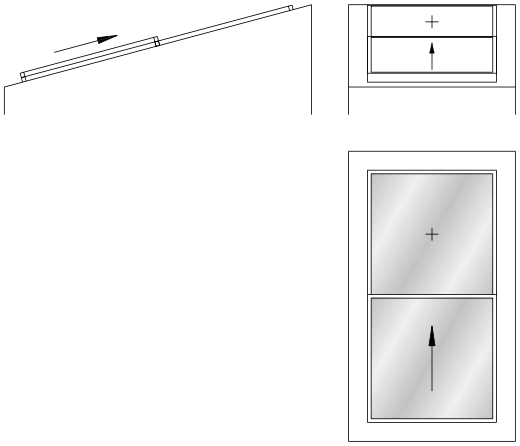
Schema A 5.1



Schema A 5.2



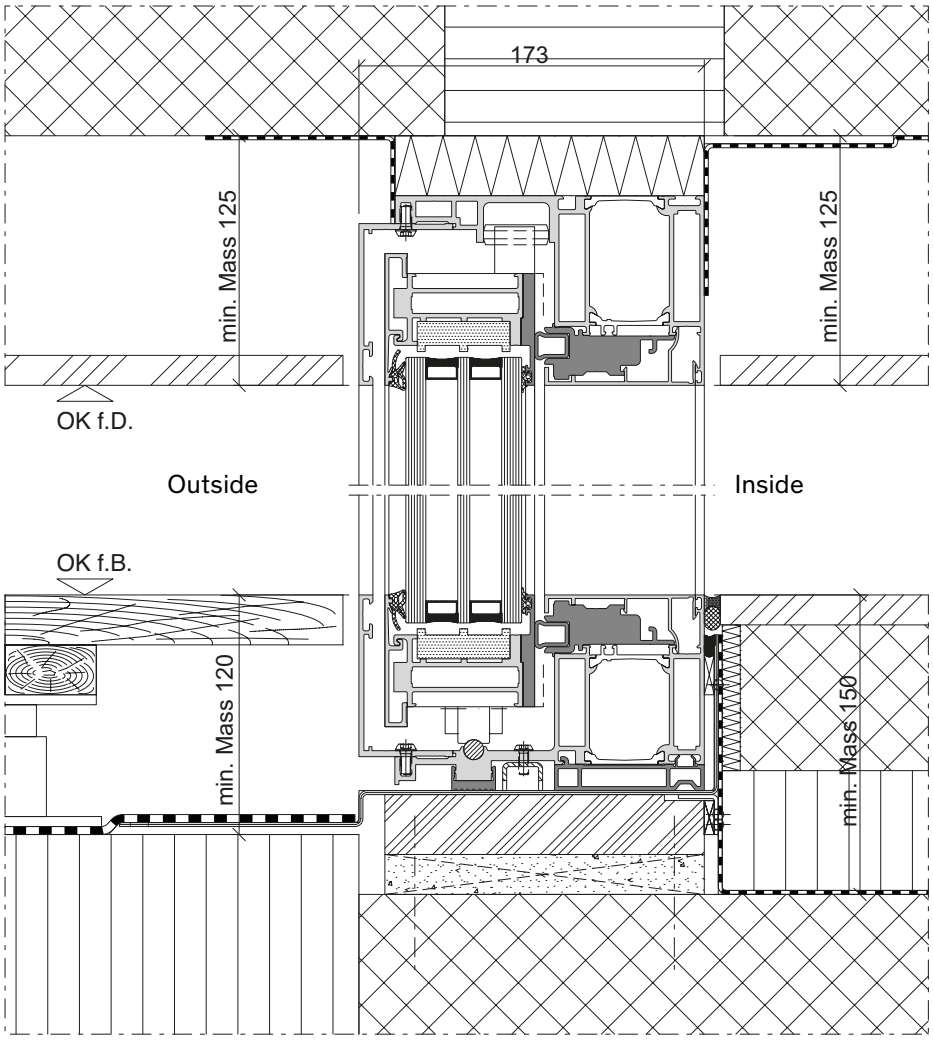
Schema A 6.1

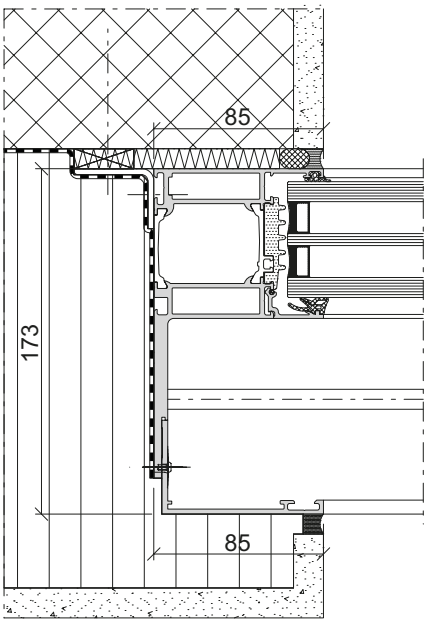


Schema A 6.2

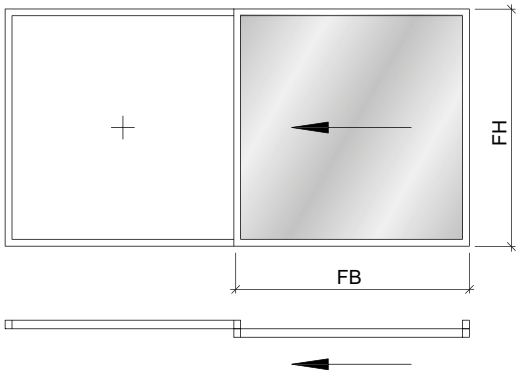
Dimensions available on request.

Minimum installation dimensions





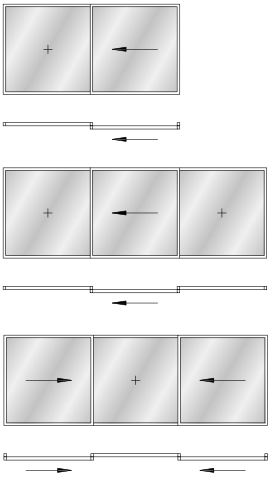
Dimensions



Dimensions – Schema A, G and K

Width: min. SW 1,400 mm
max. SW 6,000 mm

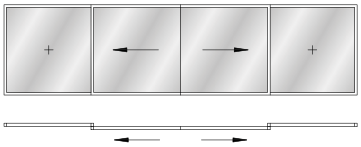
Height: min. SH 700 mm
max. SH 6,000 mm



Dimensions – Schema C

Width: min. SW 1,200 mm
max. SW 6,000 mm

Height: min. SH 1,100 mm
max. SH 6,000 mm



Versions

Motorized	Width: min. SW 1,700 mm
RC	Width: min. SW 1,800 mm
Motorized threshold	Width: min. 700 mm

Area: max. 18 m²
Weight: max. 1,800 kg

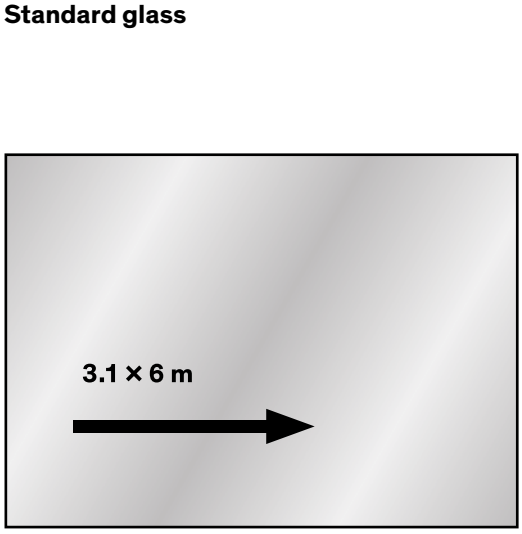
Fixed glazing: up to maximum glass sizes

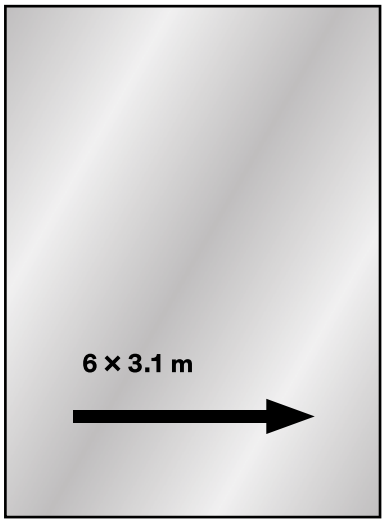
Other dimensions on pages 27–31 and available on request.

SW = sash width
SH = sash height

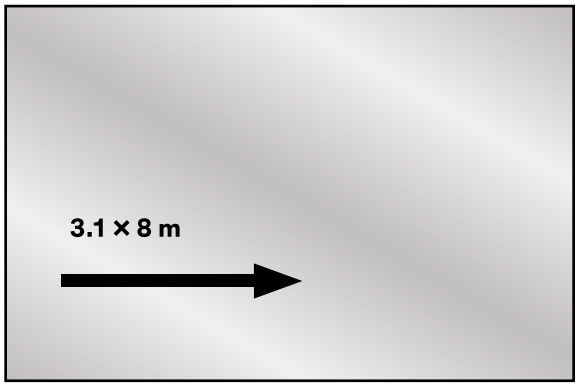
Insulating glass dimensions

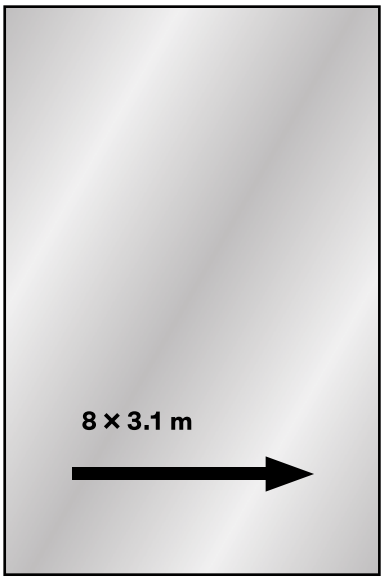
Standard glass





Special glass

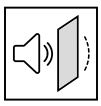
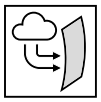
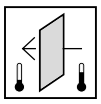
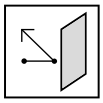
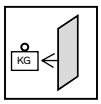
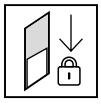




Custom production available on request

CE datasheet

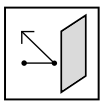
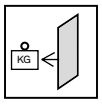
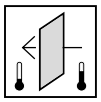
Test results for product standard EN 14351-1

	**Air permeability** Classification to standard EN 12207: 2016-12	up to class 4
	**Driving rain impermeability** Classification to standard EN 12208:1999-11	up to class E1500
	**Noise insulation** Dimensions in accordance with DIN EN ISO 10 140-2	up to 43 dB
	**Wind load** Classification to standard EN 12210: 2016-03	up to class C4/B4
	**Thermal insulation** Classification to standard EN 10077-1	U_w value/property-specific 0.83 W/m²K, U_g 0.5 W/m²K 0.92 W/m²K, U_g 0.6 W/m²K
	**Burglar resistance** in accordance with EN 1627-1630	up to RC 3
	**Bullet-resistant** Special designs up to resistance class BR4-NS	
	**Operating forces** Classification to standard EN 13115:2020-11	up to class 2
	**Fall protection** in accordance with DIN 18008-4	Category A
	**Roll-over capacity** in accordance with ift guideline BA-01/1	up to class 6

Institute/authority

US datasheet

AAMA/WDMA/CSA 101/I.S.2/A440-11
Class CW-PG50
Tested dimensions: 10,973 mm/width × 3,962 mm/height (432 in × 156 in)

	**Air permeability** Classification in accordance with standard ASTM E283-04	0.00 cfm/ft² @ 300 Pa (6.24 psf)
	**Driving rain impermeability** Classification to standard ASTM E331-09 Uniform pressure ASTM E547-09 Cyclic pressure	No entry @ 958 Pa (20psf) No entry @ 958 Pa (20psf)
	**Wind load** Classification to standard Uniform structural load Design pressure ASTM E330-02 (10) ASTM E330-02 (10) Deglazing ASTM E987-88 (09)	+/- 2394 Pa (+/- 50 psf) +/- 3591 Pa (+/- 75 psf) No damage
	**Hurricanes** Classification to standard TAS 201/2002/203	HVHZ, wind zone 4, large and small missile impact
	**Burglar resistance** Classification to standard ASTM F842-04 Forced Entry	Burglar resistance Classification in accordance with standard ASTM F842-04 Forced Entry
	**Bullet-resistant** Special designs up to resistance class BR4-NS	Window height up to 3 m
	**Operating capacity** Classification to standard ASTM E2068	12.4 lbf initial/13.8 lbf
	**Thermal insulation** Classification to standard NFRC glazed wall system NFRC sliding door	0.18 Btu/hr.sqft. °F (1.02 W/m²K) 0.24 Btu/hr.sqft. °F (1.36 W/m²K)

Institute/authority

Important information

Sash weights
Suitability for increased weights:
Higher operating forces are to be expected in the event of sash weights above 600 kg.
A classification of the operating forces in accordance with class 2 of EN 13115 is unlikely to be achieved.
air-lux recommends motorising sashes weighing over 500 kg.
Deviations from legal or normative regulations and specifications for maximum sash weights at the place of use of the system must be taken into account and ensured by the party responsible for ordering the system.

Important information
When planning and designing systems with wall cavities, it should be noted that the construction of the surrounding walls can have an influence on the temperatures inside the wall cavity and, in particular, on the components used. When planning and designing the system in the construction project, it must be ensured that there is sufficient air circulation in the wall cavity so that any humidity can dissipate out of the wall space.

Weight and safety
The sliding sash must always be closed at a controlled speed. Increased closing speed and sash weights increase the risk of pinching. This can also cause damage to the infeed area of the system.

Possible condensation
The formation of condensation is strongly influenced by climatic and structural boundary conditions (outside and inside temperature, relative humidity etc.).
Please note that in some cases, due to unfavourable boundary conditions in conjunction with the narrow visible width in this system, especially in corner mullion constructions, condensation can occur if the outside temperature falls below 0°C.

Risk of crushing
Risk of pinching when moving the sliding sash into the frame:
When closing, do not touch the infeed area of the sliding sash, as there is a risk of pinching. Always use the handle to operate the sliding sash.

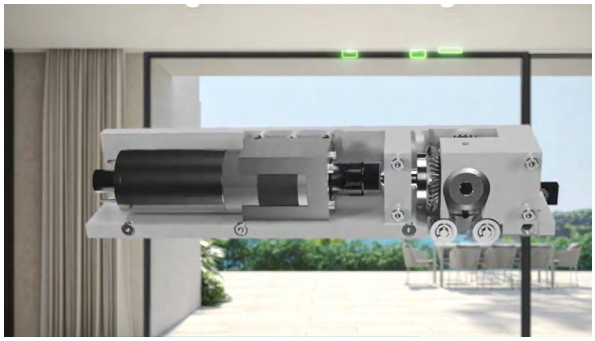
All-glass corners
The illustration of the all-glass corner design/glass joint of the insulating glass is a conceptual design that must be agreed by the manufacturer with the glass maker or glass supplier in each individual case.
In the case of monoglass and insulated sandwich panels, the manufacturer must also coordinate with the glass maker or glass panel supplier.
Under unfavourable climatic conditions, there is an increased risk of condensation in the area of the all-glass corner/glass joint.
We recommend having the absence of condensation confirmed by a building physicist.

Notes on glass
The choice of glass must be clarified in advance for each project. Coordination between the metal fabricator and the glass supplier is essential to ensure compatibility with system requirements.

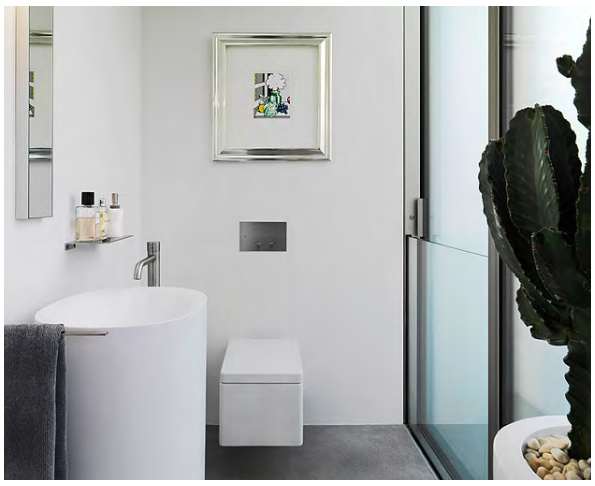
Additional information:
Risk of glass breakage in multi-track systems.
When constructing multi-track systems, panes with safety glass must not be used due to unfavourable temperature developments between the glass panes and the associated risk of glass breakage. The middle panes should be made of ESG-H to avoid this risk. P4A glass, for example, can be used for the two outer panes.

Glass tolerances in case of glass deflection.
Due to changing climatic conditions (e.g. summer temperatures, height difference between the manufacturing site and the installation site), there may be minimal bending of the glass after installation.

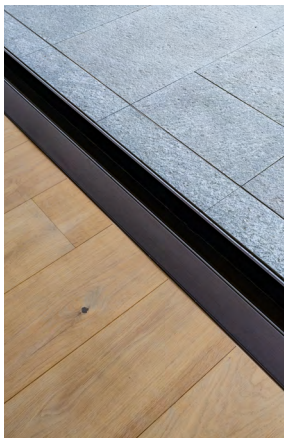
Optional features

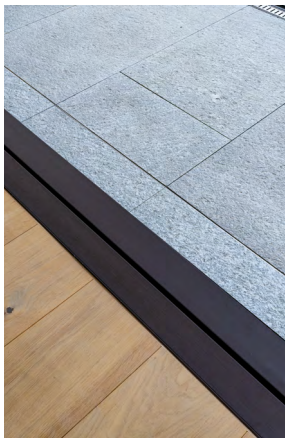


Motorization
The air-lux motor is concealed in the frames of all opening types and avoids the need for niches or recesses in the ceiling. The motorized opening and closing of the sliding window is gentle and quiet. In the event of a power failure, the sliding sash can easily be slid manually and locked without power. In the standard version, a safety cut-off is installed as a basic safety feature.



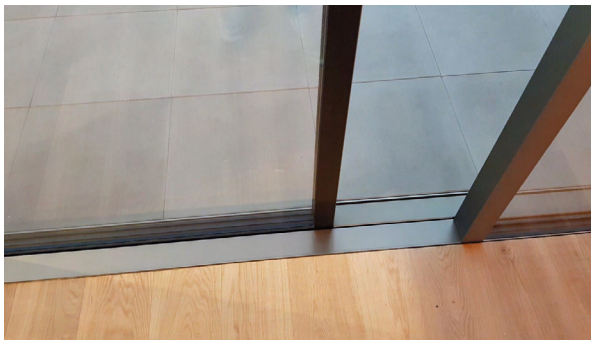
Fall protection
For constructions with no escape option, air-lux offers passive protection in the form of integrated fall protection. The laminated safety glass is installed on three sides in the frame opening.

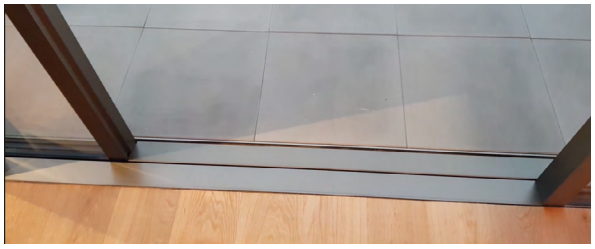




Motorized threshold
In flush sliding systems, there is a recess in the track area when the window is open. On request, air-lux can provide a motorized threshold, which ensures barrier-free access when the sliding window is open.

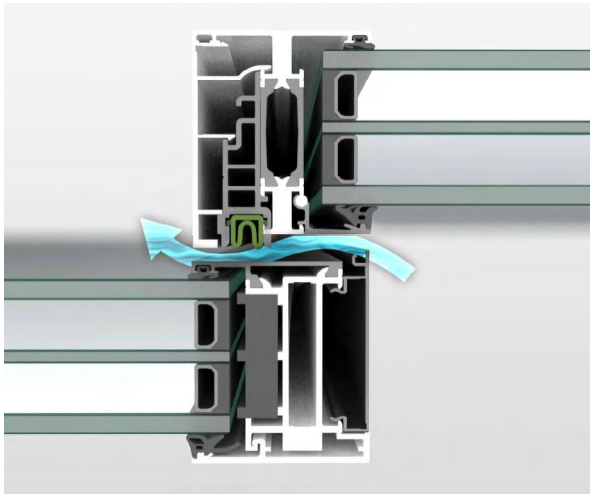
Optional features





Bar slider
As an alternative to the motorized threshold cover, a manual sliding threshold cover can be used in permissible instances. Due to its design, a fixed area is required to accommodate the sliding threshold cover when the element is closed. The motorized option may be used in all other cases.

Gap ventilation
A gap ventilation feature allows the sliding element to open up to 90 mm, providing ventilation into the building. Once at 90 mm, a second press of the button locks the sliding element in place to prevent unwanted movement.



Indirect ventilation
Indirect ventilation while the sliding element is closed can be activated via a separate button or through the building management system. In this mode, the door remains securely locked while the gasket deflates, creating a 5 mm opening around the perimeter of the door. This allows for indirect ventilation and offers improved sound insulation compared to traditional window vents.

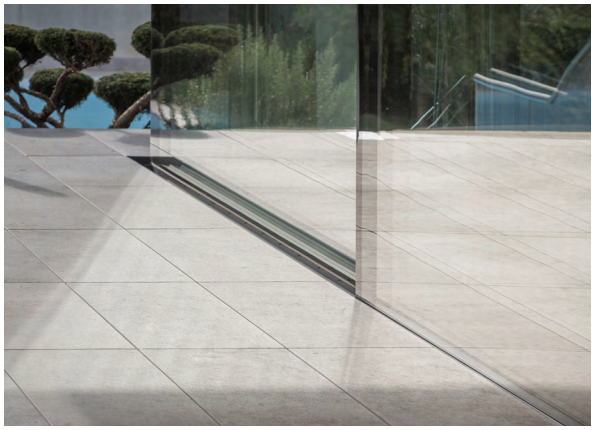
Optional features

Alarm bundle
If necessary, air-lux provides independent contacts for alarm systems that have been tested by the VdS (Verband der Sachversicherer). The air-lux alarm bundle includes a magnetic contact for position monitoring and a bolt contact for closure monitoring. All components are concealed in the system.

Building management system
Do you want to be able to monitor, open and close your air-lux sliding windows from anywhere? Directly connecting the air-lux motherboard to your building management system makes this easy.

Insect screen
An integrated insect screen, suitable for both small and large sliding sashes, is available for window heights of up to 3300 mm and opening widths of up to 850 mm. The pleated blind is operated via a discreet grip rail, allowing it to slide to the side and remain in any desired position. Thanks to its sophisticated design, it can be operated effortlessly and is fully integrated into the profile, making it invisible when the sliding window is closed.

Optional features



All-glass design
The air-lux sliding sash is also available in an all-glass design. The glass is designed with a step on two or, if desired, on all four sides. This makes the glass surface appear even larger and makes the window truly eye-catching.

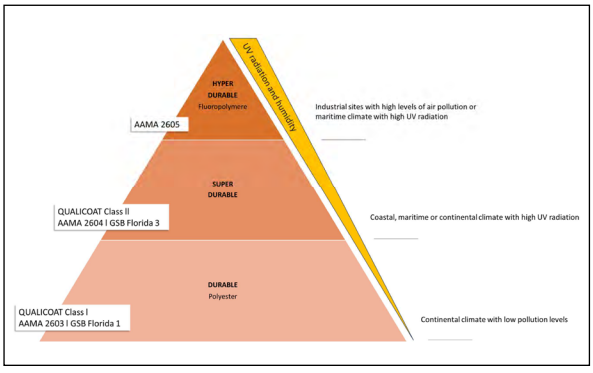
All-glass design
Mullion-free corners and bi-parting sliding elements air-lux enables the realization of maximum openings with postless corner solutions or bi-parting sliding elements. Thanks to the labyrinth construction, double-stop gasket, and the optional motorized locking system with at least three locking points, these variants also ensure complete air and water tightness.

Maritime applications
In coastal regions, near swimming pools, or in industrial environments, the aggressive atmosphere places increased demands on buildings and their components. For these conditions, air-lux offers specially designed components that ensure long-term durability and system performance, even under harsh environmental influences.

Optional features

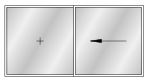
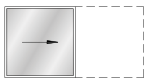
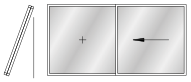
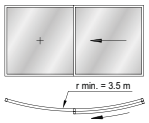
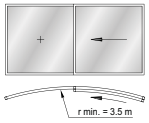
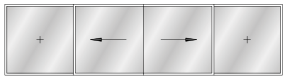
Curved/tilted
With air-lux, the only limit to design is your imagination. There are many architectural options available, not only in terms of size, but also in terms of shape and installation type.

Materials
air-lux ConnectAwarded by AIT architectural magazine in 2013 as a system that «achieves high aesthetic quality without compromising technical performance», air-lux Connect offers a refined selection of material finishes without sacrificing functionality. In addition to the standard aluminum version, options in bronze and a variety of premium woods are available – all with the same outstanding sealing and operational performance.



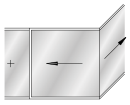
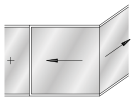
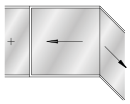
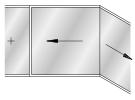
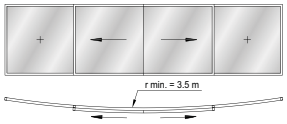
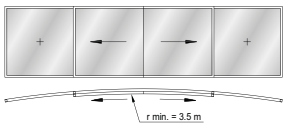
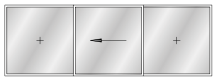
Surface
At air-lux, there are no standard colors – every element is finished according to individual customer specifications. Upon receipt of the material, components are powder-coated in the desired color or anodized for a natural metallic appearance. Both powder coating and anodizing are available, with three durability classes of powder coating offered depending on the installation location and environmental exposure.

air-lux SW 75 sliding window variants

Opening type	Exterior handle	Connection to building management system	Indirect ventilation	Gap ventilation	Alarm bundle	Insect screen	Fall protection	Bar slider	Floor flap	Burglary protection	Motorisation	All glass	Maritime	Materials	Hurricanes
 Schema A	■	■	■	■	■	■	■		■	■	■	■	■	■	■
 Schema A pocket	■	■	■	■	■	■	■		■	■	■	■	■	■	■
 Schema A 2.1	■	■	■	■	■		■			■	■	■	■		
 Schema A 2.2	■	■	■	■	■		■			■	■	■	■		
 Schema A 3.1	■	■	■	■	■					■	■		■		
 Schema A 3.2	■	■	■	■	■					■	■		■		
 Schema C	■	■	■	■	■		■		■	■	■	■	■	■	

■ = possible

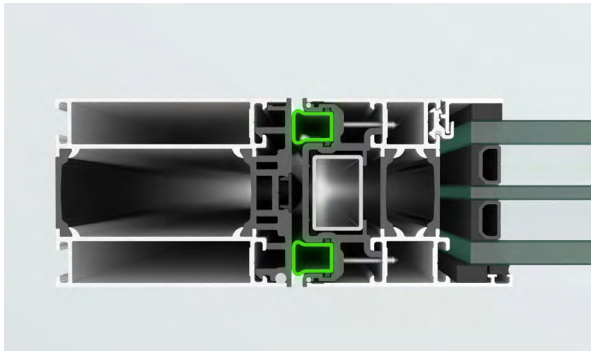
air-lux SW 75 variants

Opening type	Exterior handle	Connection to building management system	Indirect ventilation	Gap ventilation	Alarm bundle	Insect screen	Fall protection	Bar slider	Floor flap	Burglary protection	Motorisation	All glass	Maritime	Materials	Hurricanes
 Schema C 1.1	■	■	■	■	■				■	■	■	■	■	■	
 Schema C 1.2	■	■	■	■	■				■	■	■	■	■	■	
 Schema C 1.3	■	■	■	■	■				■	■	■	■	■	■	
 Schema C 1.4	■	■	■	■	■				■	■	■	■	■	■	
 Schema C 3.1	■	■	■	■	■					■	■		■	■	
 Schema C 3.2	■	■	■	■	■					■	■		■	■	
 Schema K	■	■	■	■	■	■	■		■	■	■	■	■	■	■
 Schema G	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

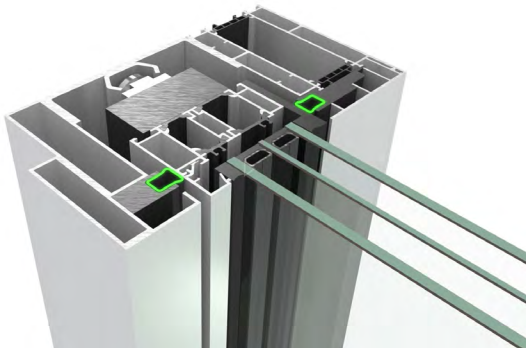
■ = possible

Further applications with the air-lux sealing system

air-lux PD 75 pivot door
Pivot doors are a striking solution for large-scale entrance areas. Thanks to precision-engineered asymmetrical pivot hinges and button technology, the door swings open effortlessly on both sides. The PD 75 is available in exceptionally large formats and offers extensive design flexibility – fully customizable in glass, metal, and various other materials.

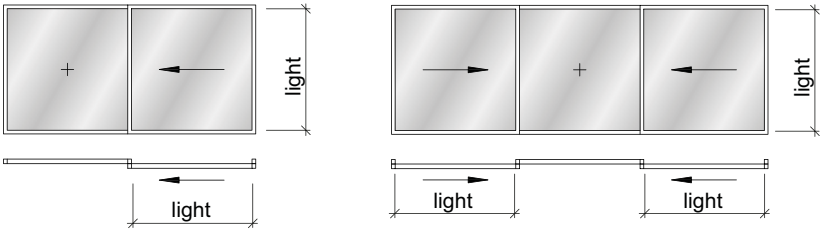


air-lux DW M-XL – Descending Window
Equipped with the same high-performance sealing technology used in all air-lux elements, the descending window descends fully into the floor at the push of a button – creating a seamless transition between interior and exterior space.



Minimum dimensions and influences

Schemas A and K



Manual variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	1-piece floor flap mm	2-piece floor flap mm
Standard	W = 1,265 H = 500	W + 345	W + 0	W + 340
Vertical board	W = 820 H = 968	W + 345	W + 80	W + 785
Vertical board and pump	W = 670 H = 1,168	W + 165	W + 230	W + 935

Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Alarm monitoring
- Alarm glass
- Fixed section not accessible from the outside
- Insect-resistant pleated blinds

Motorized variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Not accessible from the outside mm	2-piece floor flap mm
Standard	W = 1,580 H = 340	W + 345	W + 230	W + 0
Vertical board	W = 988 H = 968	W + 345	W + 230	W + 460
Vertical board and pump	W = 670 H = 1,168	W + 165	W + 230	W + 610

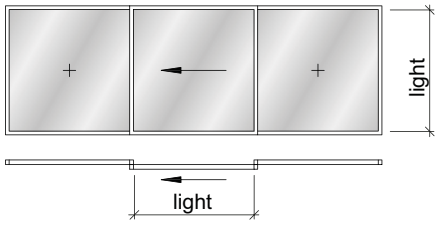
Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Alarm monitoring
- Alarm glass
- Insect-resistant pleated blinds
- 1-piece floor flap

W = width
H = height

Minimum dimensions and influences

Schema G



Manual variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	1-piece floor flap mm	2-piece floor flap mm
Standard	W = 1,265 H = 500	W + 345	W + 0	W + 340

Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Alarm monitoring
- Alarm glass
- Fixed section not accessible from the outside
- Insect-resistant pleated blinds

Motorized variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Not accessible from the outside mm	2-piece floor flap mm
Standard	W = 1,580 H = 340	W + 345	W + 230	W + 0

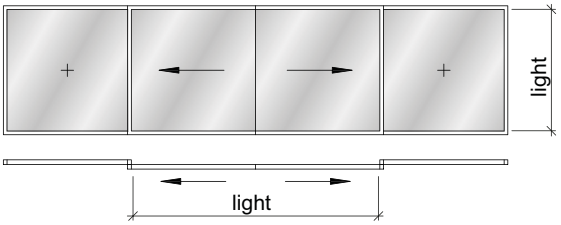
Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Alarm monitoring
- Alarm glass
- Insect-resistant pleated blinds
- 1-piece floor flap

W = width
H = height

Minimum dimensions and influences

Schema C



Manual variants

Minimum dimensions	Initial dimensions (light) mm	RC2 mm	RC3 mm	Gap ventilation mm	Alarm glass mm	2-piece floor flap mm
Standard	W = 2,150 H = 1,000	W + 380	W + 915	W + 300	W + 300	W + 1,065

Variants that do not affect the minimum dimensions:

- Indirect ventilation
- Alarm monitoring
- Fixed section not accessible from the outside
- 1-piece floor flap

Motorized variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Not accessible from the outside mm	2-piece floor flap mm
Standard	W = 2,780 H = 1,000	W + 915	W + 460	W + 153

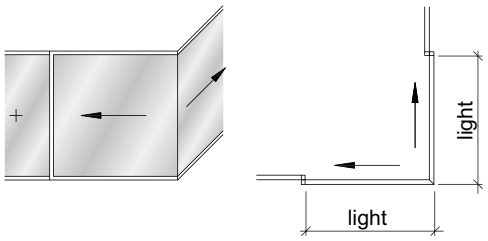
Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Partial opening
- Alarm monitoring
- Alarm glass
- 1-piece floor flap

W = width
H = height

Minimum dimensions and influences

Schema C 1.1



Manual variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Gap ventilation mm	Alarm glass mm	2-piece floor flap mm
Standard	W = 1,525 H = 1,000	W + 130	W + 150	W + 150	W + 165

Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Alarm monitoring
- Fixed section not accessible from the outside
- 1-piece floor flap

Motorized variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Not accessible from the outside mm
Standard	W = 1,695 H = 1,000	W + 345	W + 230

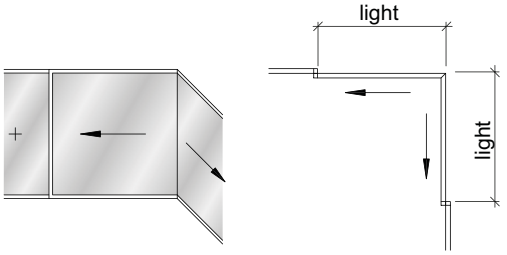
Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Partial opening
- Alarm monitoring
- Alarm glass
- 1-piece floor flap
- 2-piece floor flap

W = width
H = height

Minimum dimensions and influences

Schema C 1.3



Manual variants

Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Gap ventilation mm	Alarm glass mm	2-piece floor flap mm
Standard	W = 1,770 H = 1,000	W + 130	W + 150	W + 150	W + 200

Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Alarm monitoring
- Fixed section not accessible from the outside
- 1-piece floor flap

Motorized variants

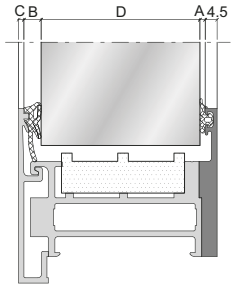
Minimum dimensions	Initial dimensions (light) mm	RC3 mm	Not accessible from the outside mm
Standard	W = 1,805 H = 1,000	W + 450	W + 230

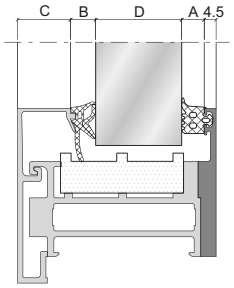
Variants that do not affect the minimum dimensions:

- RC2
- Indirect ventilation
- Gap ventilation
- Partial opening
- Alarm monitoring
- Alarm glass
- 1-piece floor flap
- 2-piece floor flap

W = width
H = height

Overview of glazing thicknesses for sash profiles





D = glazing thickness

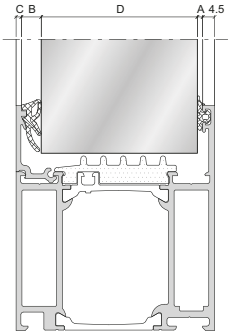
Interior gasket A	**Exterior gasket B**						**Glazing bead C**
	284834	284835	284835	284836	284836	284837	
245743 (2 mm)		60	59	58	57		555160
		56		55	54	53	555320
		52	51	50	49	48	555330
		47	46	45	44	43	555340
		42	41	40	39		555350
224063 (4 mm)				38			555350
224267 (5 mm)				37			555350
284321 (6 mm)				36			555350
224268 (7 mm)				35			555350
224105 (8 mm)				34			555350
224269 (9 mm)				33			555350
224205 (10 mm)				32			555350
224313 (11 mm)				31			555350
244041 (12 mm)				30			555350
				29			555350
224312 (13 mm)					28		555350
						27	555350

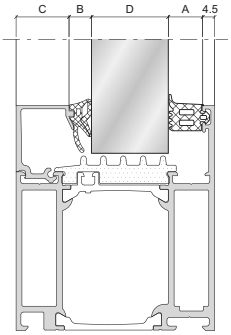
Avoid these glazing thicknesses where possible. In the event of deviating tolerances, the glazing bead must be replaced.

The glazing table is based on the nominal dimensions of the profiles and filling elements. Due to different tolerances (profiles, glazing beads, glass gaskets and glass elements), we recommend testing your chosen outer glazing gaskets beforehand on an element. If necessary, the next smaller or larger glazing bead/gasket can be used.

Note:
For sliding windows as in schema C with stepped-edge glazing, the minimum glazing thickness is 48 mm.

Overview of glazing thicknesses for fixed glazing





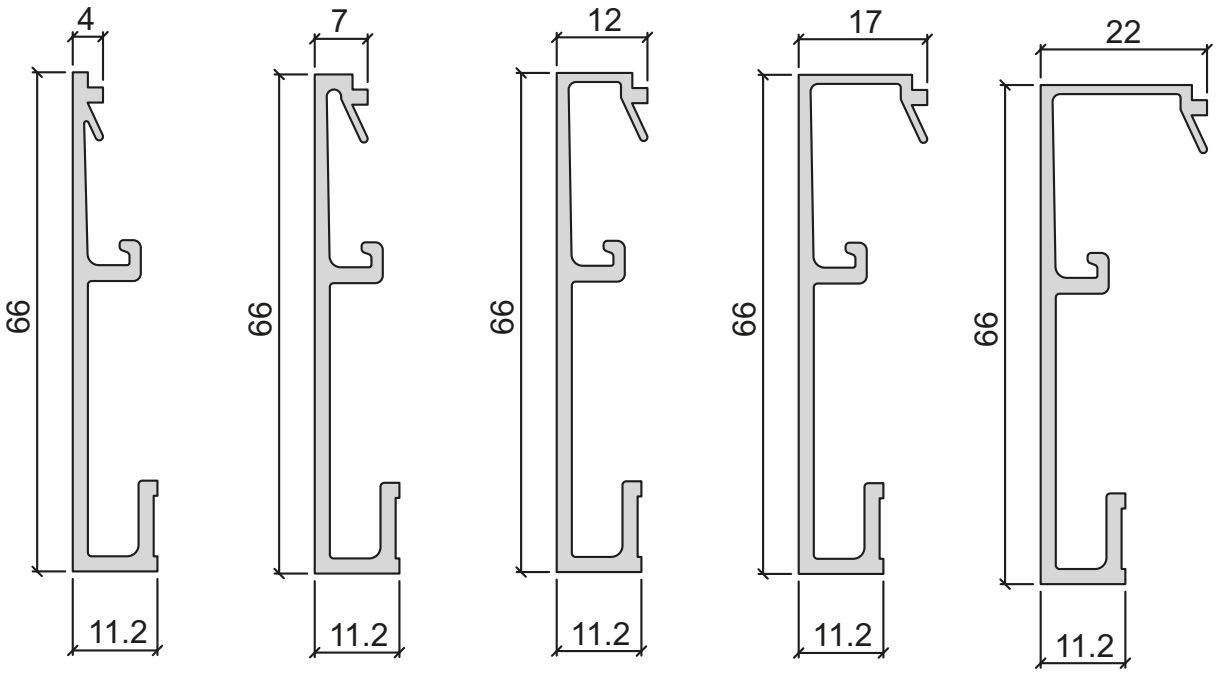
D = glazing thickness

Interior gasket A	**Exterior gasket B**						**Glazing bead C**
	284834	284835	284835	284836	284836	284837	
245743 (2 mm)		60	59	58	57		555150
		56		55	54	53	555280
		52	51	50	49	48	555290
		47	46	45	44	43	555300
		42	41	40	39		555310
224063 (4 mm)				38			555310
224267 (5 mm)				37			555350
284321 (6 mm)				36			555350
224268 (7 mm)				35			555350
224105 (8 mm)				34			555350
224269 (9 mm)				33			555350
224205 (10 mm)				32			555350
224313 (11 mm)				31			555350
244041 (12 mm)				30			555350
				29			555350
224312 (13 mm)					28		555350
						27	555350

Avoid these glazing thicknesses where possible. In the event of deviating tolerances, the glazing bead must be replaced.

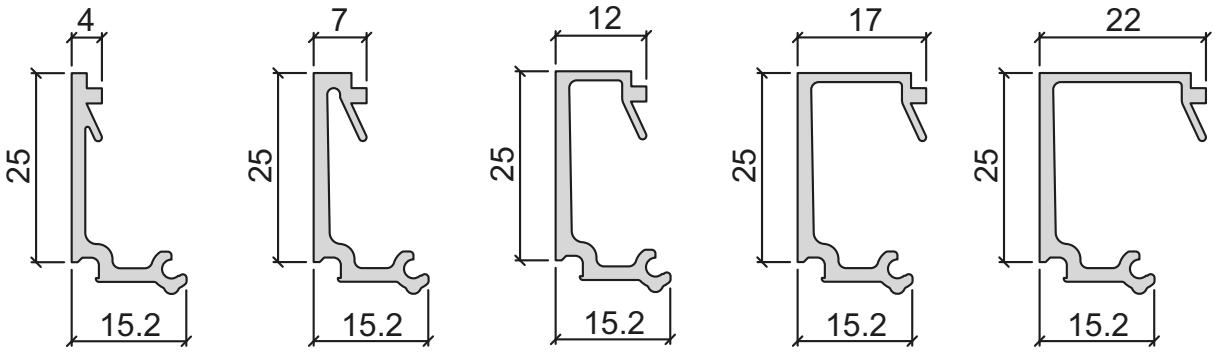
The glazing table is based on the nominal dimensions of the profiles and filling elements. Due to different tolerances (profiles, glazing beads, glass gaskets and glass elements), we recommend testing your chosen outer glazing gaskets beforehand on an element. If necessary, the next smaller or larger glazing bead/gasket can be used.

Gazing beads for sash



550160 555320 555330 555340 555350

Glazing beads for fixed glazing



550150 555280 555290 555300 555310

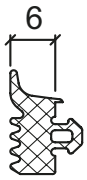
DWG **Product library**

Interior gaskets

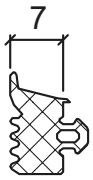
245743

224063

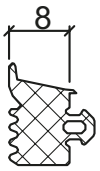
224267



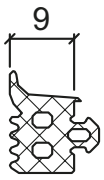
284321



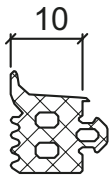
224268



224105



224269



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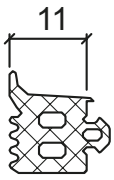
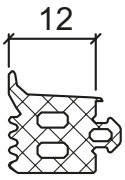
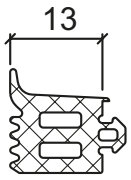


224313



244041



224312

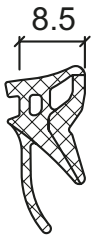
Exterior gaskets

284047

284834

284835

284836



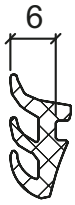
284837

Exterior gaskets (alternative)

224064

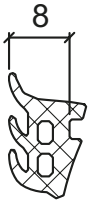
224263

224065

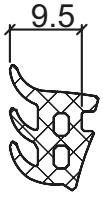


224264

224066



224265



224067

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PDF

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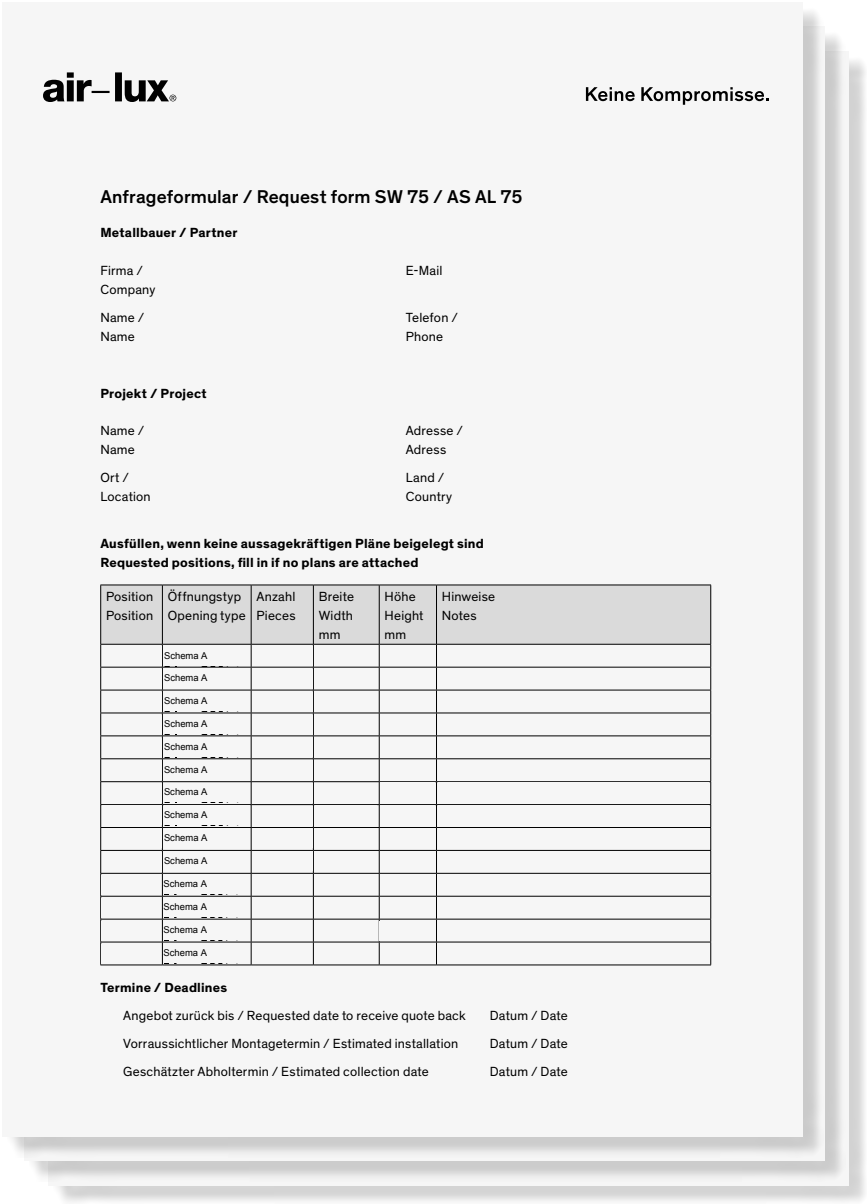

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Keine Kompromisse.

Anfrageformular / Request form SW 75 / AS AL 75

Metallbauer / Partner

Firma / Company

E-Mail

Name / Name

Telefon / Phone

Projekt / Project

Name / Name

Adresse / Adress

Ort / Location

Land / Country

Ausfüllen, wenn keine aussagekräftigen Pläne beigelegt sind
Requested positions, fill in if no plans are attached

Position Position	Öffnungstyp Opening type	Anzahl Pieces	Breite Width mm	Höhe Height mm	Hinweise Notes
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				
	Schema A				

Termine / Deadlines

Angebot zurück bis / Requested date to receive quote back — Datum / Date

Vorraussichtlicher Montagetermin / Estimated installation — Datum / Date

Geschätzter Abholtermin / Estimated collection date — Datum / Date

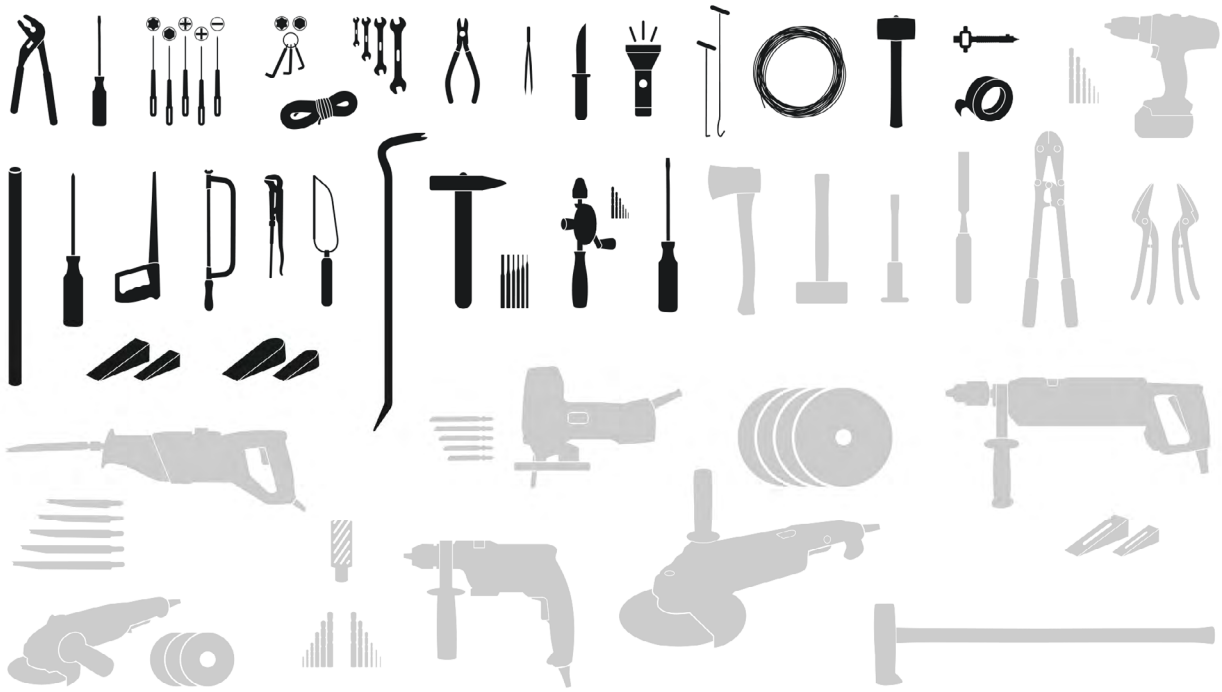
Burglar resistance

RC1N
Components of resistance class RC1N have limited to low protection against break-in attempts. RC1N is designed for attacks involving physical violence (primarily vandalism) such as kicking, flying kicks, shoulder ramming, forcing upwards and tearing out. Class RC1N sliding doors are therefore often used in elevated installations (for example, on upper floors) when a climbing aid is required due to a lack of floor space. This class is available for standard window glass.

RC2N
An opportunist offender attempts to break open the closed and locked sliding window using simple tools such as screwdrivers, pliers and wedges (test time: 3 minutes). A direct attack on the glazing is not expected. This class is available only with standard glass (i.e. without safety glazing).

RC2
Glazing in accordance with EN 356 is required for this class. Class RC2 sliding windows are often installed in residential buildings and as a basic security feature in commercial and public buildings.

RC3
A seasoned offender additionally attempts to break open the closed and locked component with a second screwdriver, goat foot and hand drill (test time: 5 minutes).
Glazing in accordance with EN 356 is required for this class. Class RC3 sliding windows are often installed in residential, commercial and public buildings with more stringent requirements.

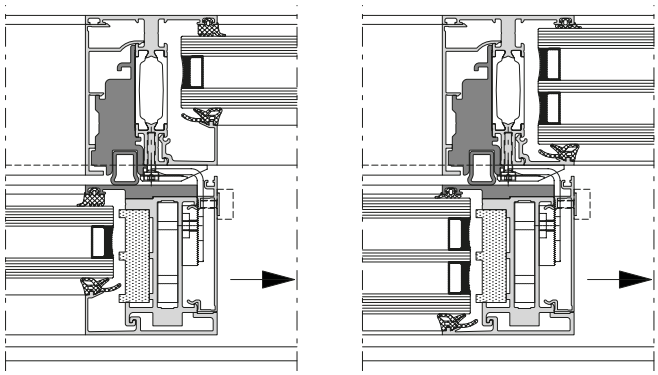


Selection of tools for RC1 to RC3 practical burglary testing

Burglar-resistant glazing

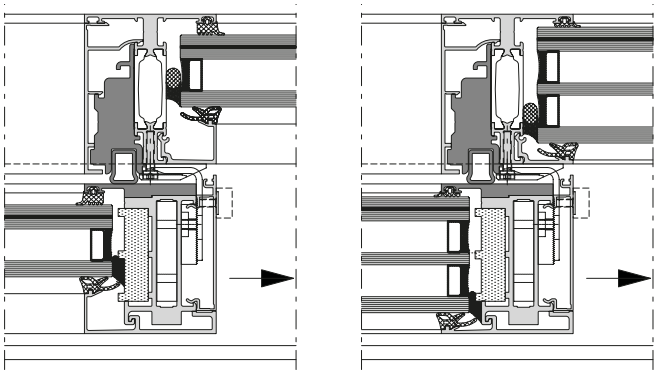
The minimum sash width in the RC3 variant is 1,800 mm

RC1N/RC2N



No requirement
(Observe national requirements)

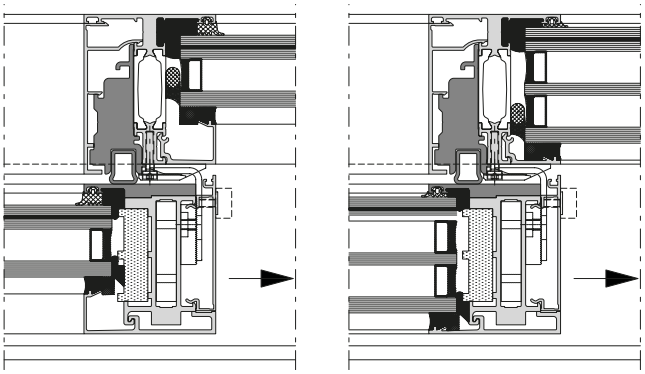
RC2



Glass
Min. P4A in accordance with EN 356

Circumferential base rebate sealing
Dry or wet glazing

RC3



Glass
Min. P5A in accordance with EN 356

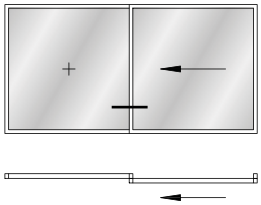
Circumferential base rebate sealing,
point sealing inside

Outside: wet glazing
Inside: Dry or wet glazing

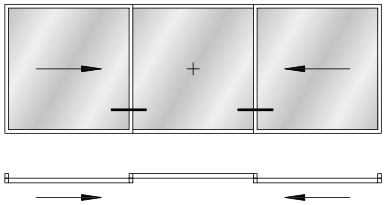
The safety pane must always be installed inside (the side facing away from burglary).

Structural diagram

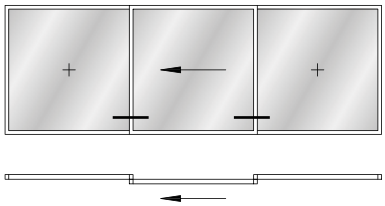
Schema A



Schema K



Schema G



DIN EN 12210 for the standard building range:
Deflection limit L/200 in accordance with DIN 18008-2.
Deviating deflection limits set by the manufacturer of the insulating glass must be observed.
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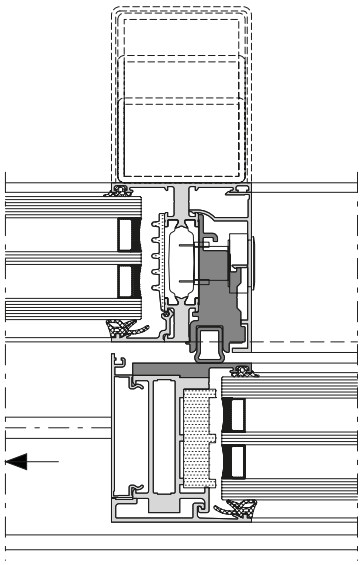
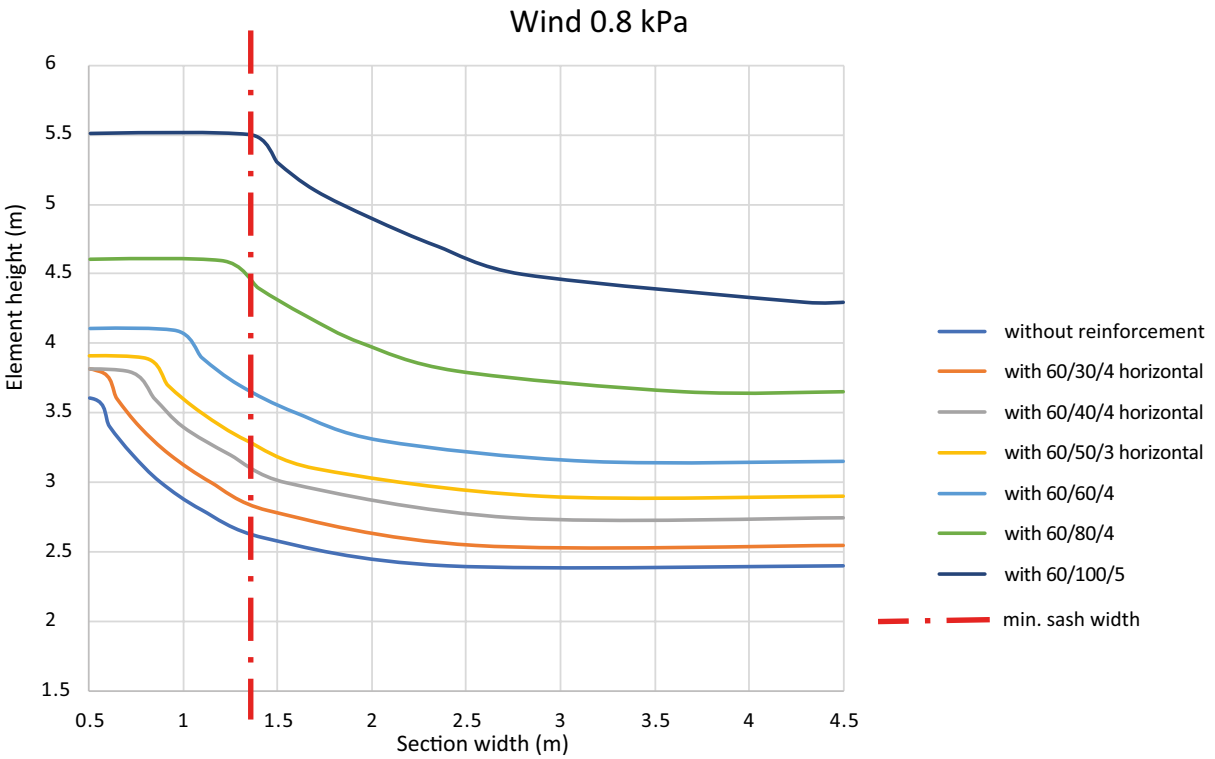
Sash sizes below the curve are structurally adequate.

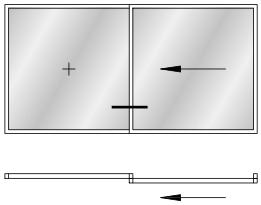


Note:
Impact load and fall protection are not taken into account in the diagrams for static pre-dimensioning.

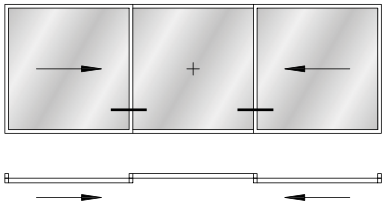


Structural diagram

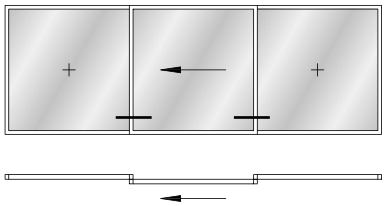
Schema A



Schema K



Schema G



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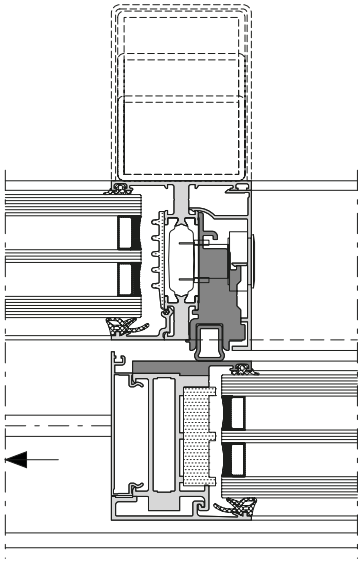

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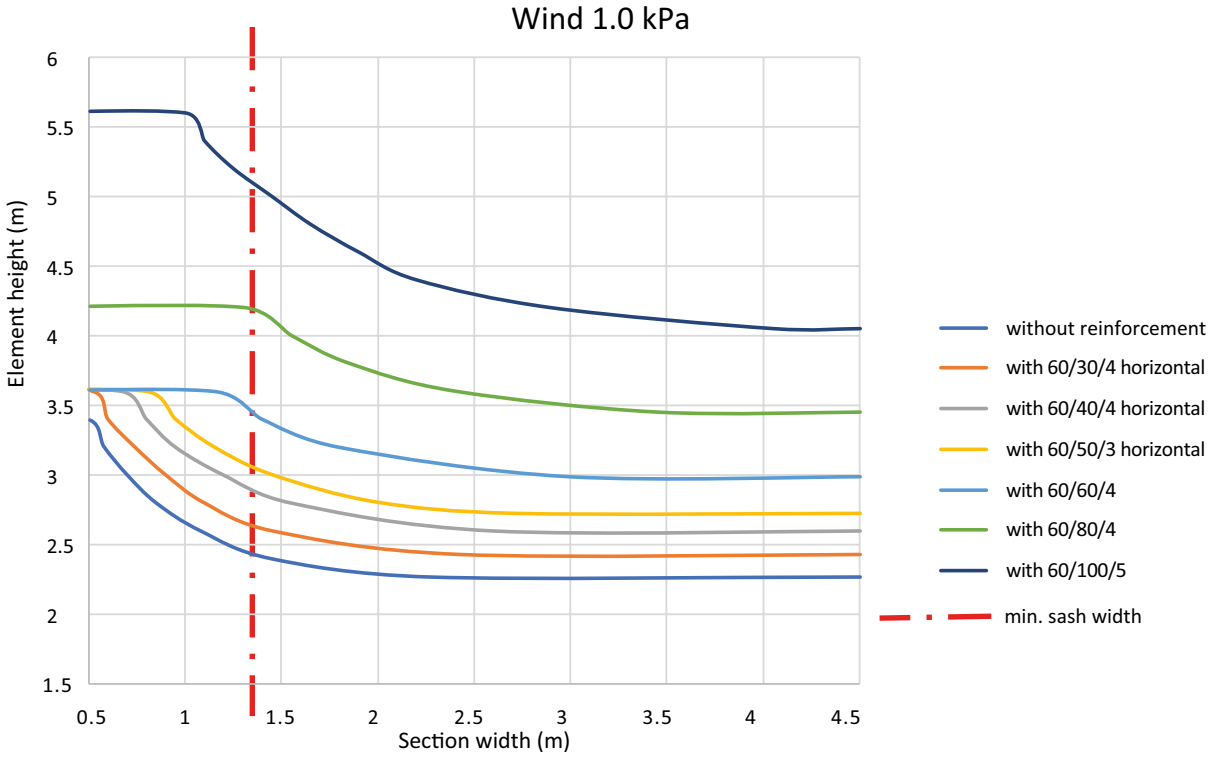
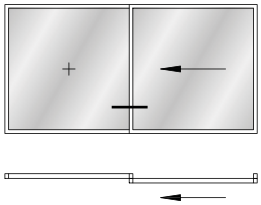
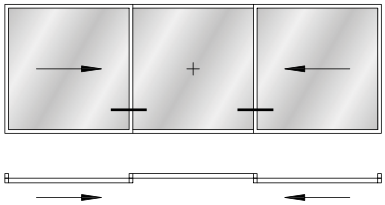


Structural diagram

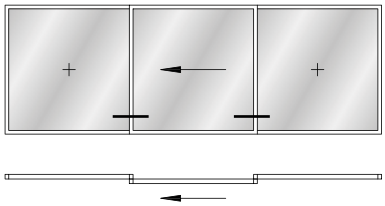
Schema A



Schema K



Schema G



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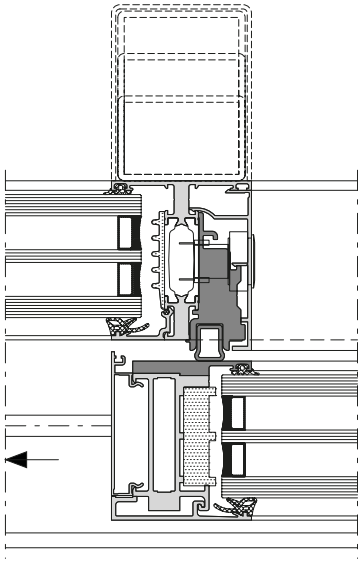

Note:
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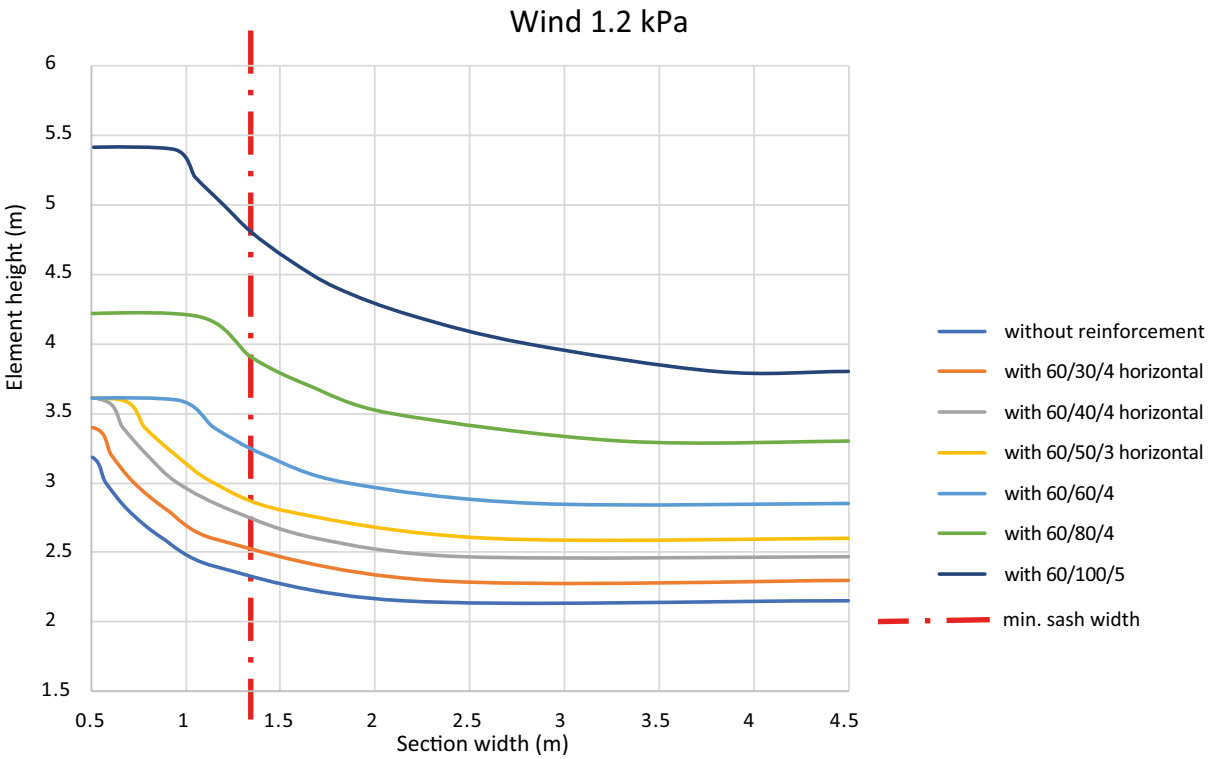
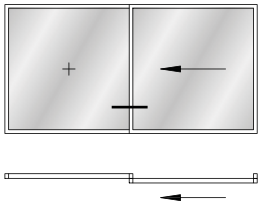
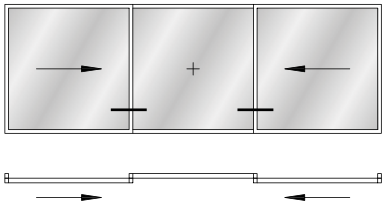


Structural diagram

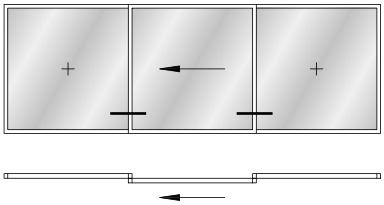
Schema A



Schema K



Schema G



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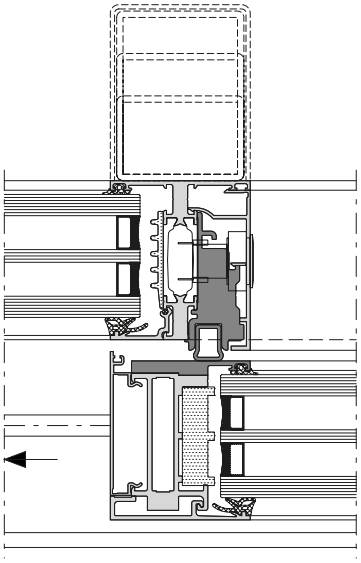

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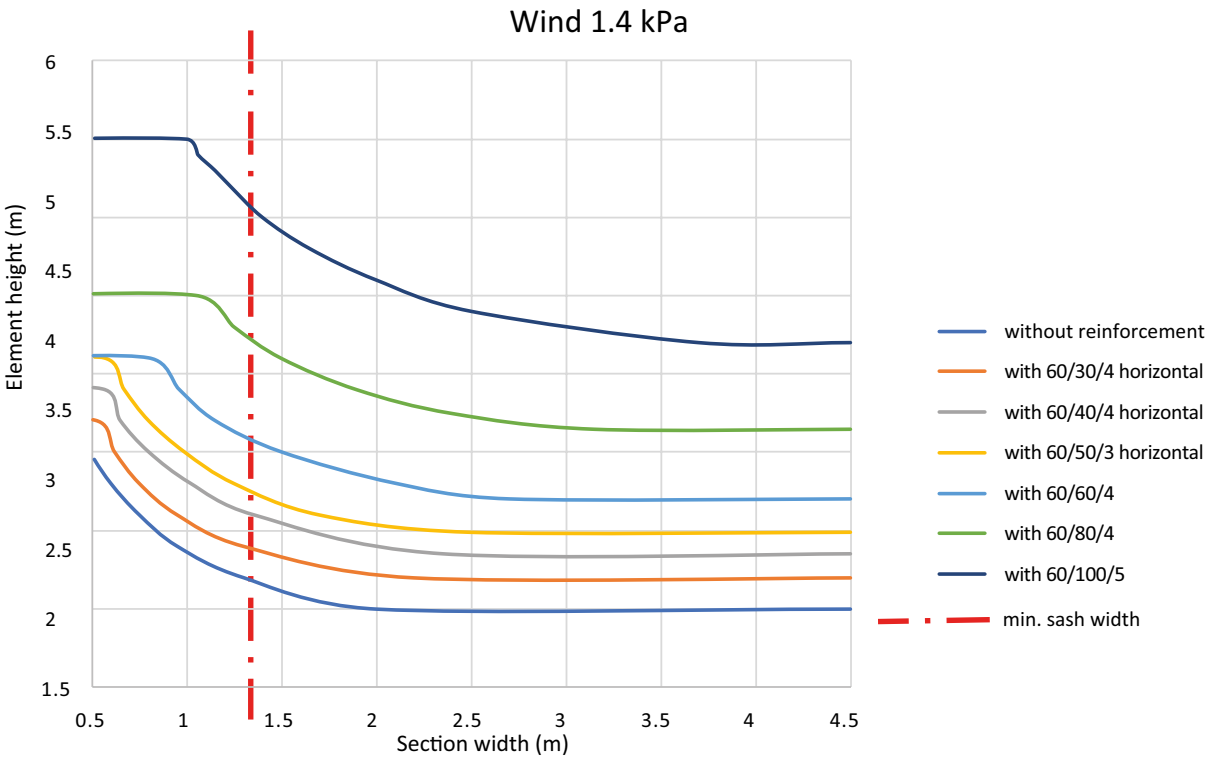
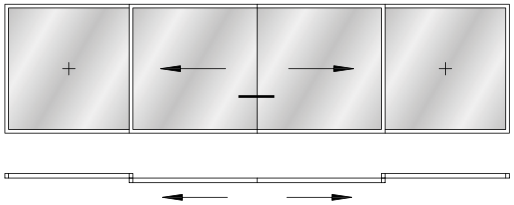


Structural diagram

Schema C



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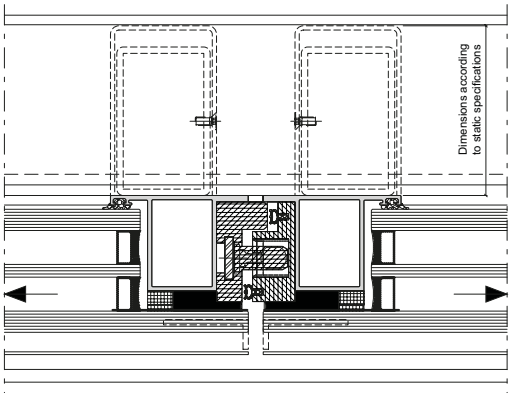

Note:
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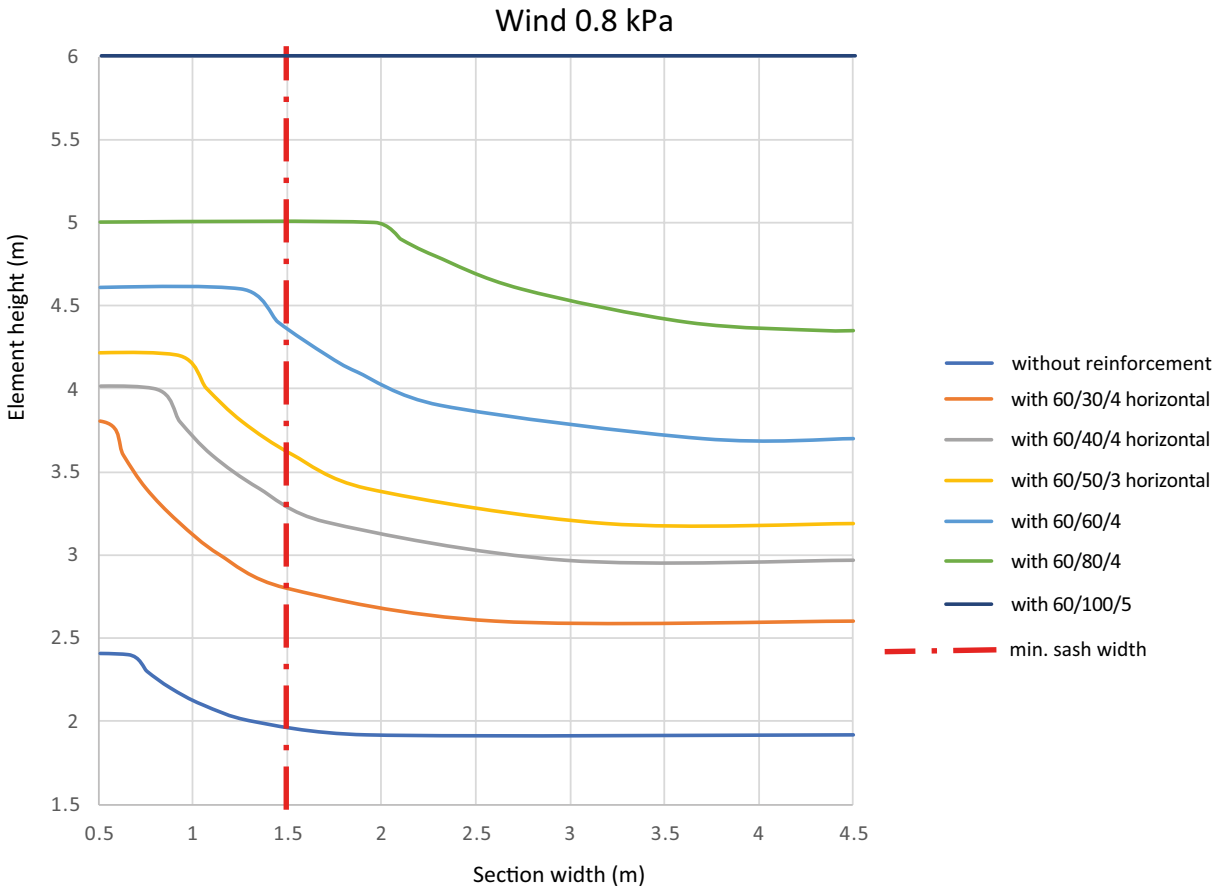
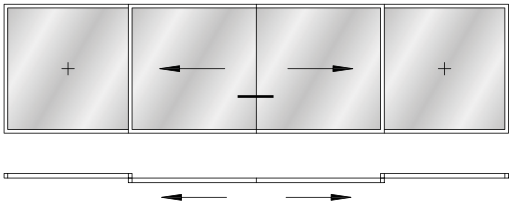


Structural diagram

Schema C



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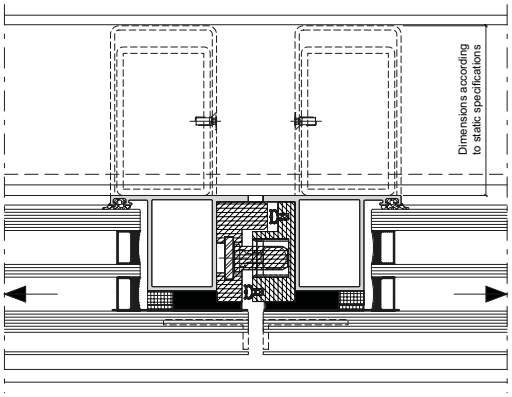

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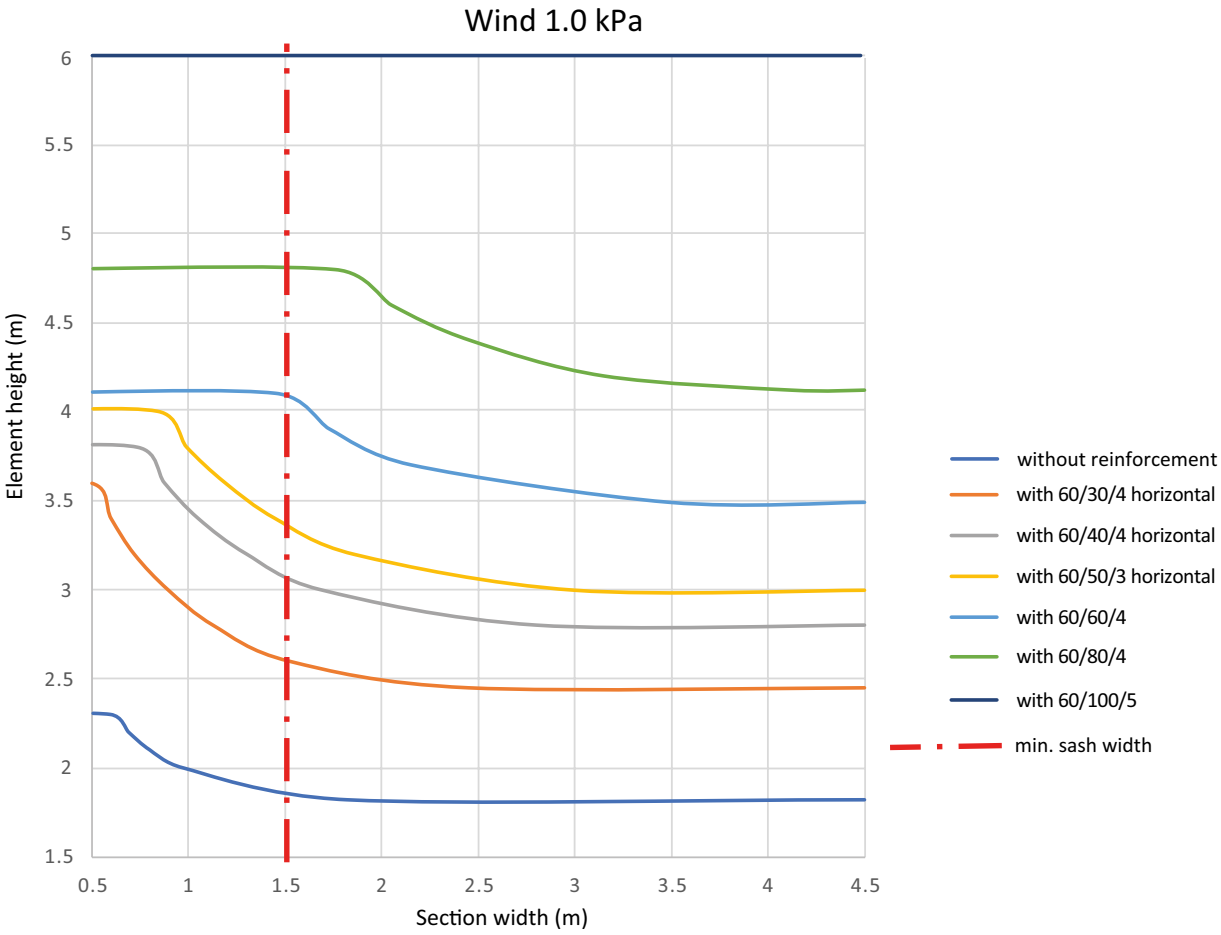
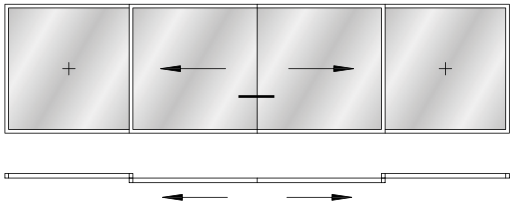
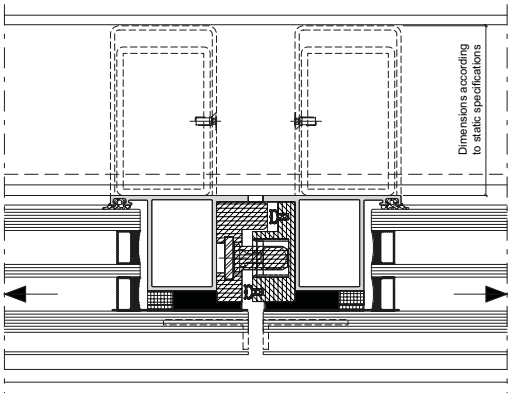


Structural diagram

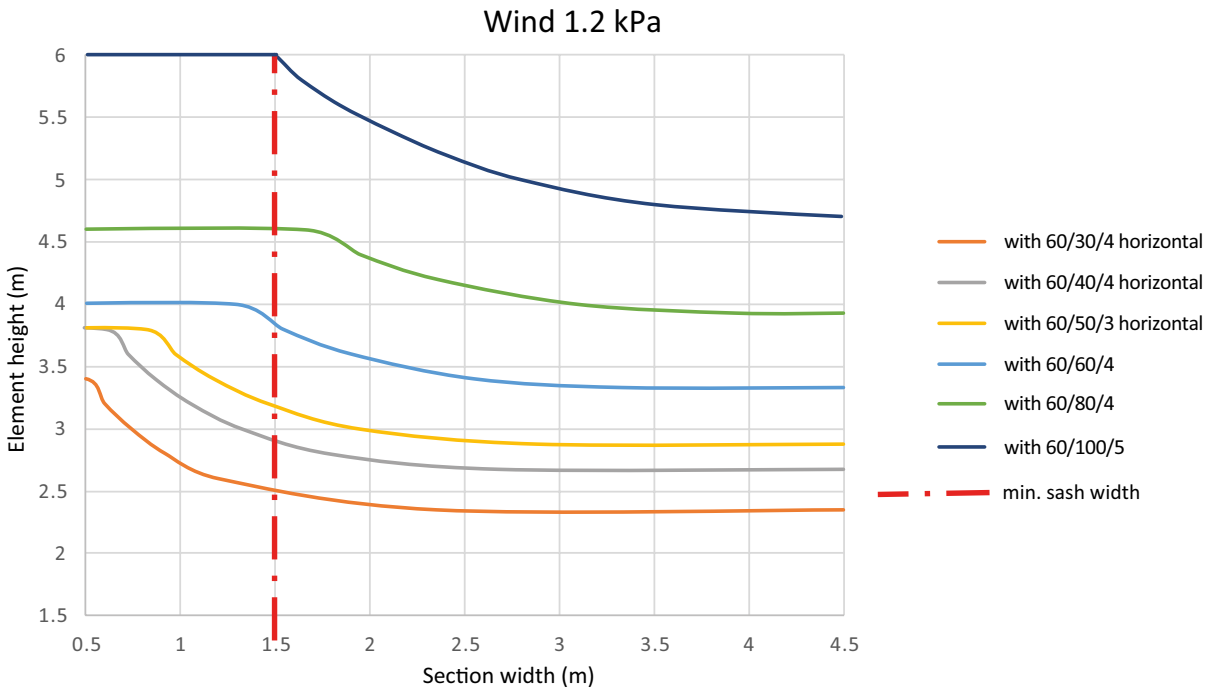
Schema C



DIN EN 12210 for the standard building range
Deflection limit L/200 in accordance with DIN 18008-2.
Deviating deflection limits set by the manufacturer of the insulating glass must be observed.
These structural diagrams are used for pre-dimensioning and profile selection (does not replace static calculation).
Sash sizes below the curve are structurally adequate.

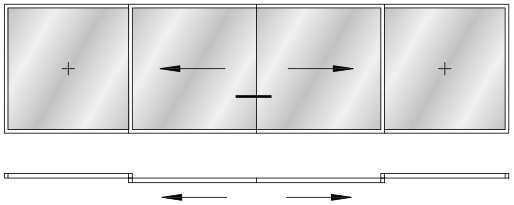


Note:
Impact load and fall protection are not taken into account in the diagrams for static pre-dimensioning.

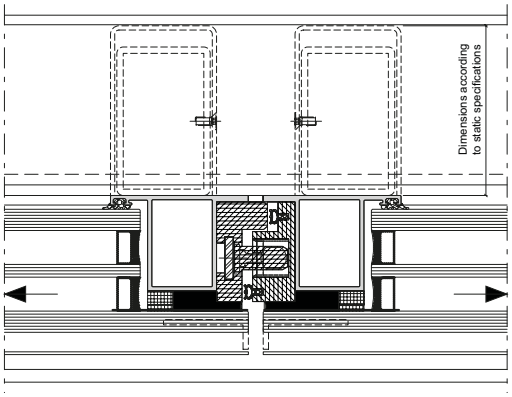


Structural diagram

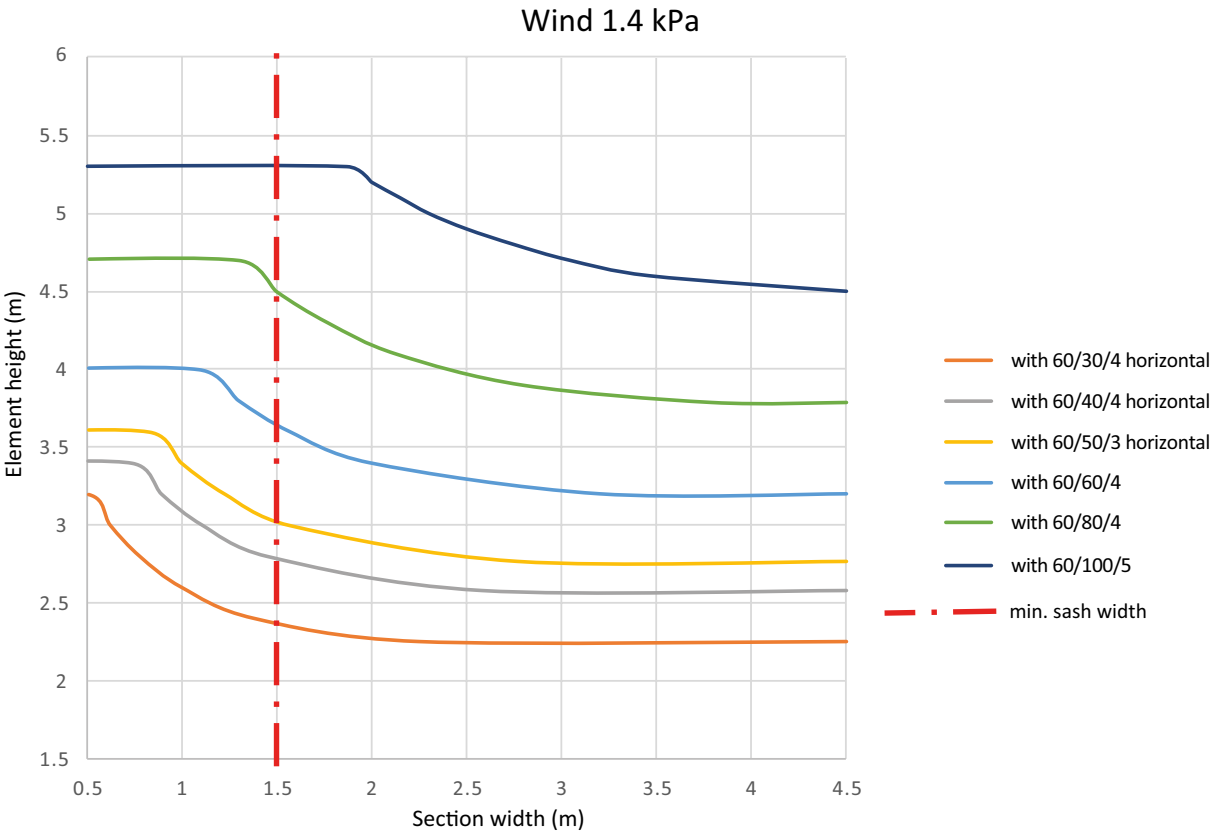
Schema C



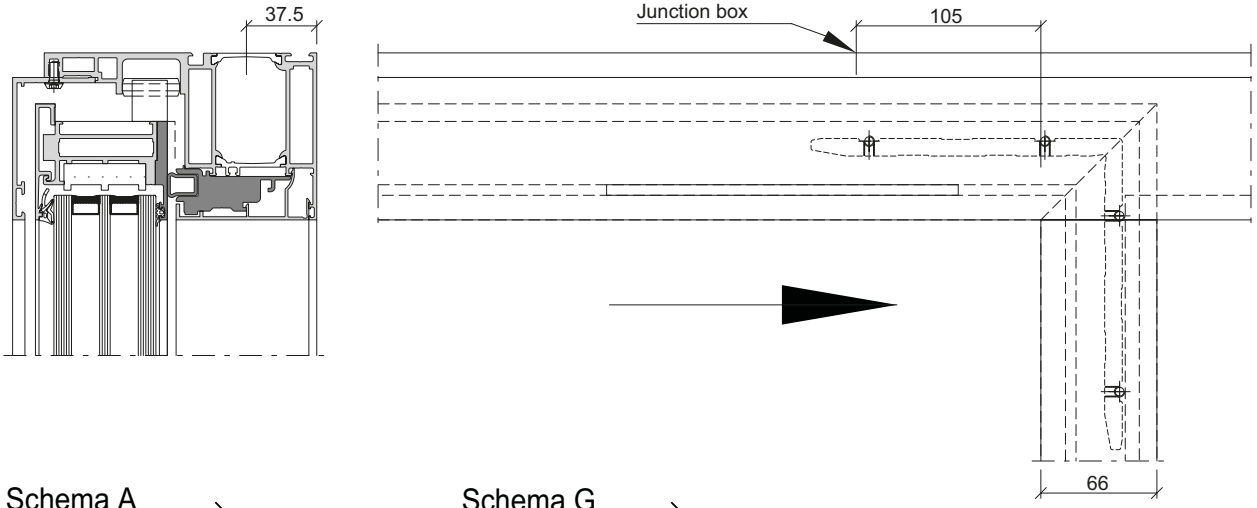
DIN EN 12210 for the standard building range
Deflection limit L/200 in accordance with DIN 18008-2.
Deviating deflection limits set by the manufacturer of the insulating glass must be observed.
These structural diagrams are used for pre-dimensioning and profile selection (does not replace static calculation).
Sash sizes below the curve are structurally adequate.



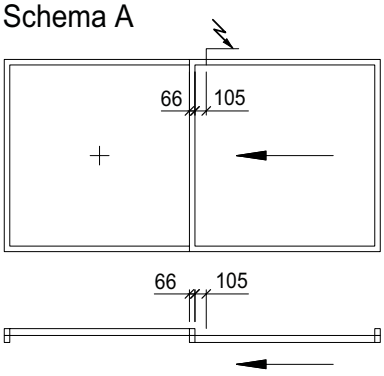
Note:
Impact load and fall protection are not taken into account in the diagrams for static pre-dimensioning.



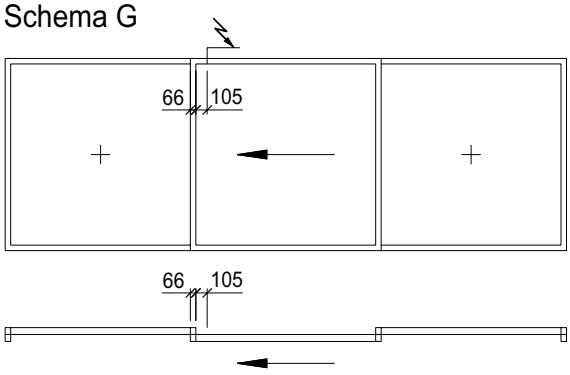
Electrical connections at the top – Manual version



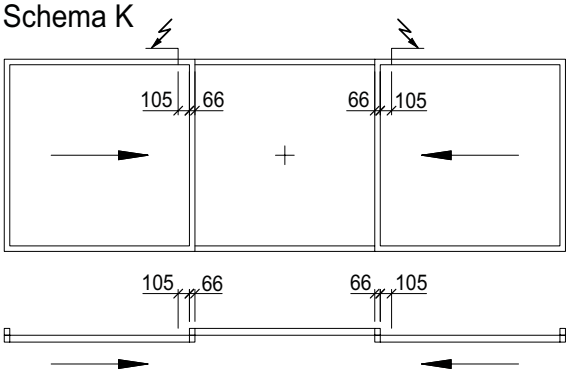
Schema A



Schema G

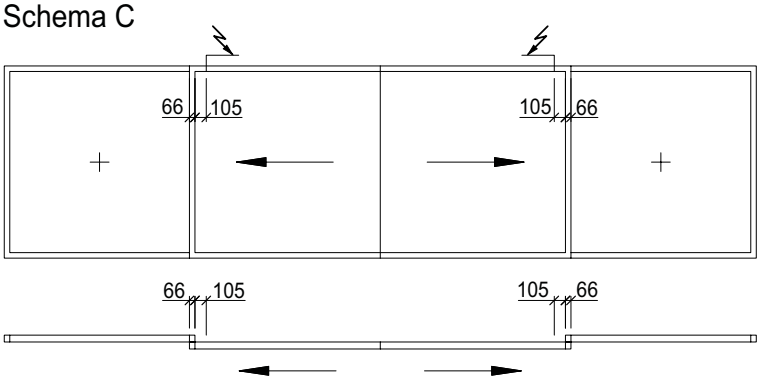


Schema K

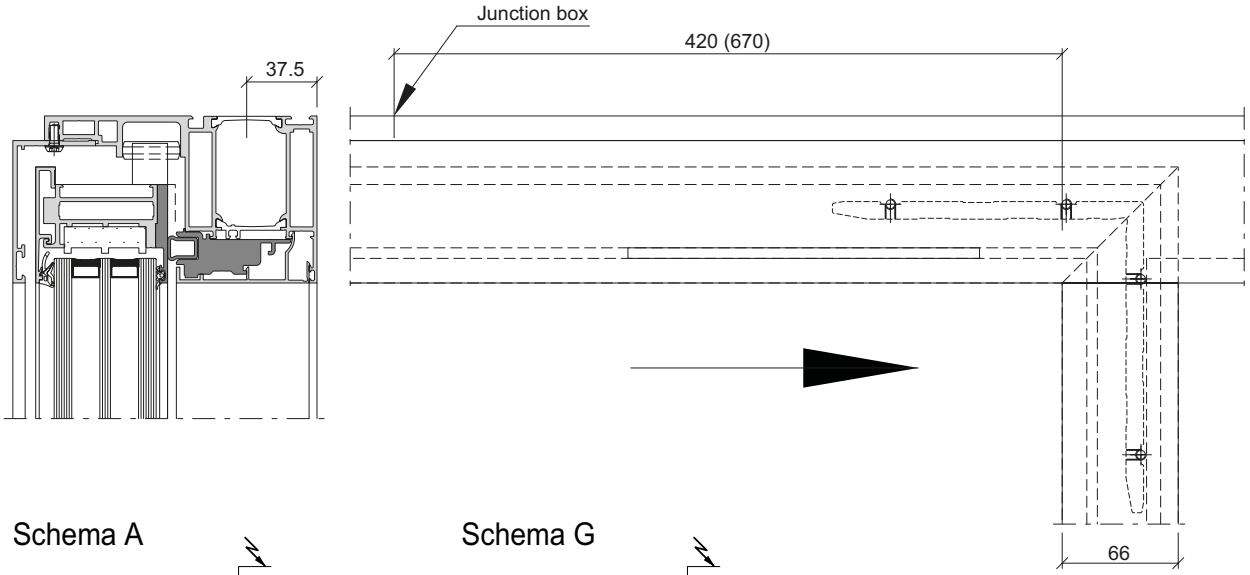


The air-lux sliding window is a single-track system in which the sliding sash moves on the exterior in front of the fixed glazing.
All diagrams are drawn from the exterior point of view.

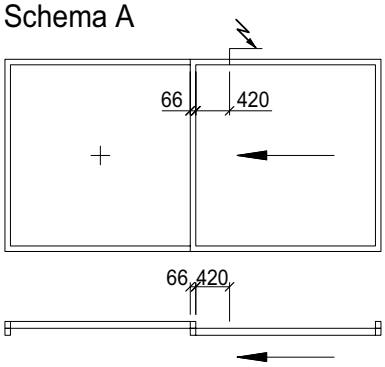
Schema C



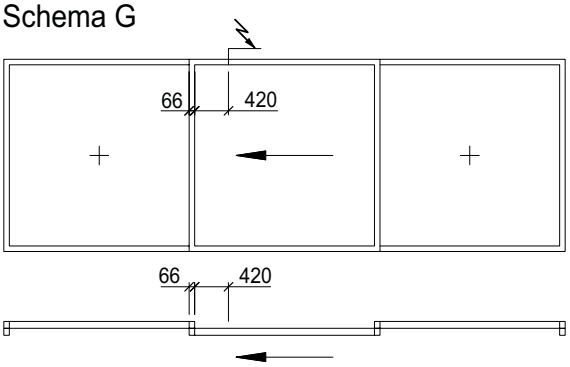
Electrical connections at the top – Motorized version



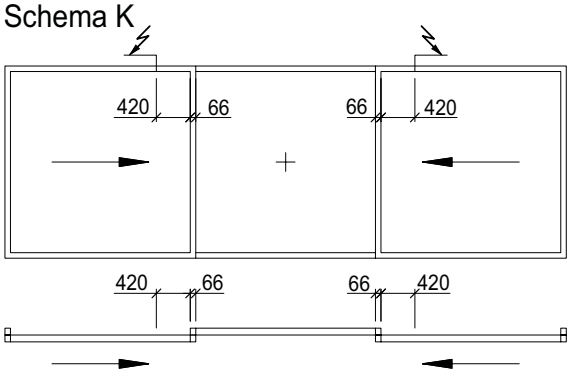
Schema A



Schema G



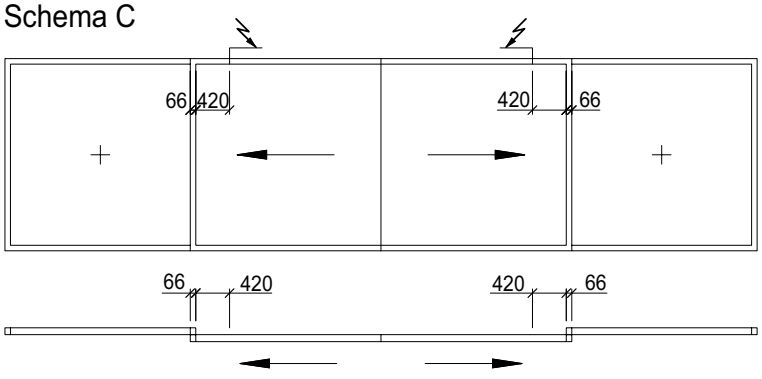
Schema K



The air-lux sliding window is a single-track system in which the sliding sash moves on the exterior in front of the fixed glazing.
All diagrams are drawn from the exterior point of view.

Exception:
For sliding windows schema A Pocket or sliding windows that are not accessible from the outside, the junction box is 670 mm (motorized version).

Schema C



Electrical connection

- Each air-lux sliding window is fitted with a junction box, which is marked with an electrical connection sticker.

Electrical connection sticker

- All cables are clamped or soldered in this junction box.
- The junction box is located in the upper frame profile.
- All cables are labelled.
- Only one power supply is required for commissioning.

Bi-parting and postless corner sliding elements are designed for master-slave operation: The master sliding element (first opening window) requires a power supply and is responsible for all control and blocking signals. The slave sliding element (second opening window) requires a power supply.

Supply line

100–130 VAC, 50–60 Hz

200–240 VAC, 50–60 Hz

The following requirements must be observed for the supply line:

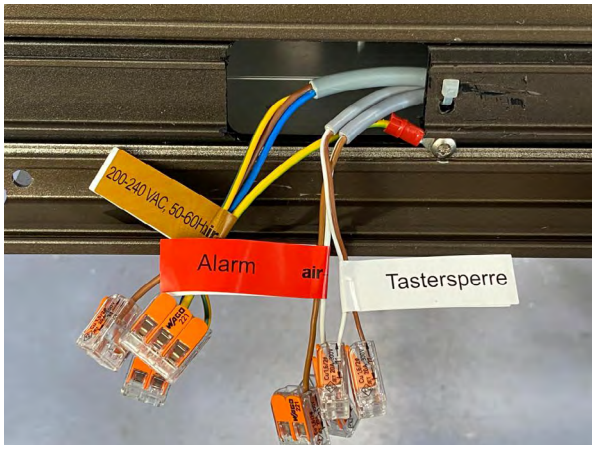
- Each window must be equipped with a voltage between 100 V AC and 130 V AC/ 200 V AC and 240 V AC.
- The connecting cables are labelled with the above sticker.
- For air-lux sliding windows, a separate fuse must be provided per floor (max. 10 windows).

Button lock

Pushbutton lock

A button lock is installed in every air-lux sliding window as standard.

- The button lock must be isolated on the building side to activate the lock. The window is locked electronically.
- A separate relay must be installed for each window!
- In the case of bi-parting and mullion-free corner sliding elements, the button lock is only connected to the master window (first opening).



Alarm contact

An alarm contact is fitted in every air-lux sliding sash as standard.

- The alarm contact may be supplied with max. U = 30 V DC/I = 2 A.
- When the contact is closed, the window is closed and locked.
- Since the locking bolts are evaluated electronically, a UPS (uninterruptible power supply) must be installed for the alarm system to function correctly.
- In the case of bi-parting and mullion-free corner sliding elements, the alarm contact is only connected to the master window (first opening).

VdS contacts

VdS contacts can be installed in the system on request.

- Separate VdS magnetic contact for monitoring the window in the ‘CLOSED’ position.
- Separate VdS magnetic contact for monitoring the window in the ‘gap ventilation’ position.
- Separate VdS lock contact for position monitoring of the locking bolt.
- An EKOM (electronic contactless transmitter) is installed in sliding windows with alarm glass.

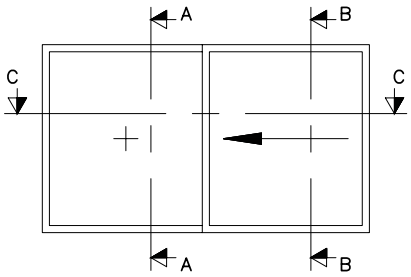
External operation

In addition to the button installed as standard, external controls are also available (e.g. for building management systems, fingerprints etc.).

- Separate empty conduits must be laid for external controls. Shielded cables must be used (e.g. U72 2×4×0.8).
- All controls are isolated from the building management system.
- In the case of bi-parting and mullion-free corner sliding elements, a separate control is required for both sliding windows.

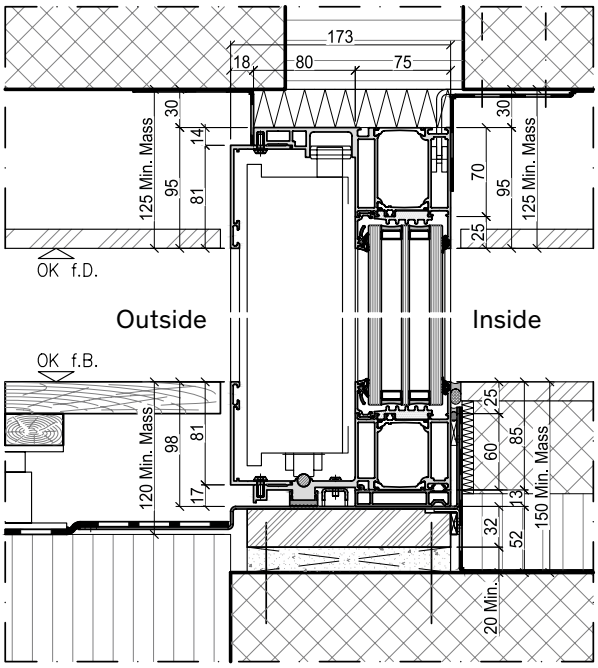
Contents: intersection points

Schema A



DWG PDF

Schnitt A-A



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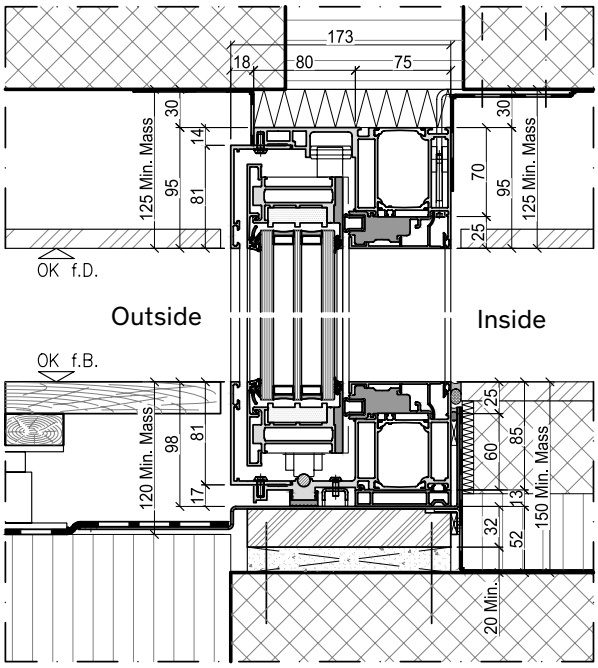
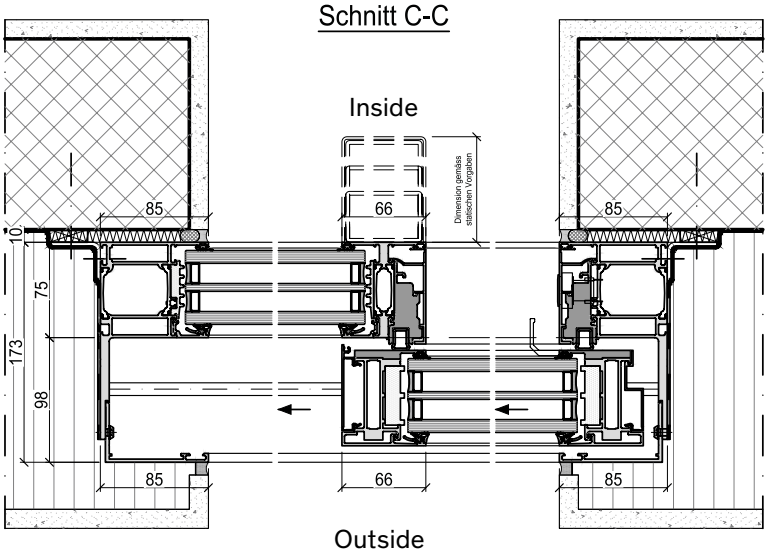
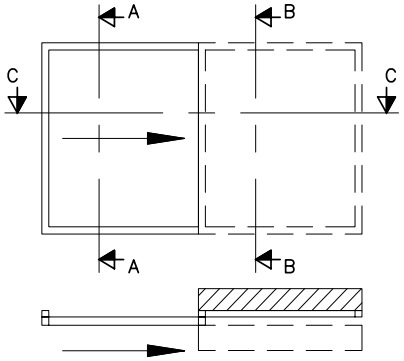


Schnitt C-C



Schema A pocket



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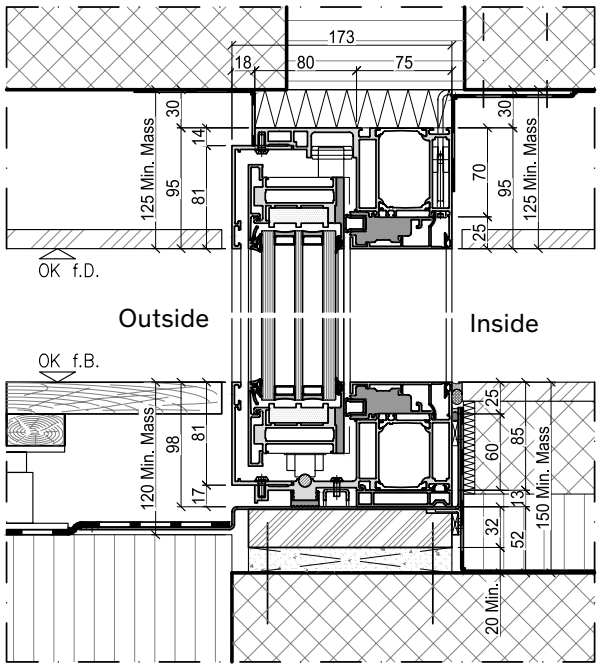

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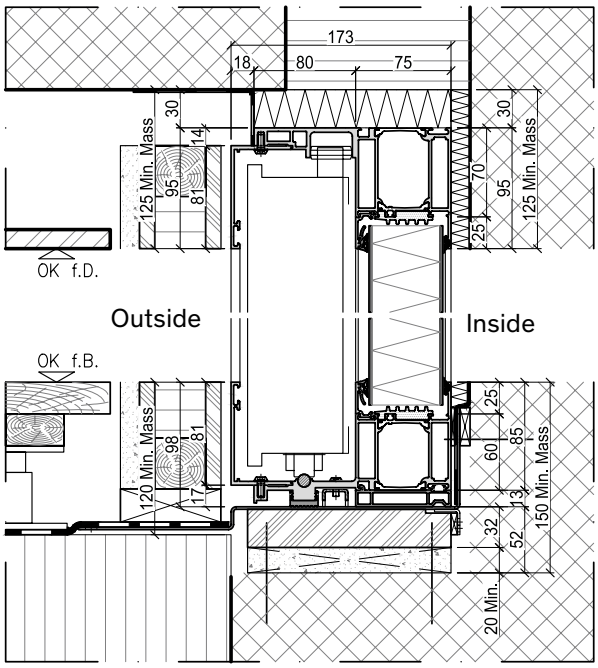

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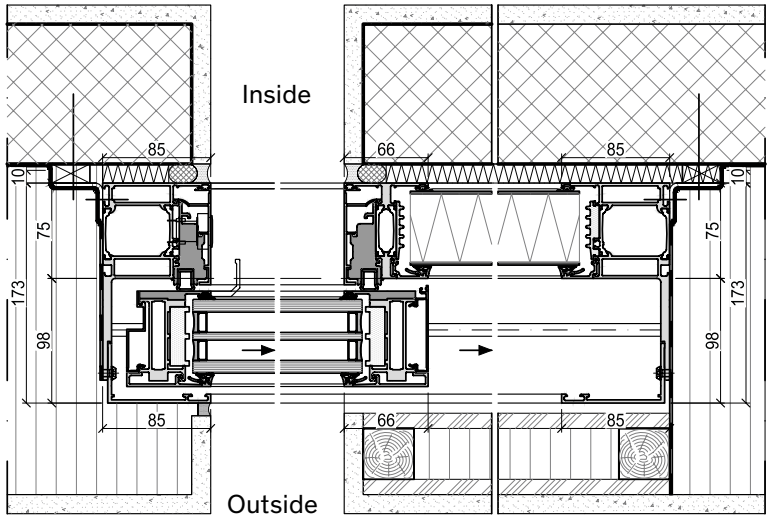
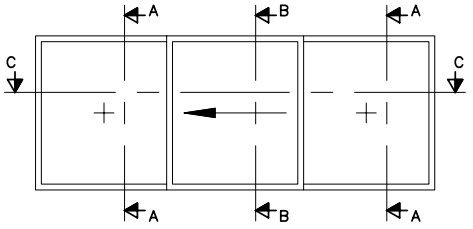


Schema G



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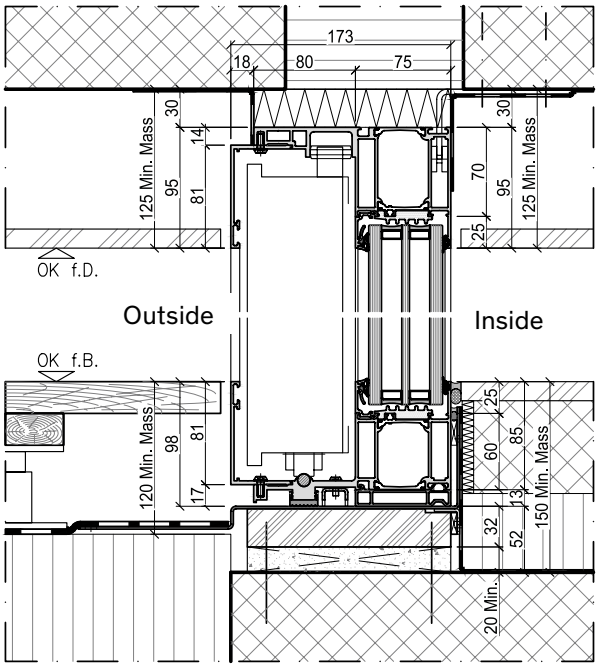

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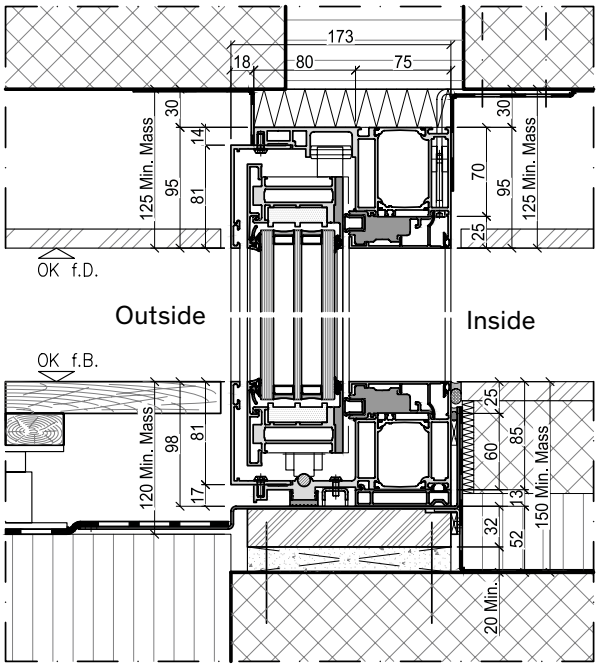

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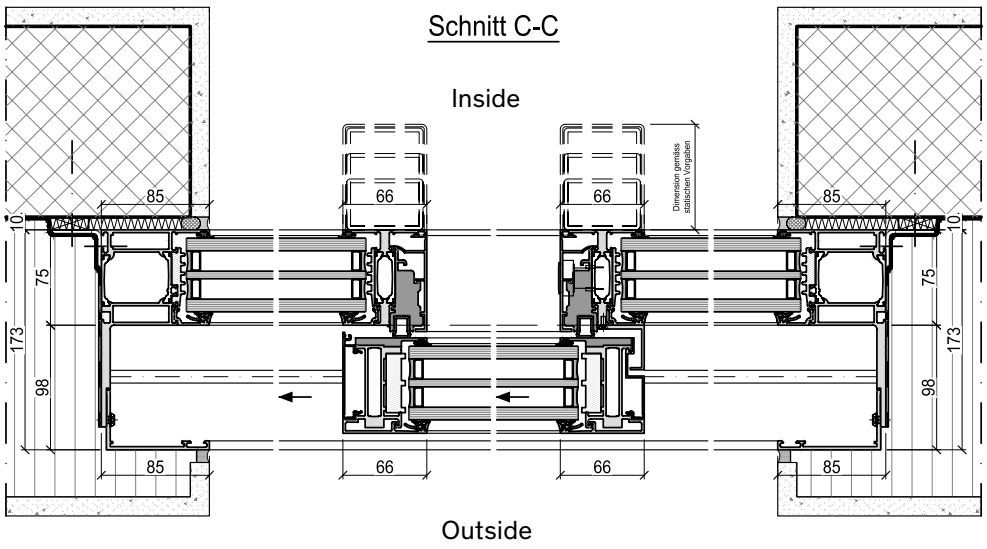
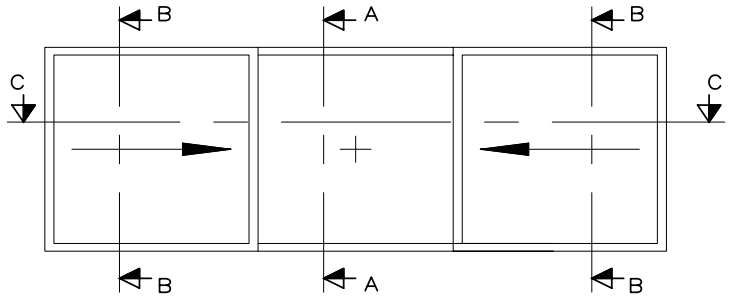
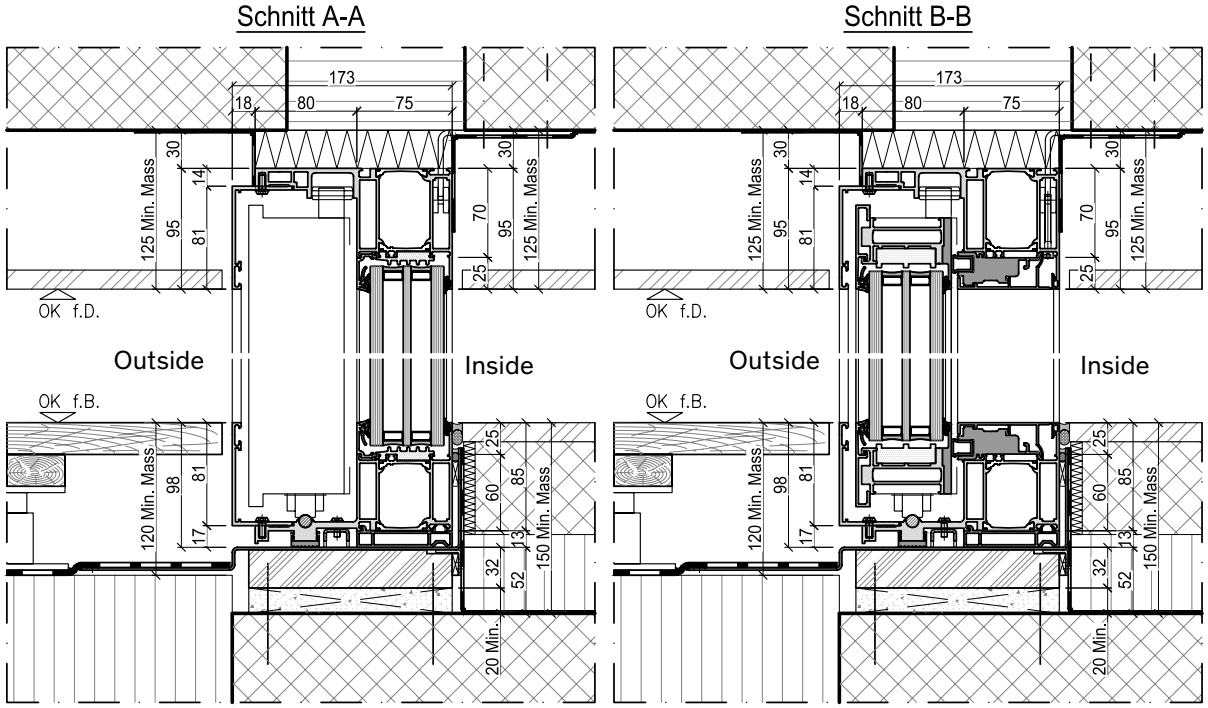
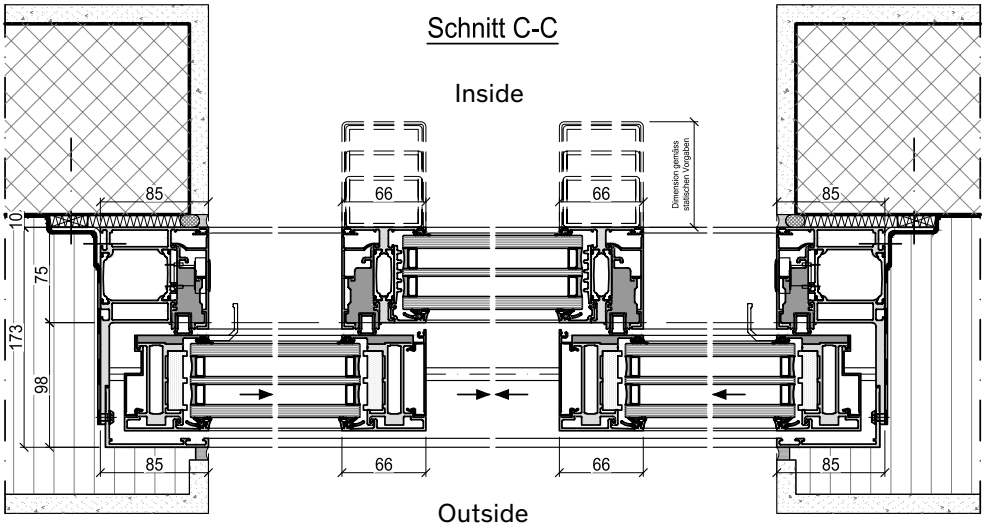


Schema K

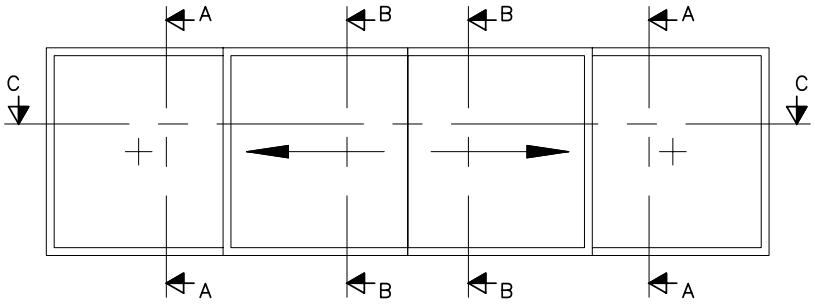
DWG PDF







Schema C



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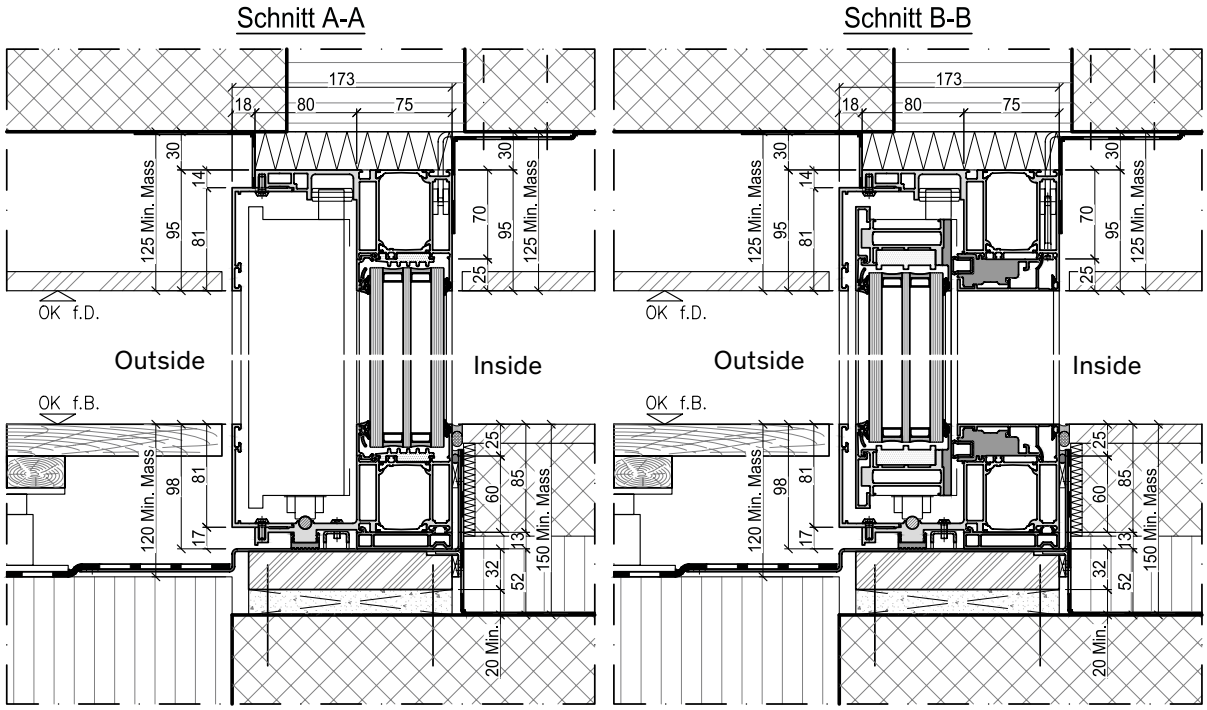
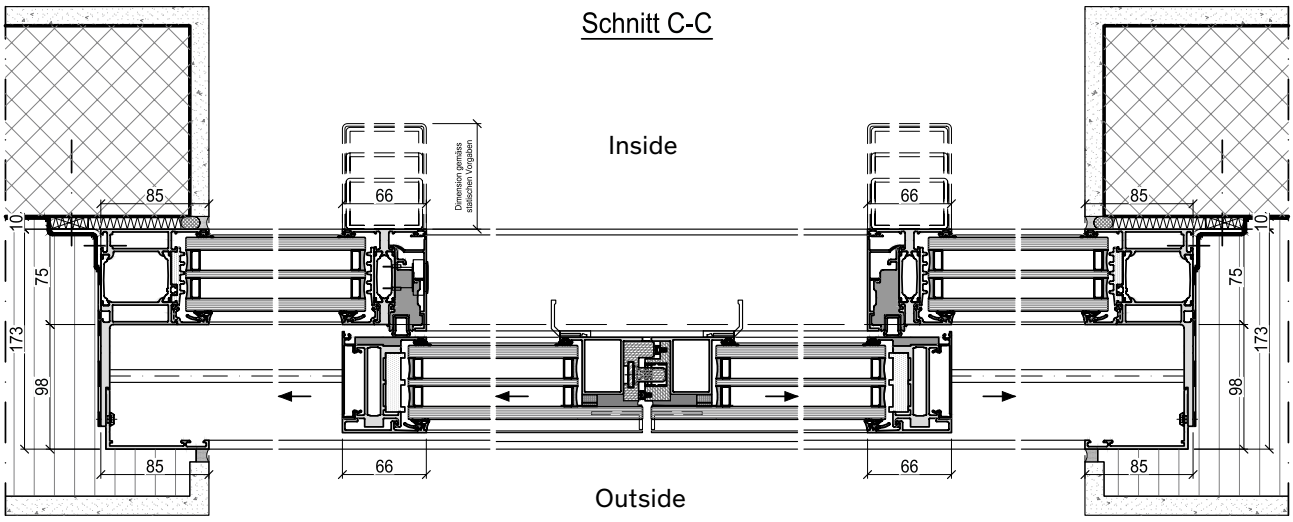
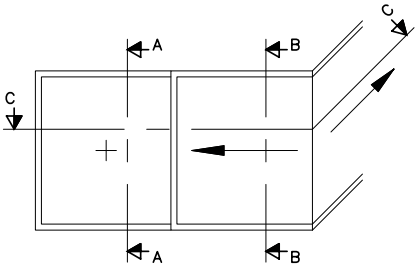




Schema C 1.1



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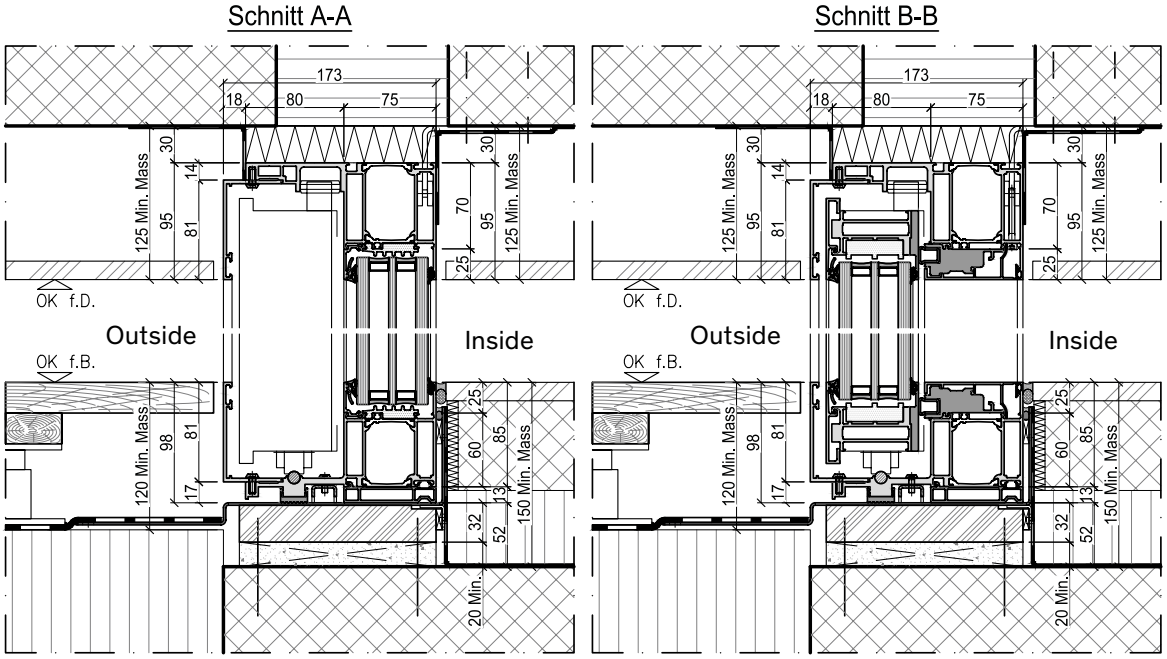

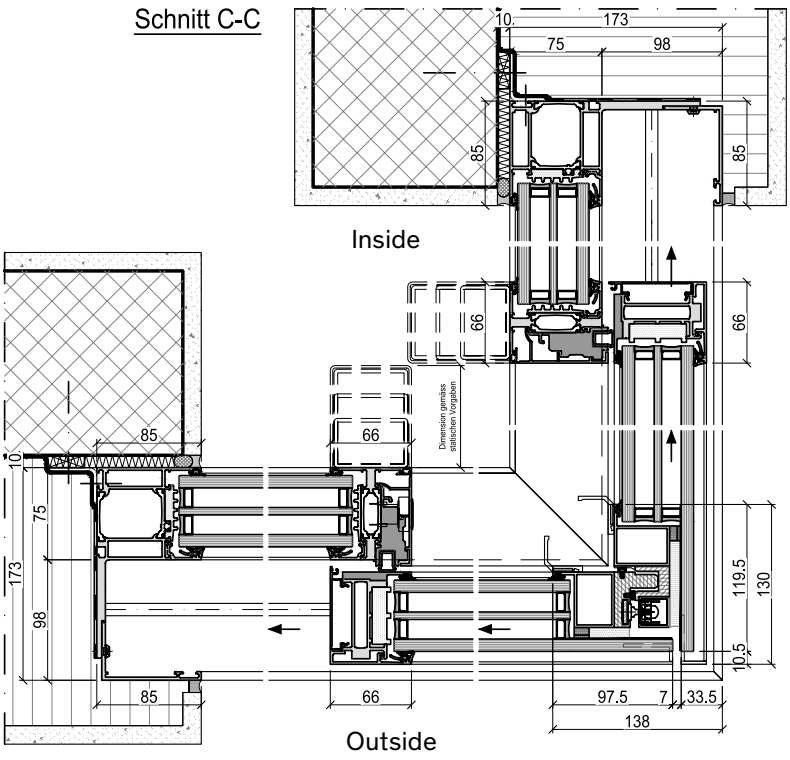

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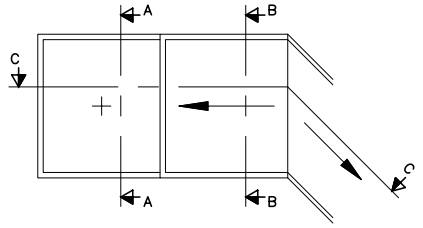

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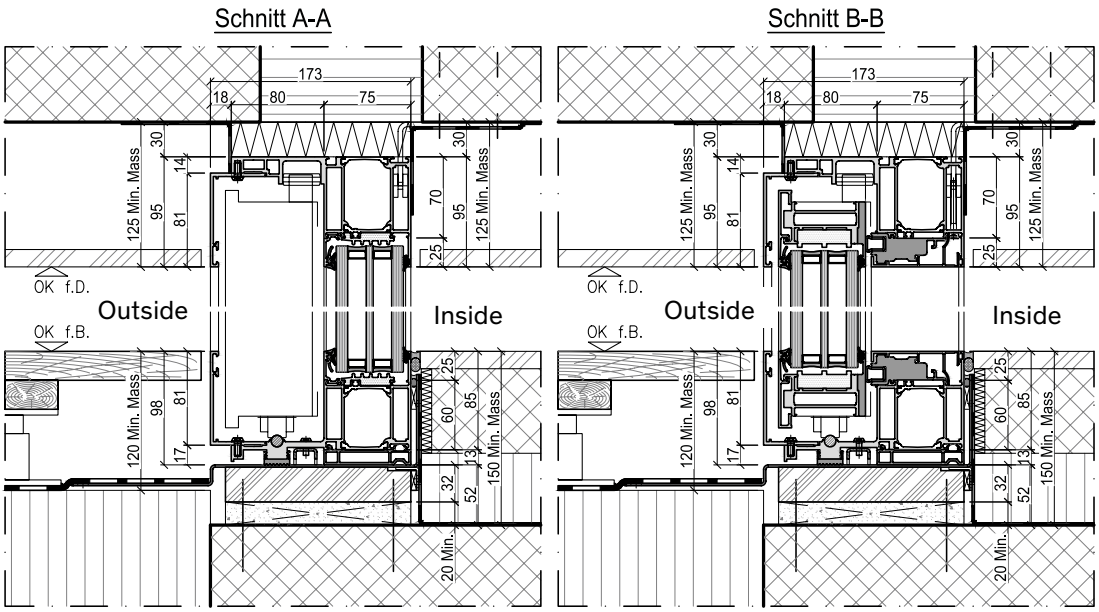

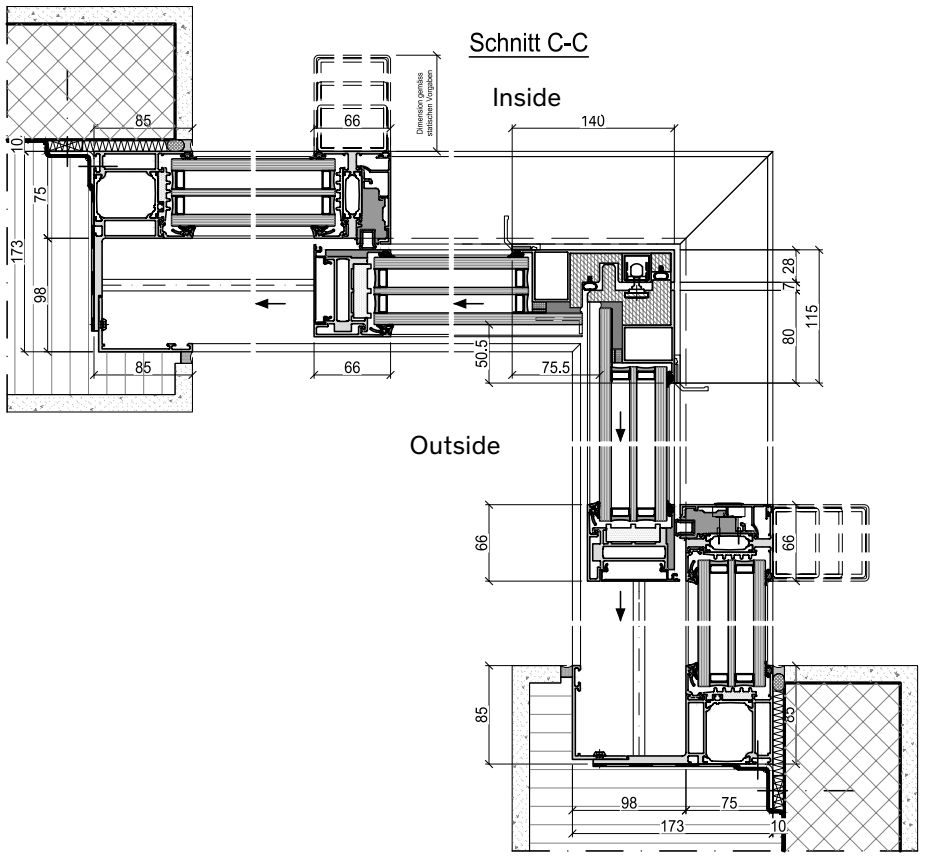

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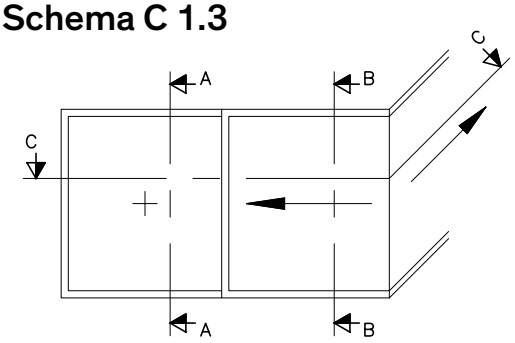

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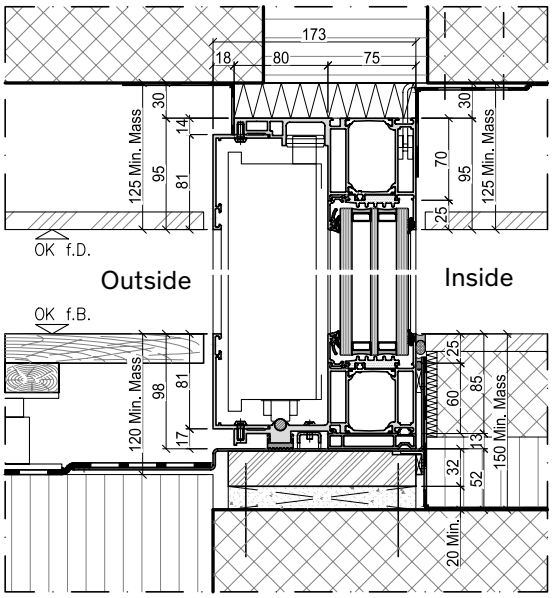

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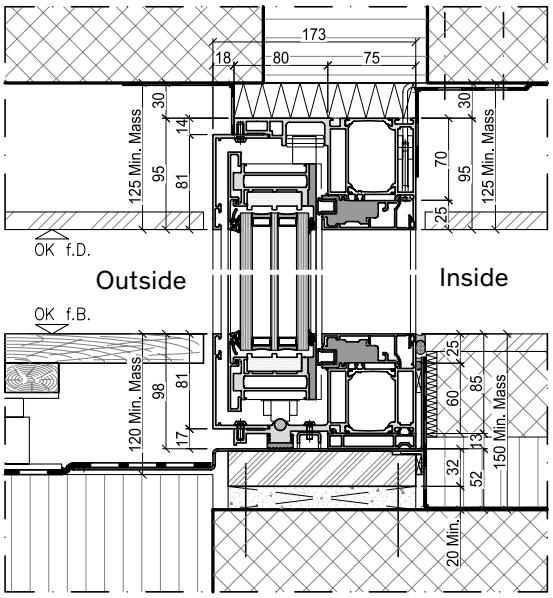

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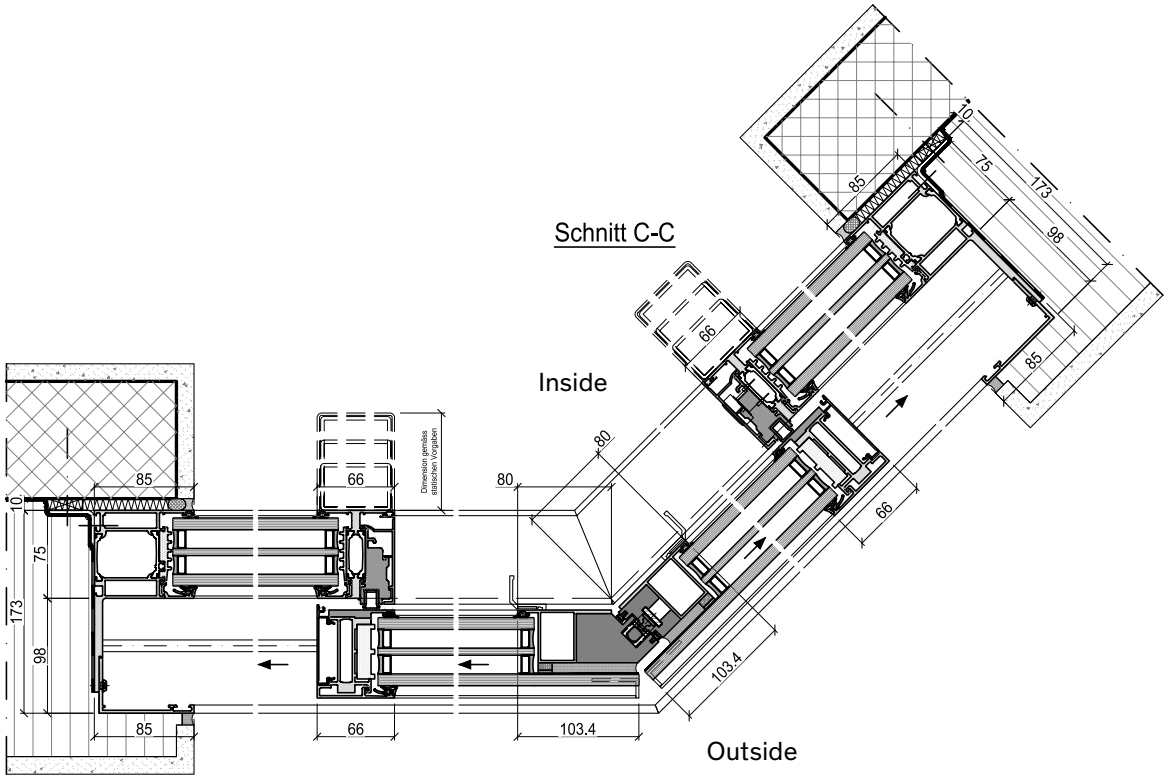

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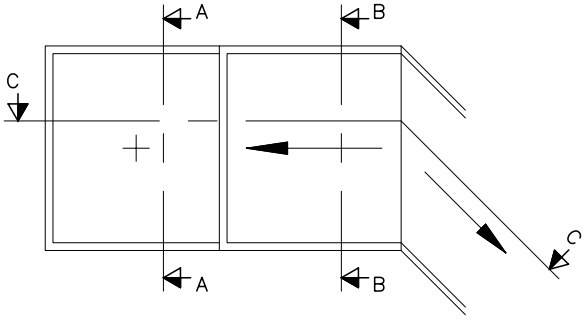

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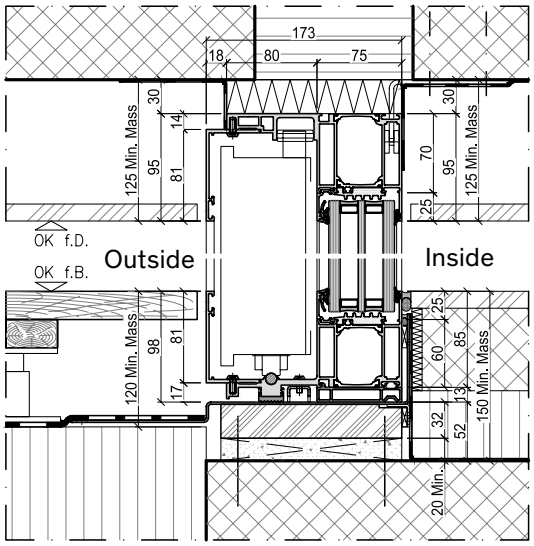

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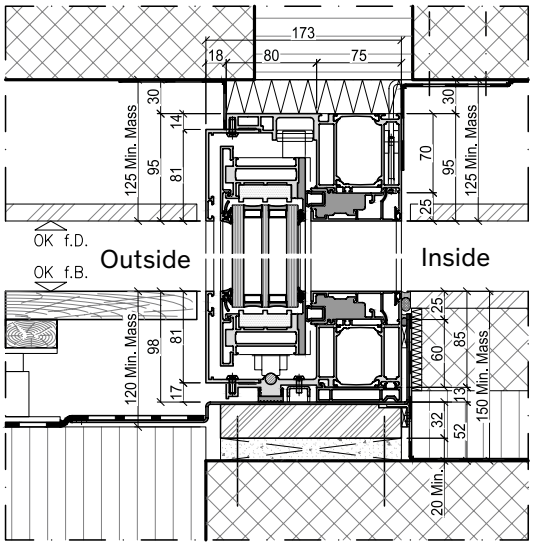

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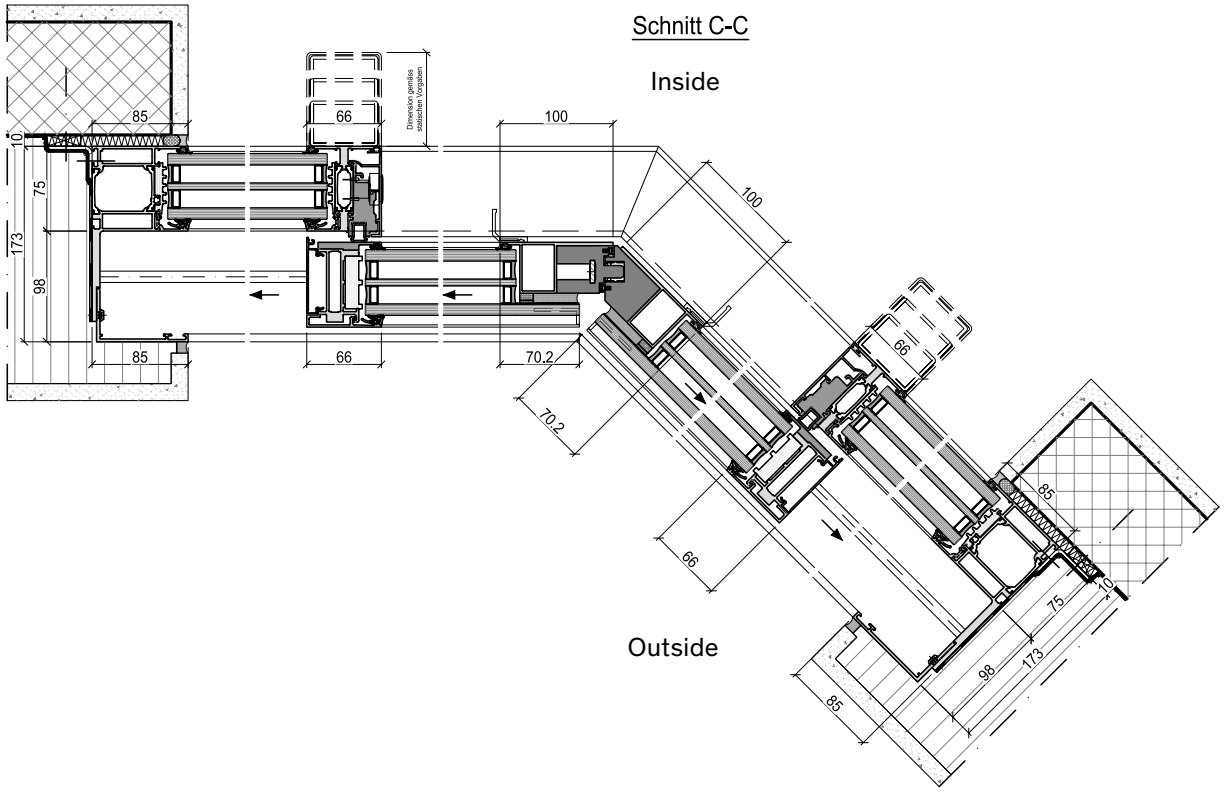

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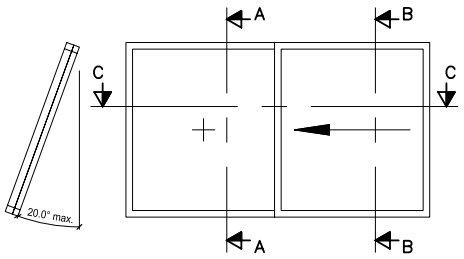
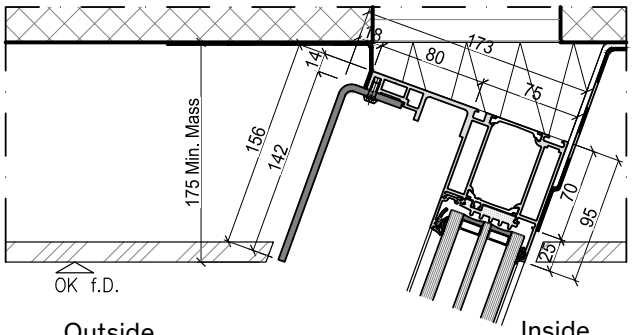


DWG PDF

Schnitt A-A



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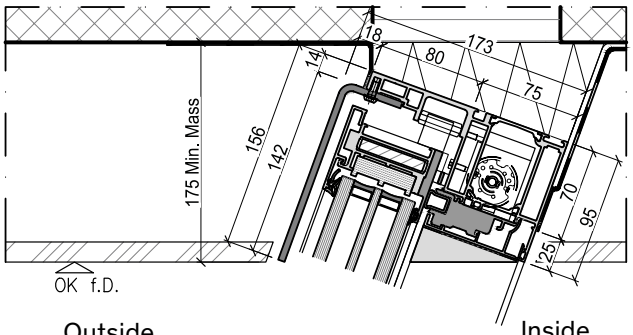
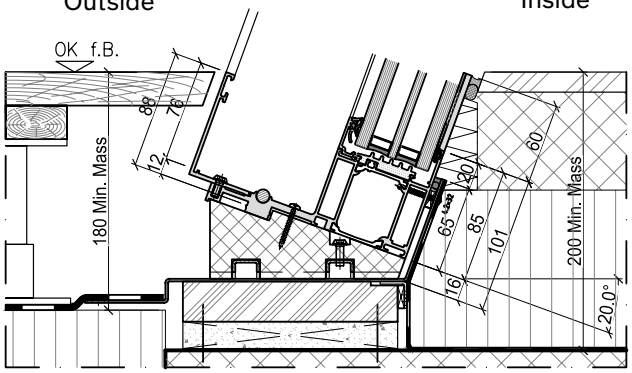
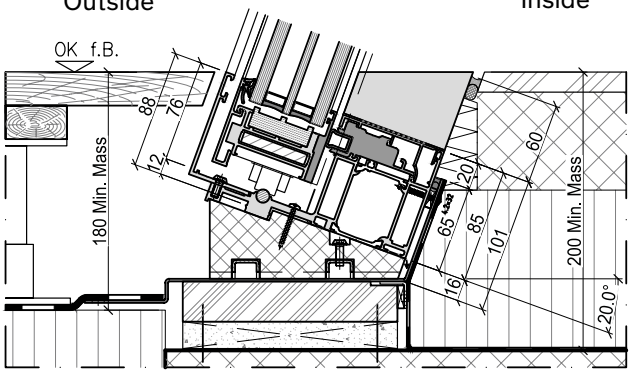
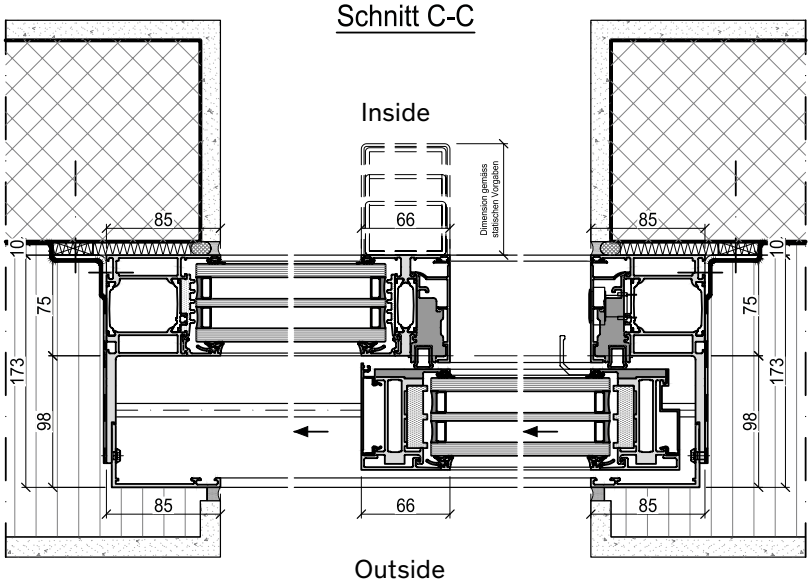


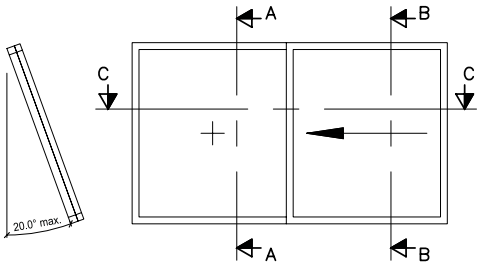




Schnitt C-C

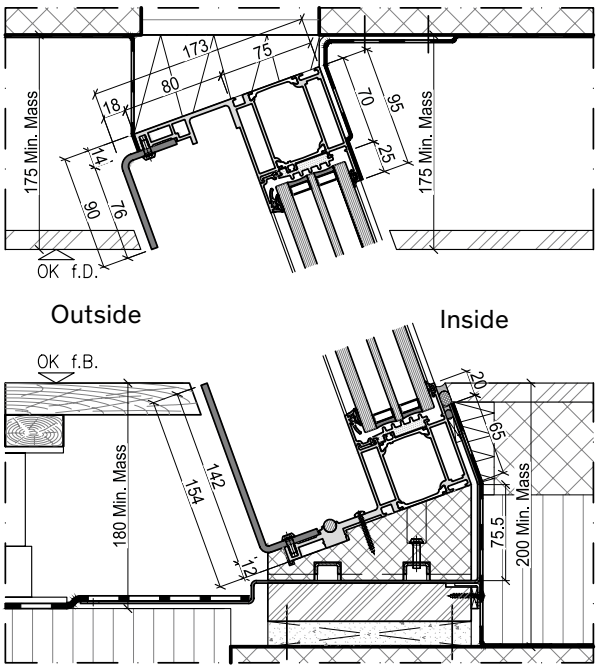


Schema A 2.2

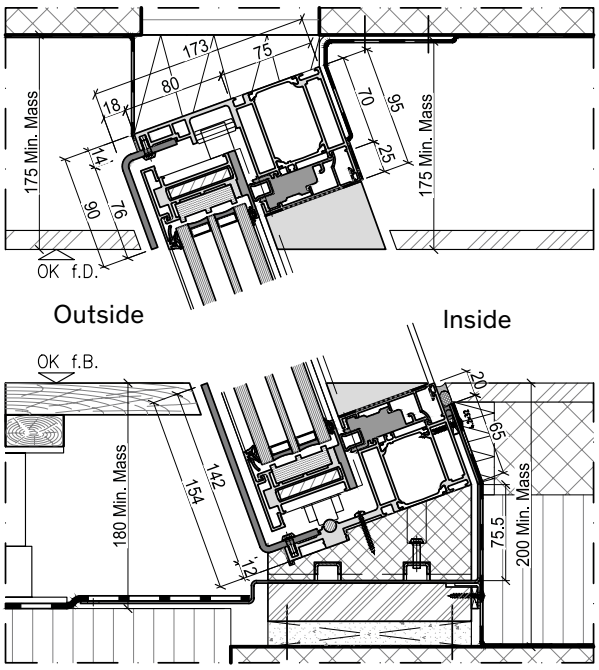


DWG PDF

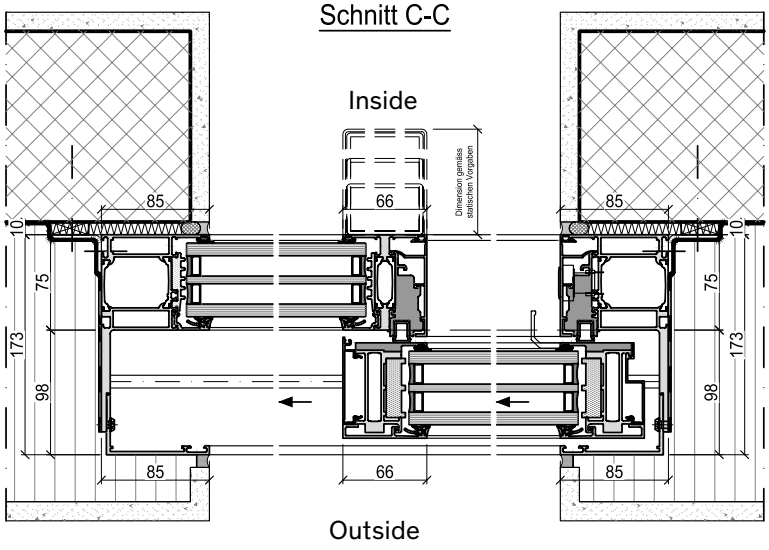
Schnitt A-A



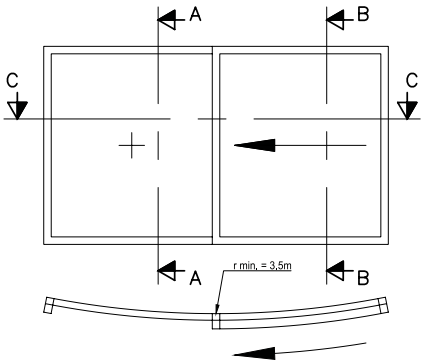
Schnitt B-B



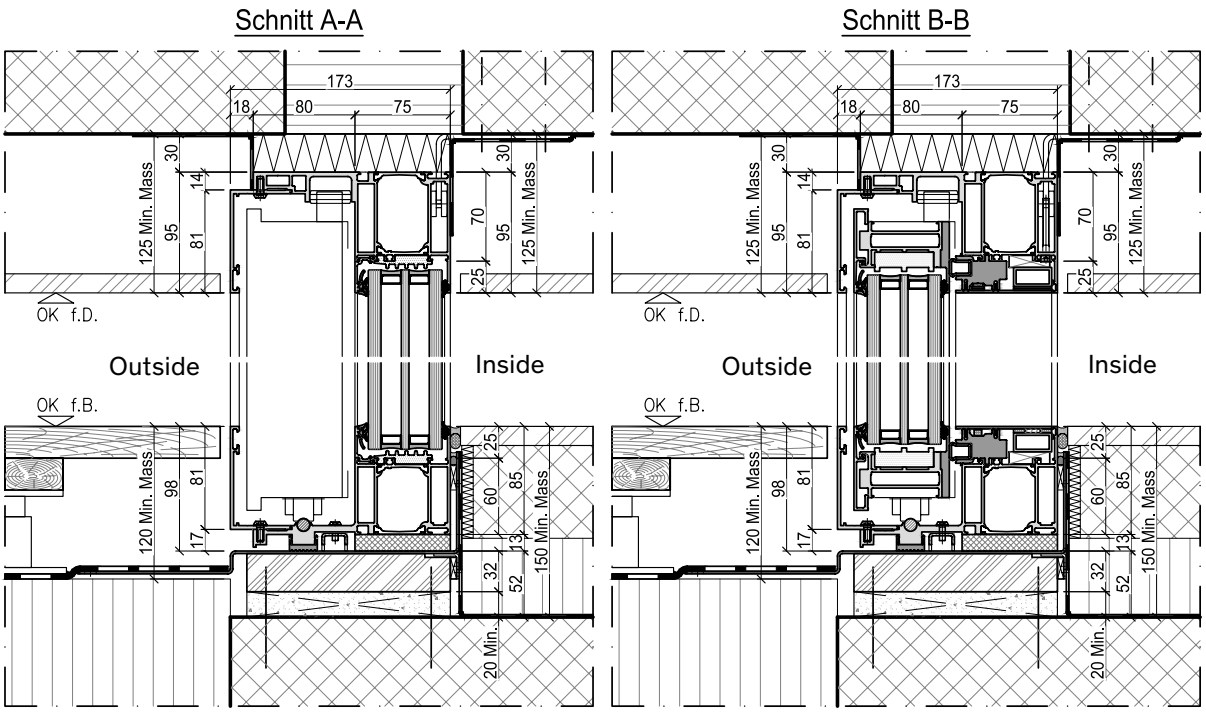
Schnitt C-C

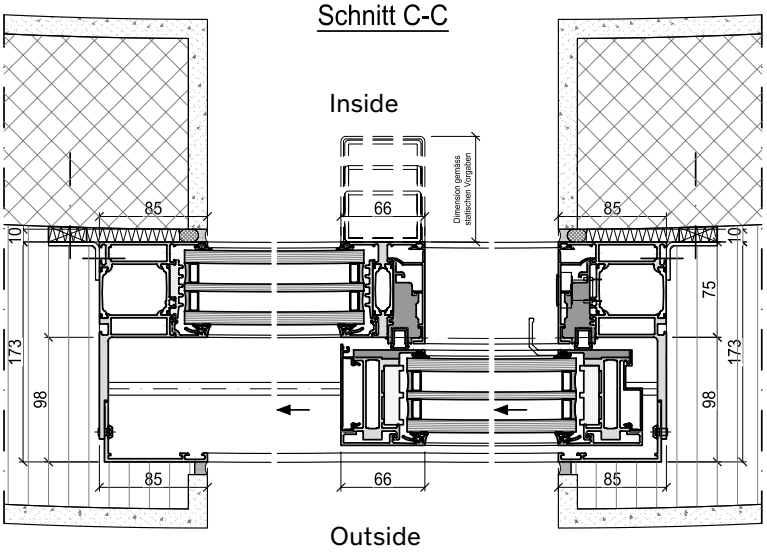


Schema A 3.1



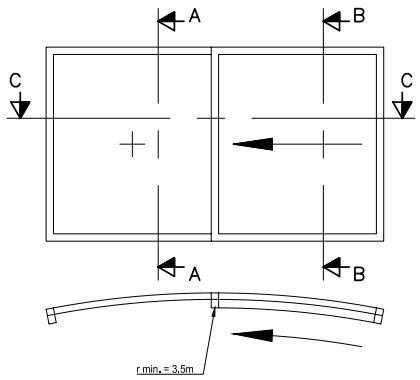
DWG PDF

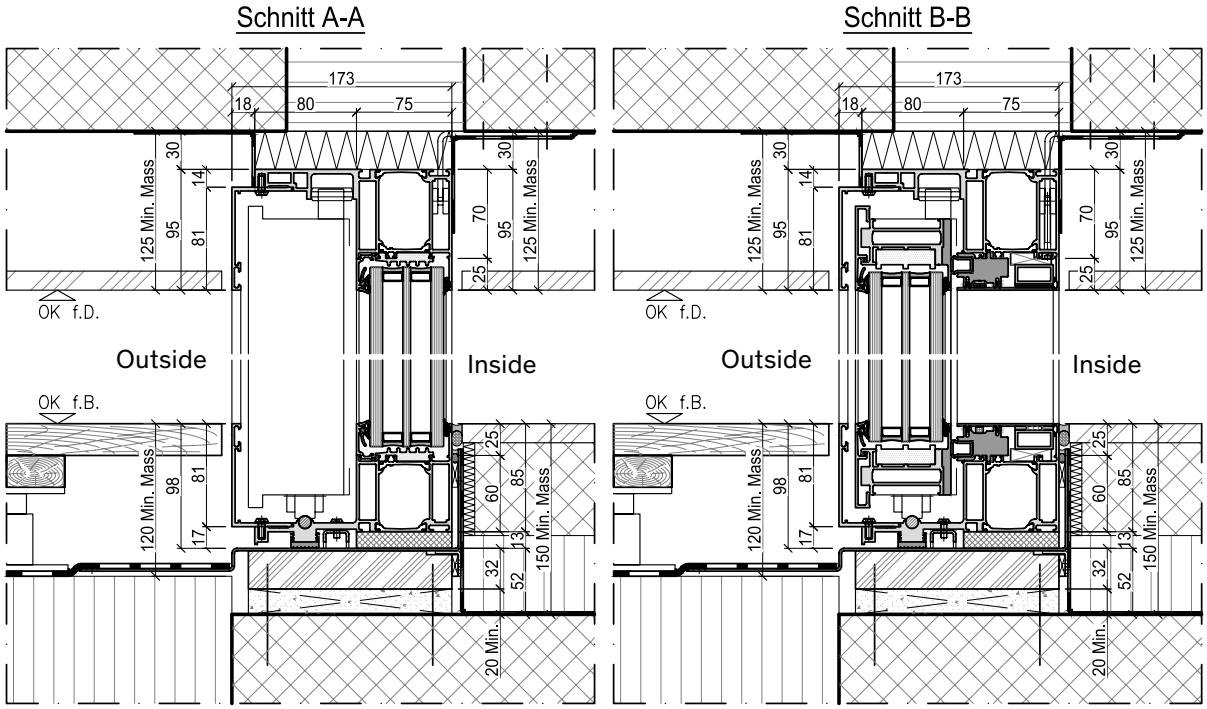


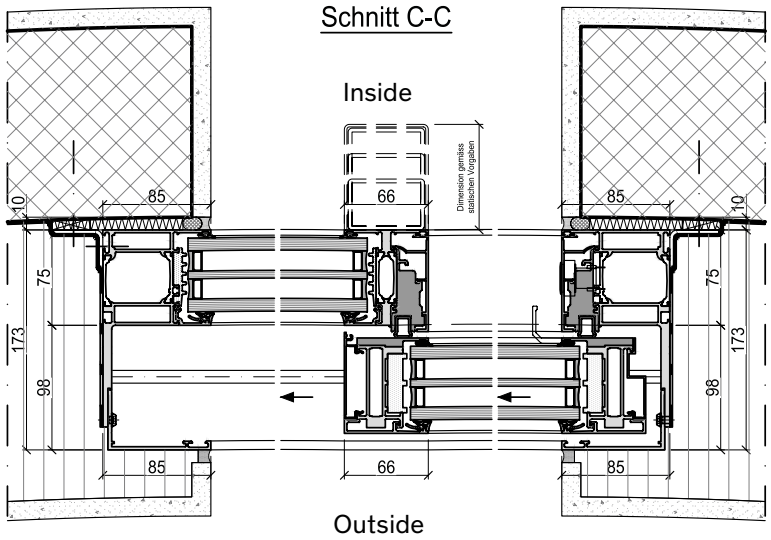


Schema A 3.2

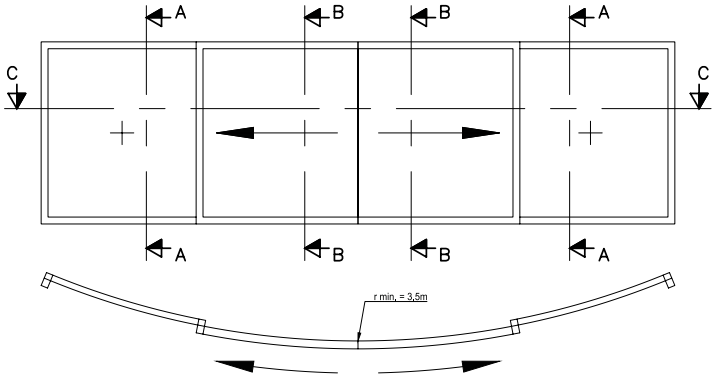
DWG PDF





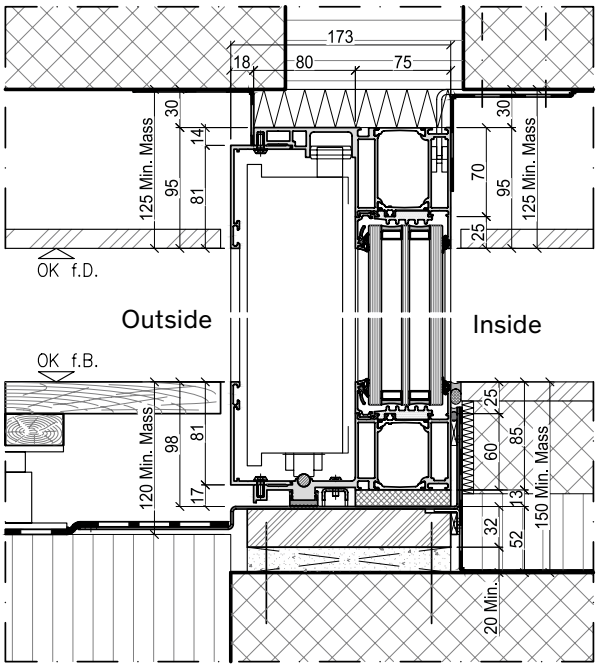


Schema C 3.1

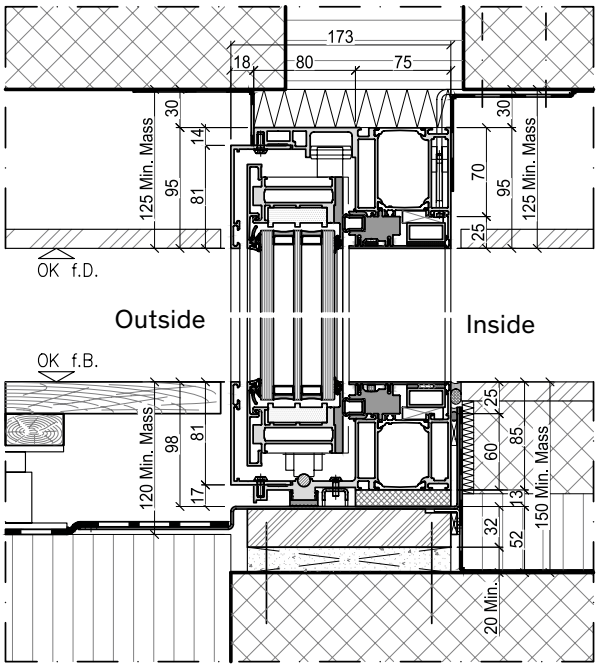


DWG PDF

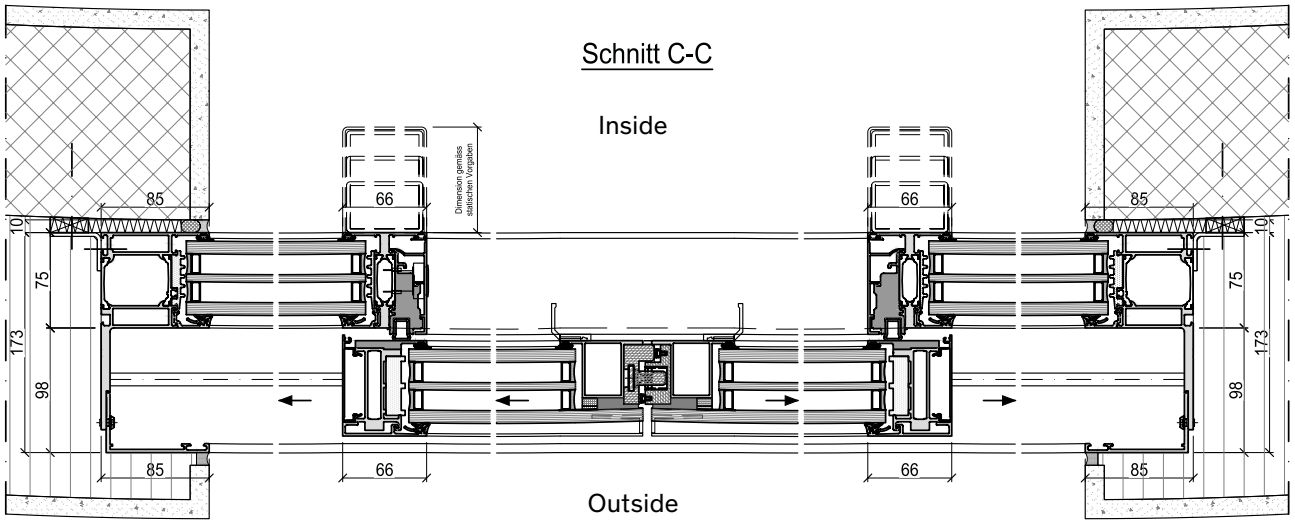
Schnitt A-A



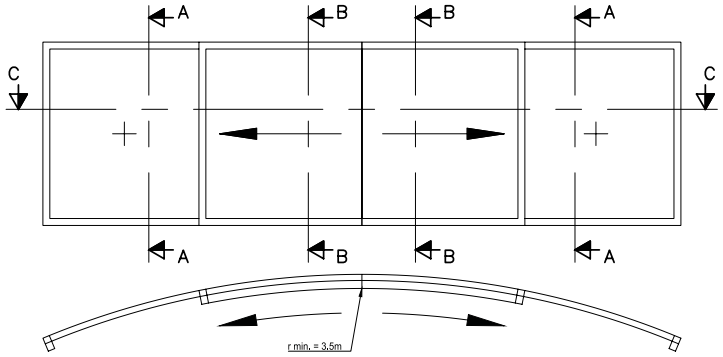
Schnitt B-B



Schnitt C-C



Schema C 3.2



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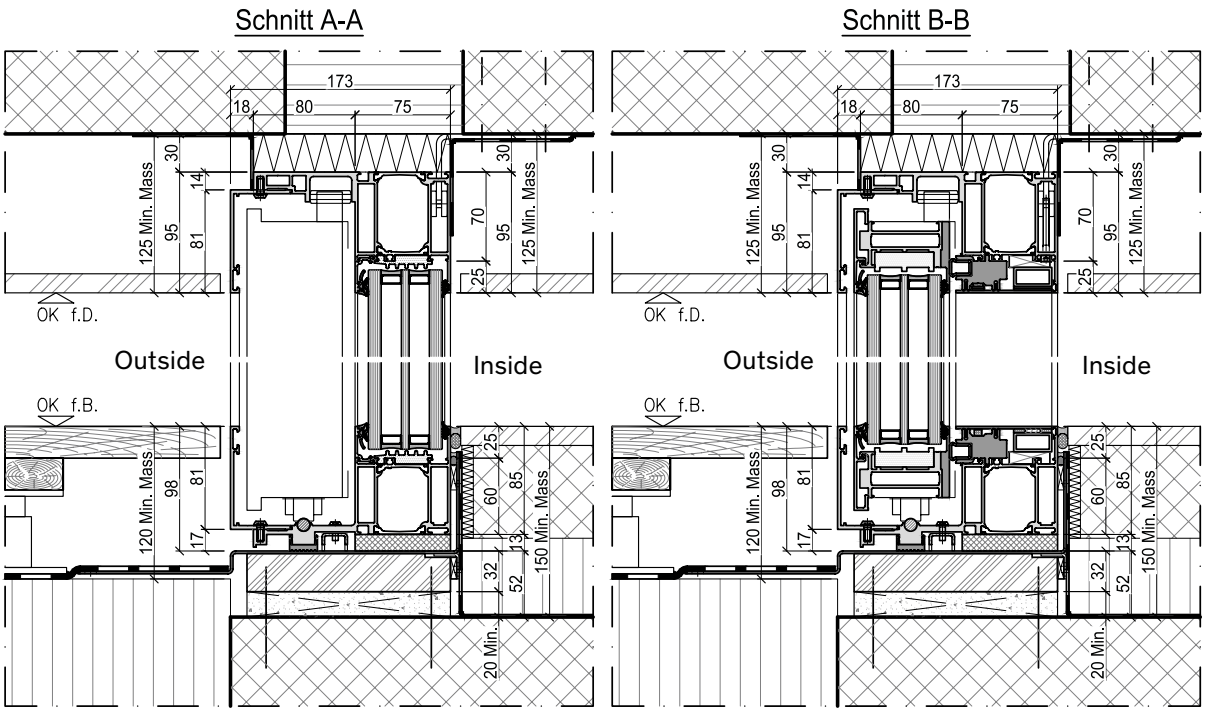
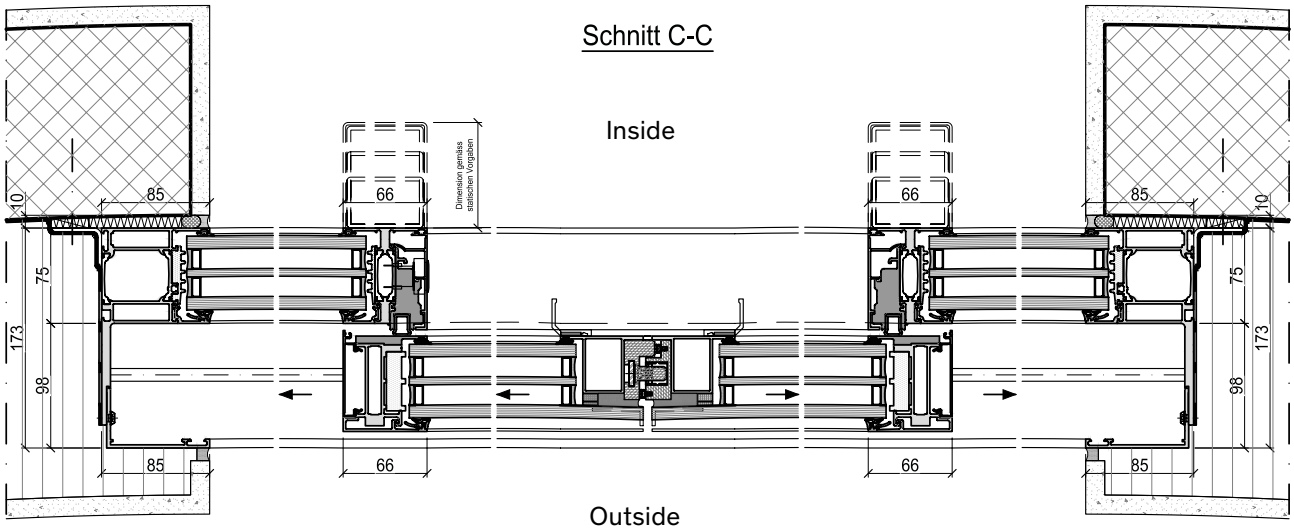
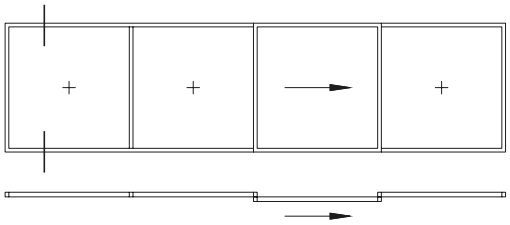


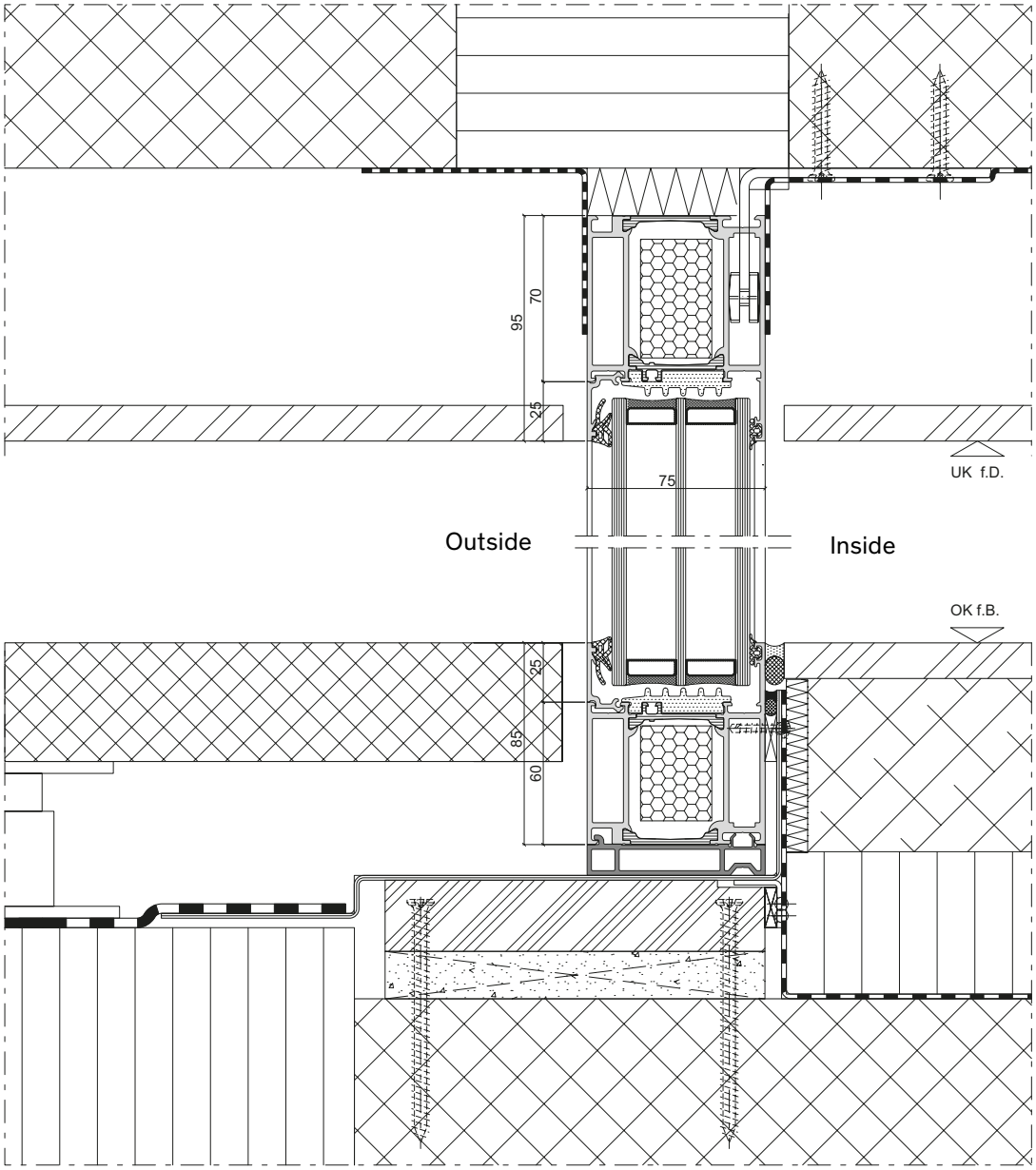


air-lux SW 75

Fixed glazing

DWG PDF

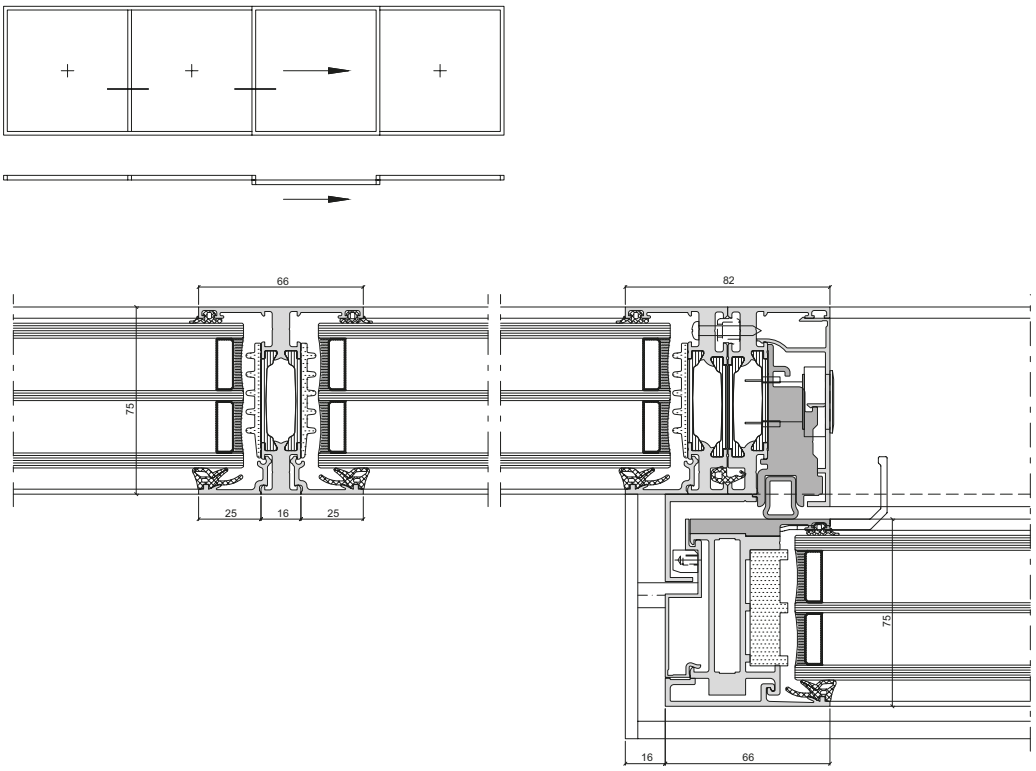




air-lux SW 75

Fixed glazing and element joint

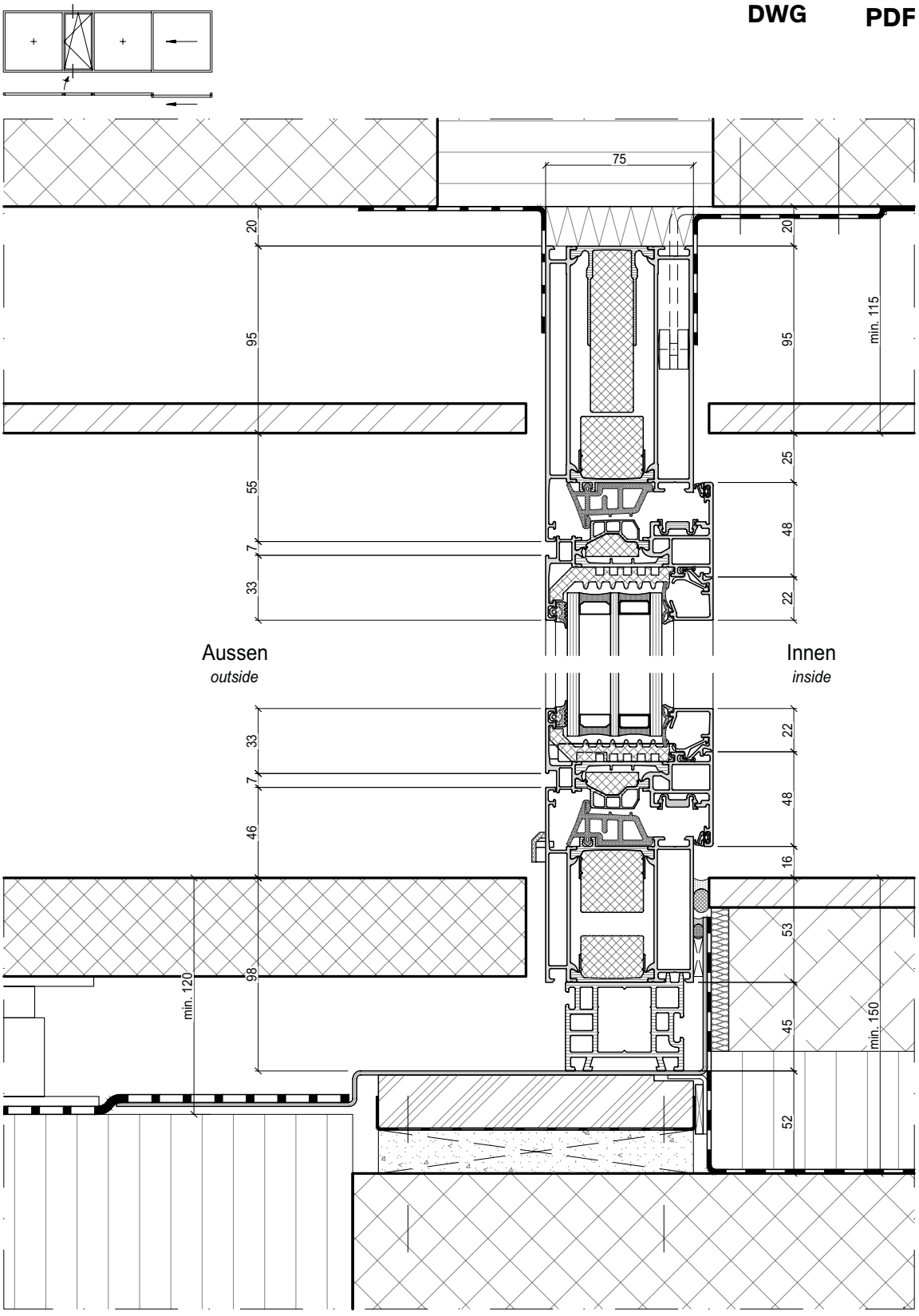
DWG PDF



Schüco AWS 75.SI+

Tilt-and-turn window

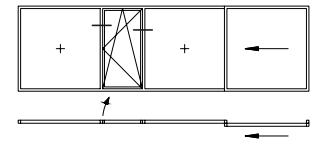
DWG PDF

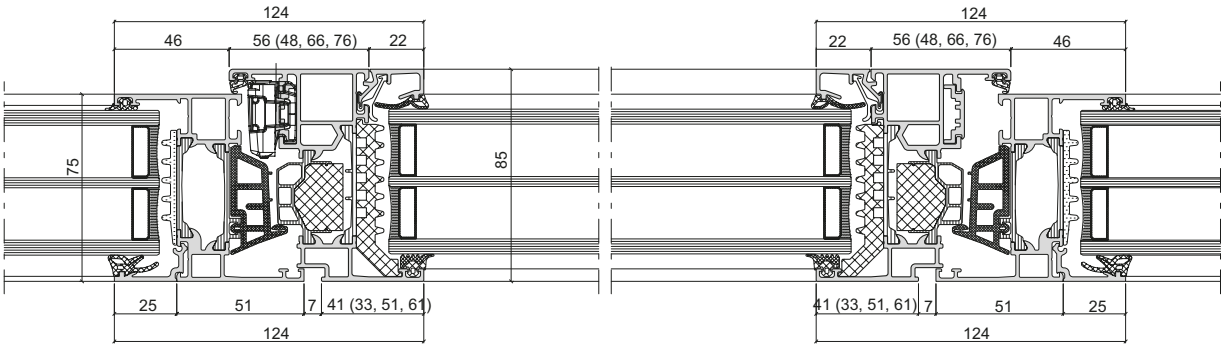


Schüco AWS 75.SI+

Tilt-and-turn window

DWG PDF

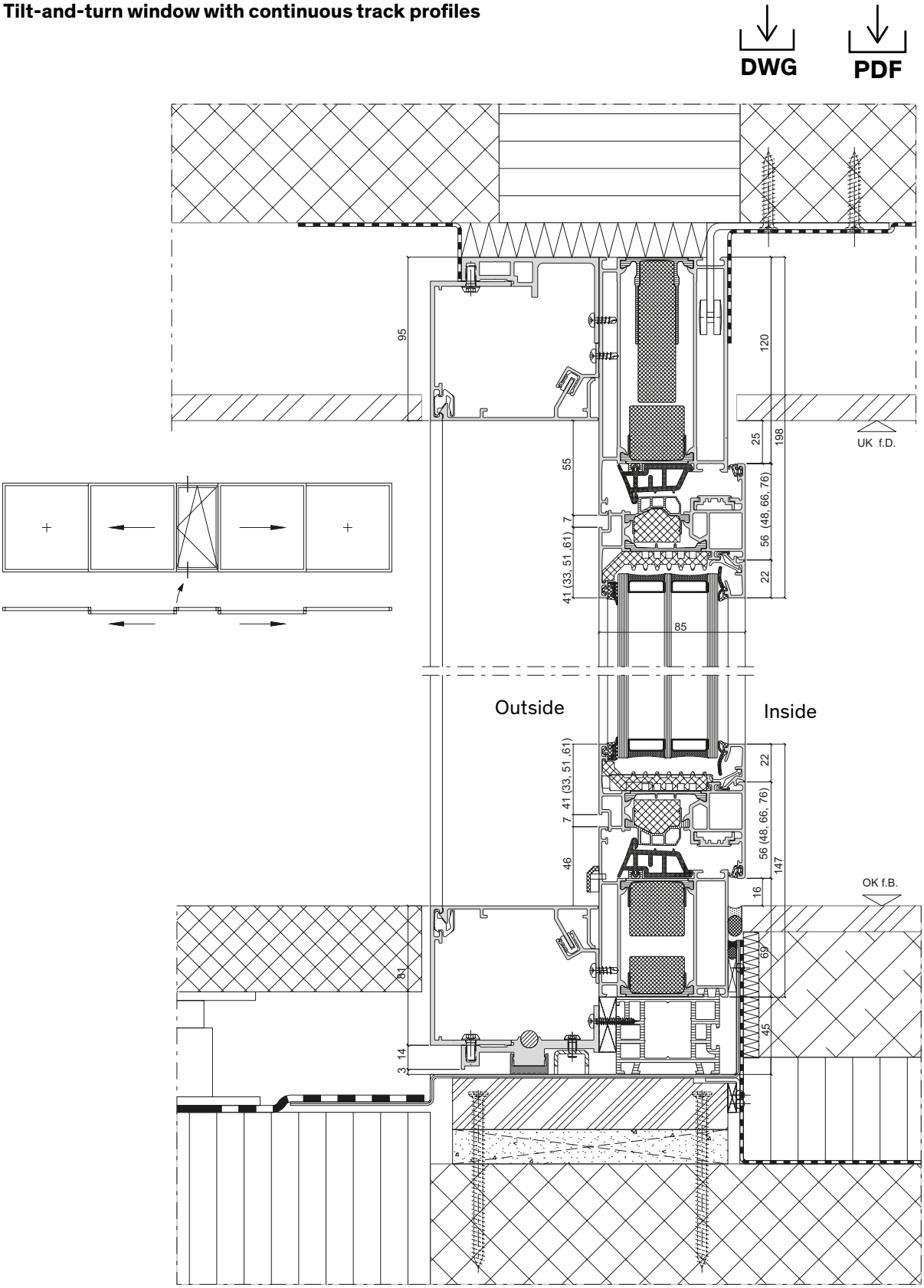




Schüco AWS 75.SI+

Tilt-and-turn window with continuous track profiles

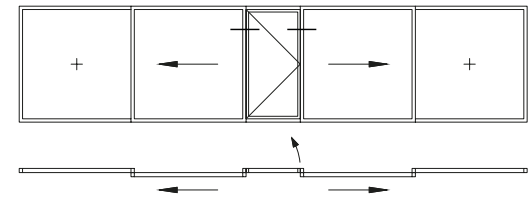
DWG PDF

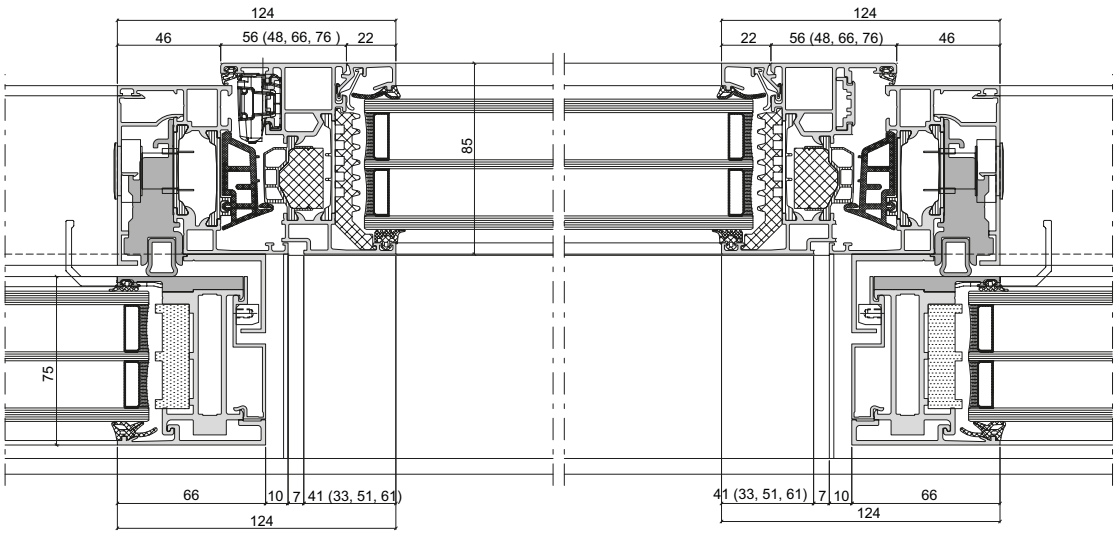


Schüco AWS 75.SI+

Tilt-and-turn window with continuous track profiles

DWG PDF

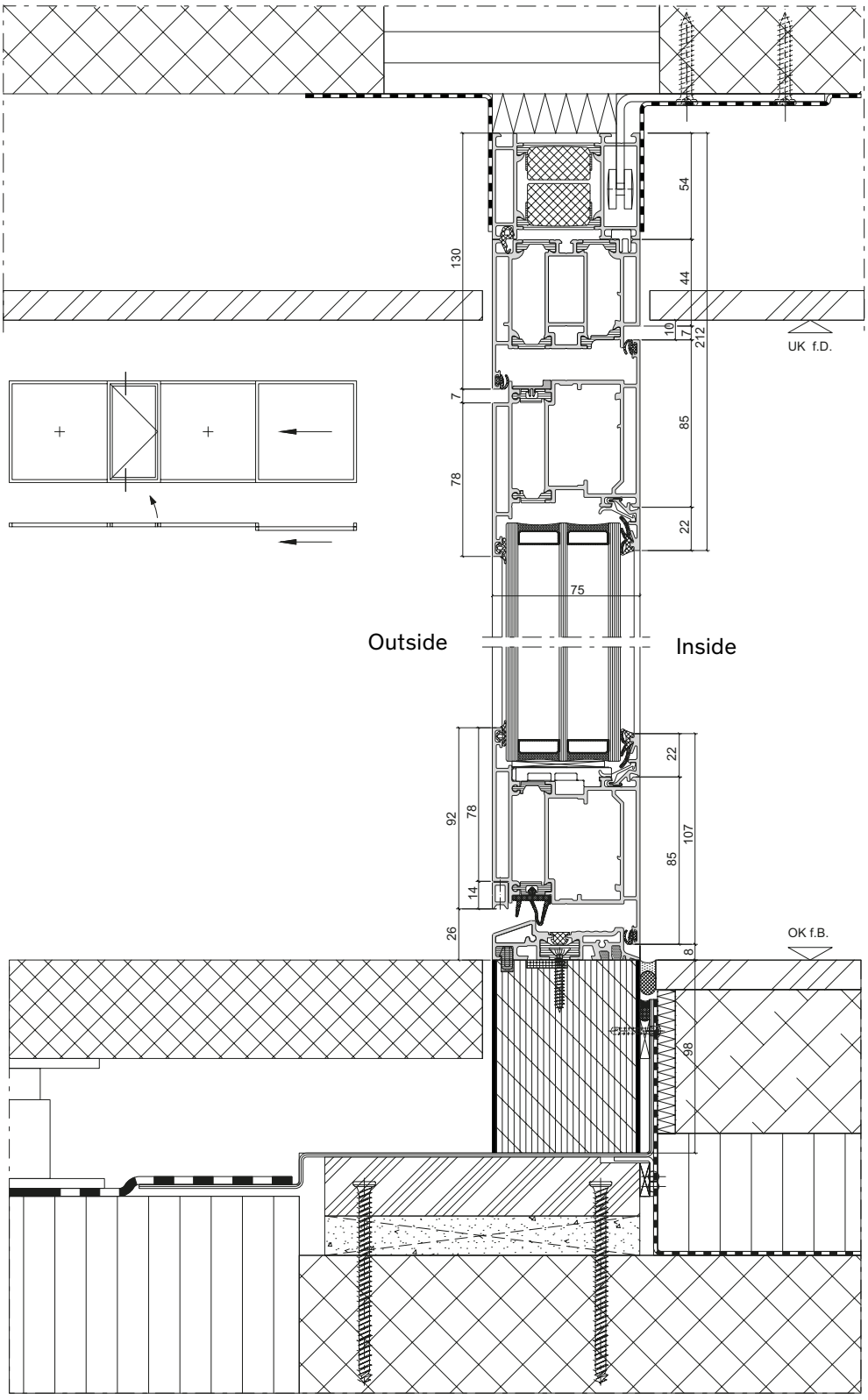




Schüco UP 75

Inward-opening doors

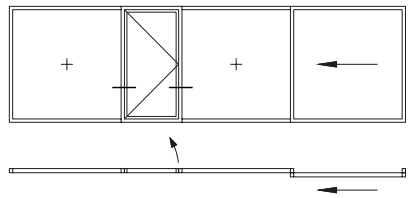
DWG PDF

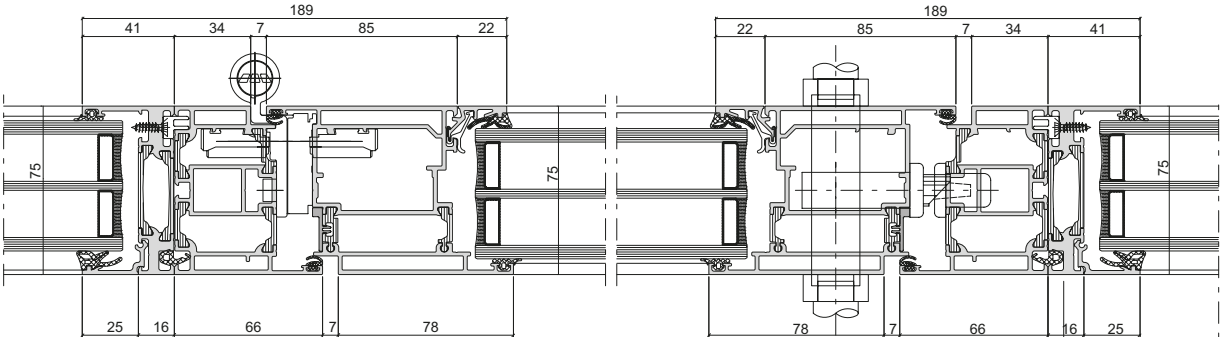


Schüco UP 75

Inward-opening doors, element joint

DWG PDF

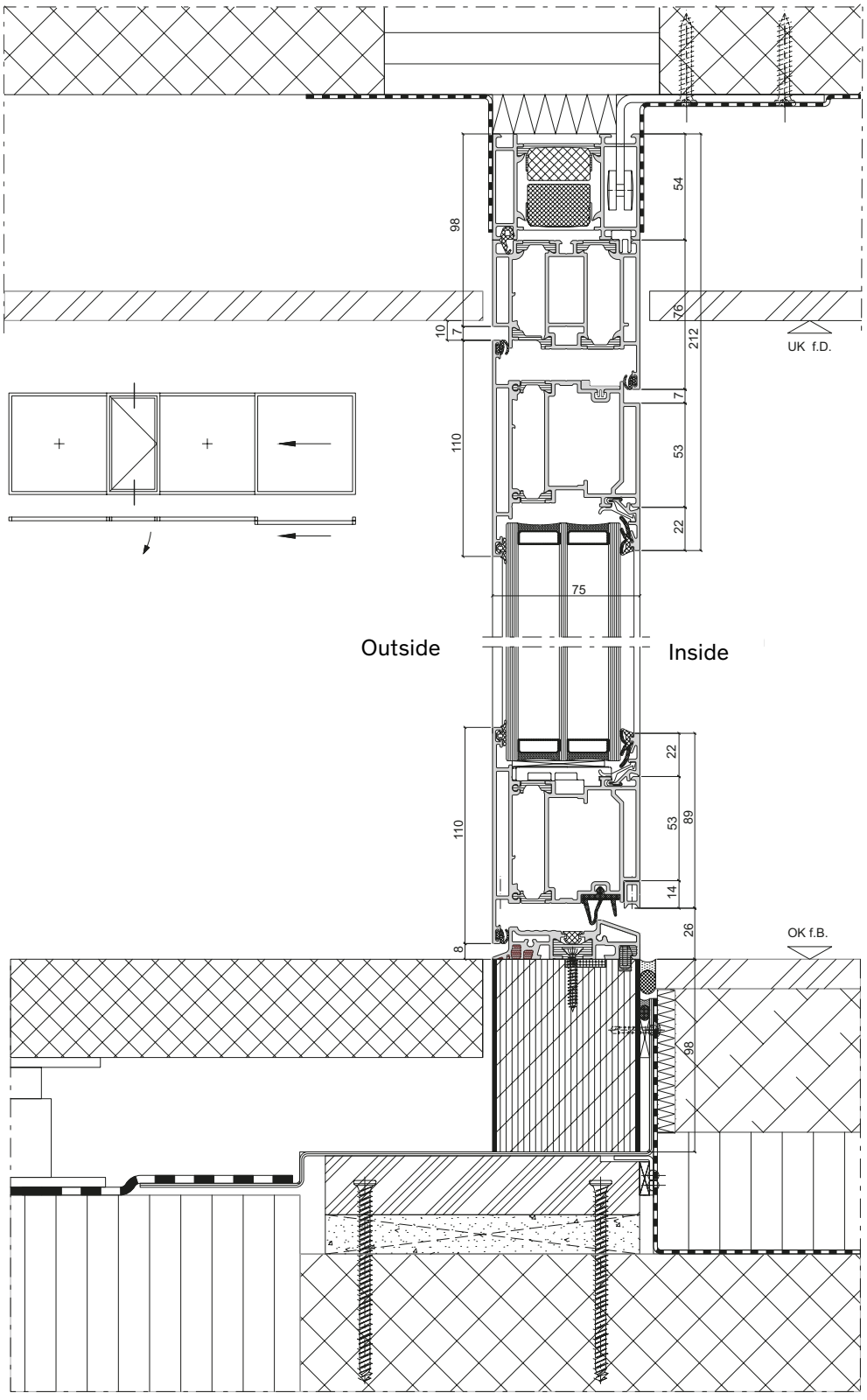




Schüco UP 75

Outward-opening doors

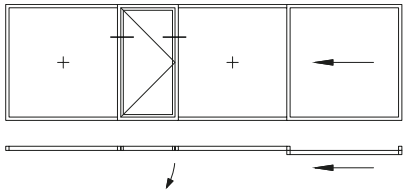
DWG PDF

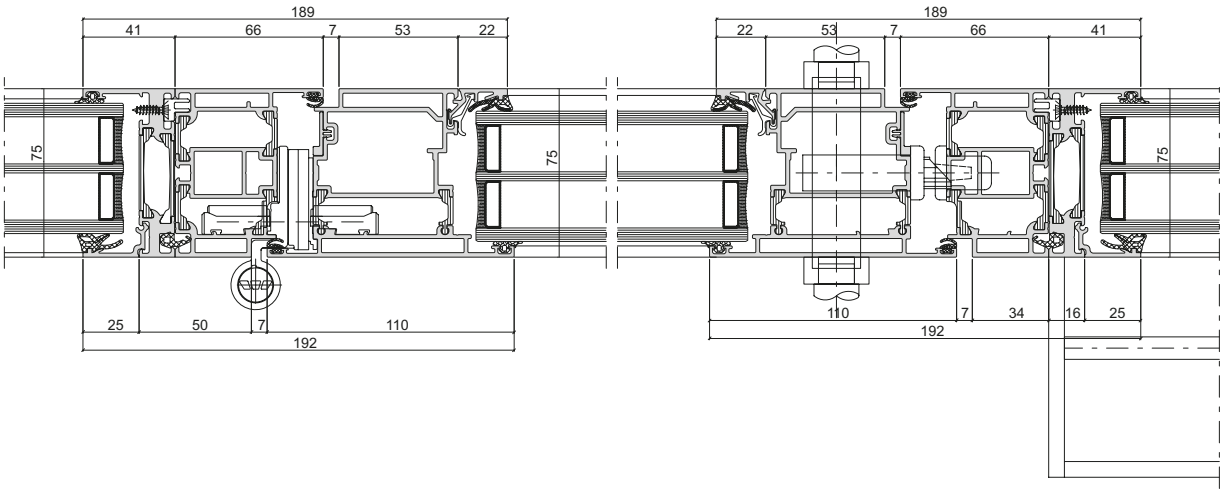


Schüco UP 75

Inward-opening doors, element joint

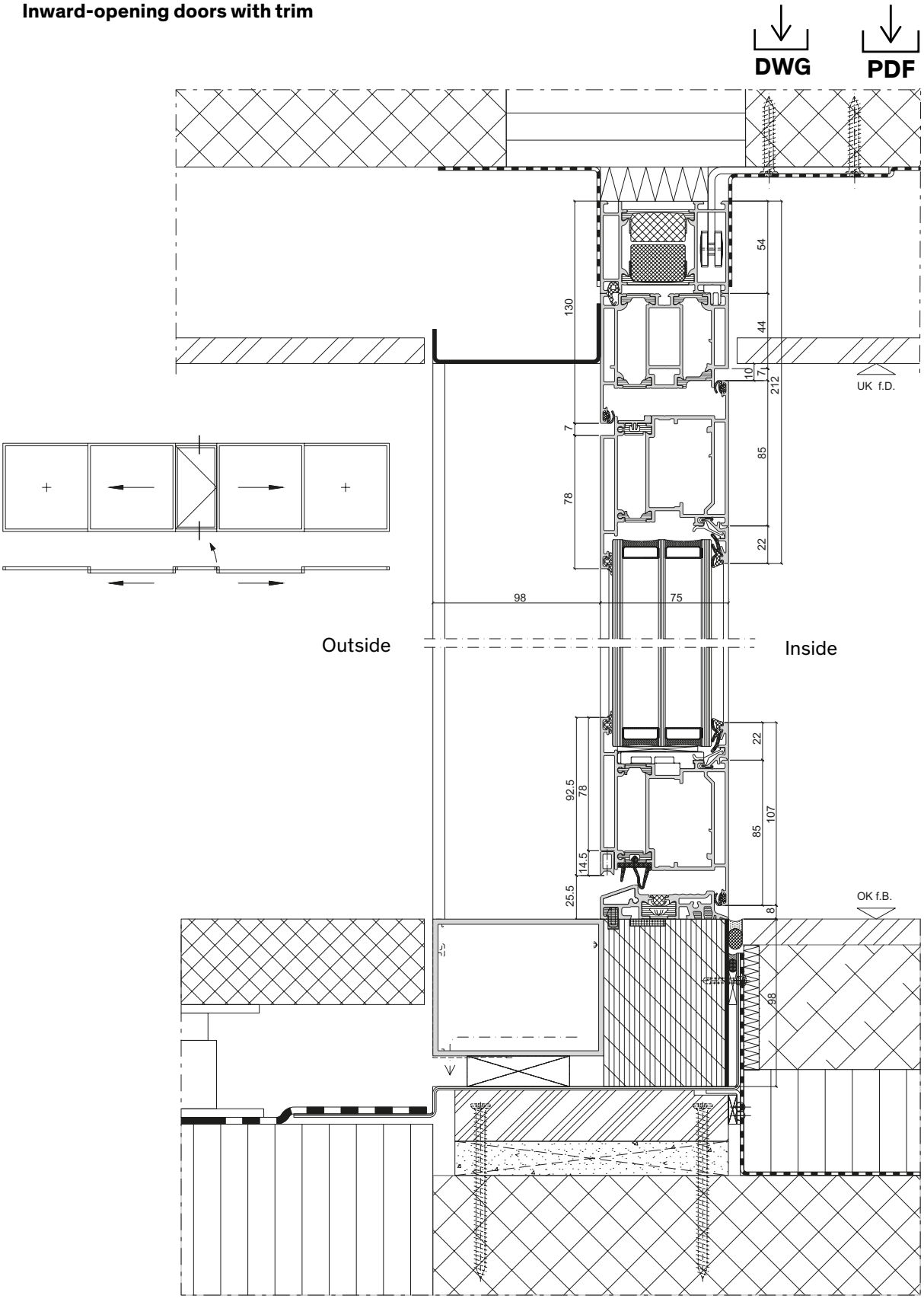
DWG PDF





Schüco UP 75

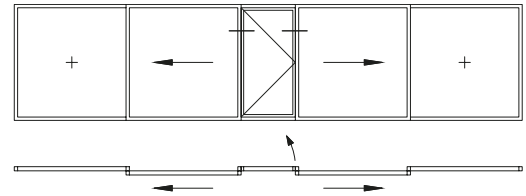
Inward-opening doors with trim

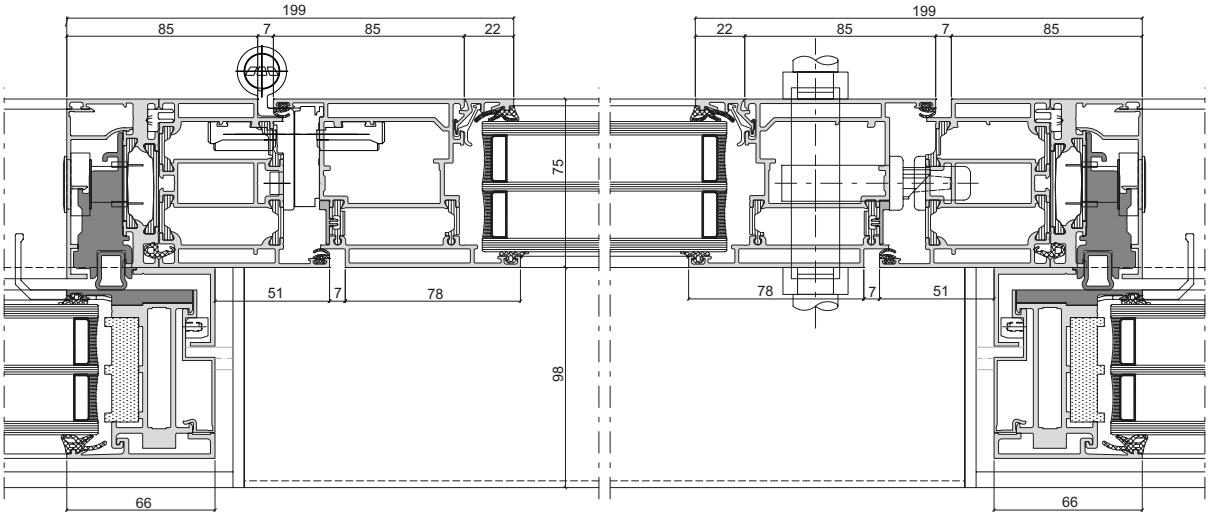


Schüco UP 75

Inward-opening doors with trim

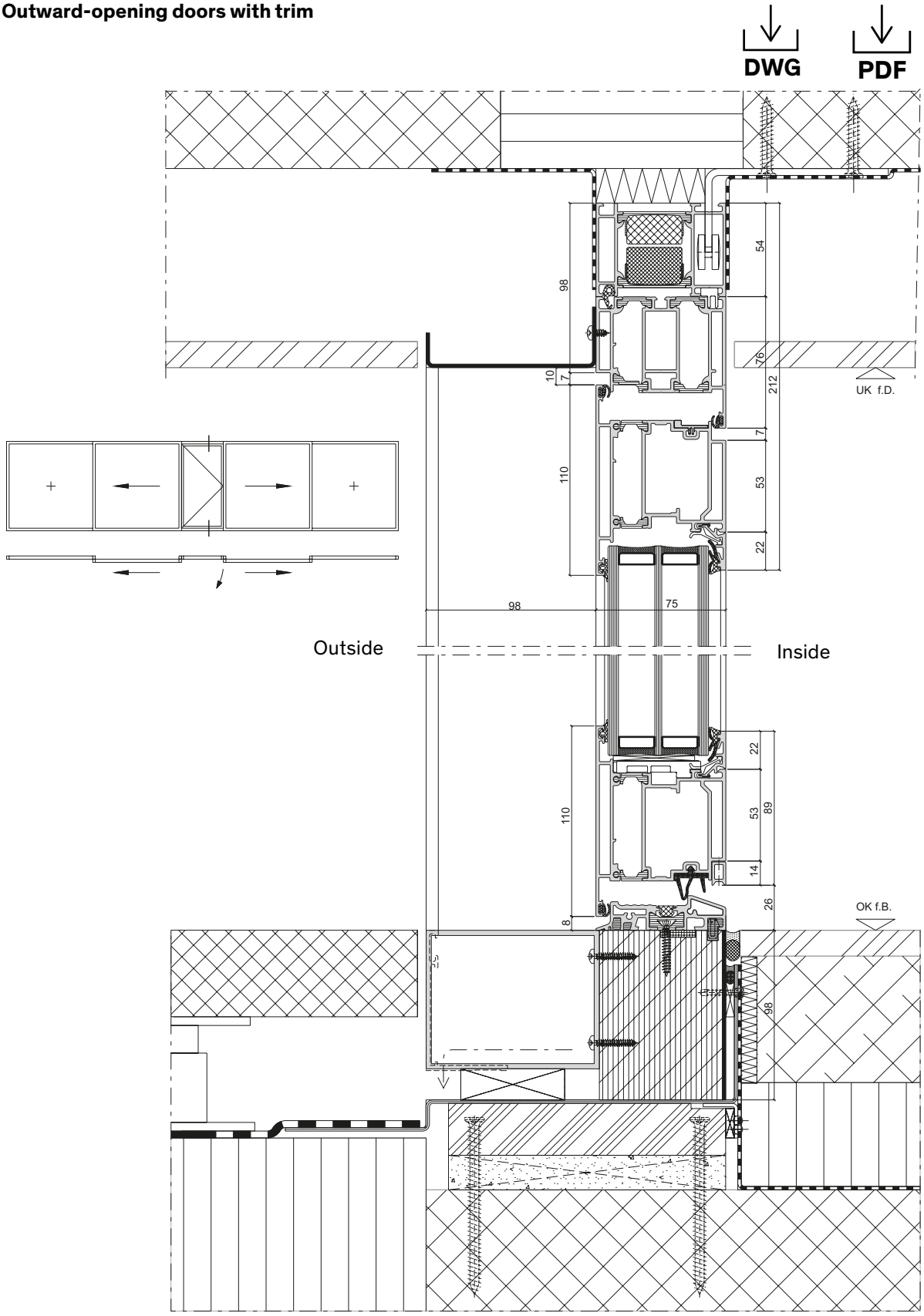
DWG PDF





Schüco UP 75

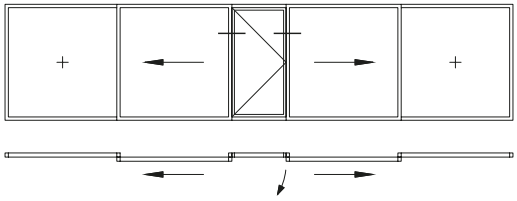
Outward-opening doors with trim

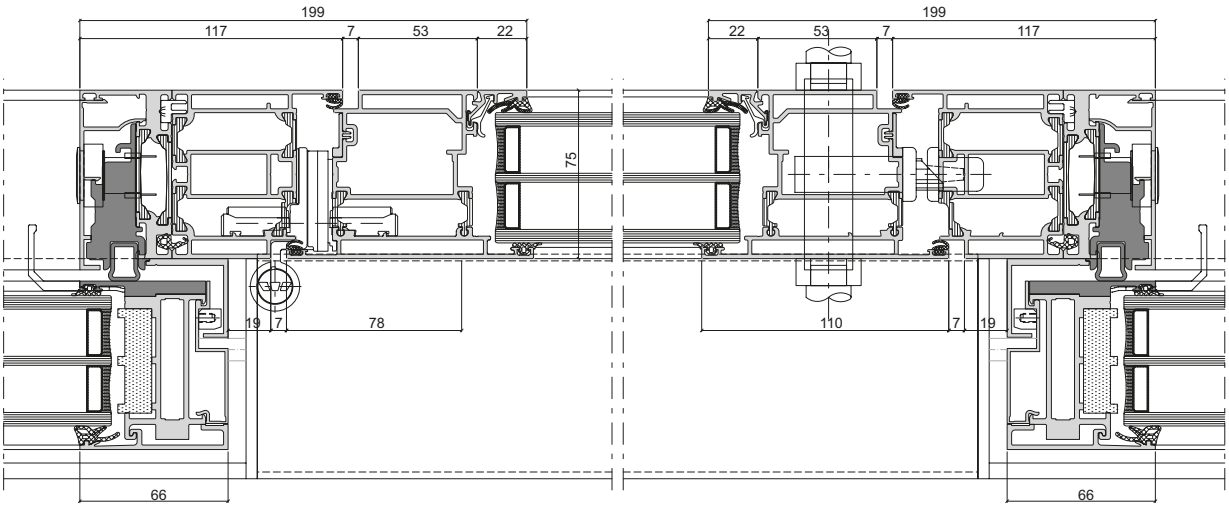


Schüco UP 75

Outward-opening doors with trim

DWG PDF

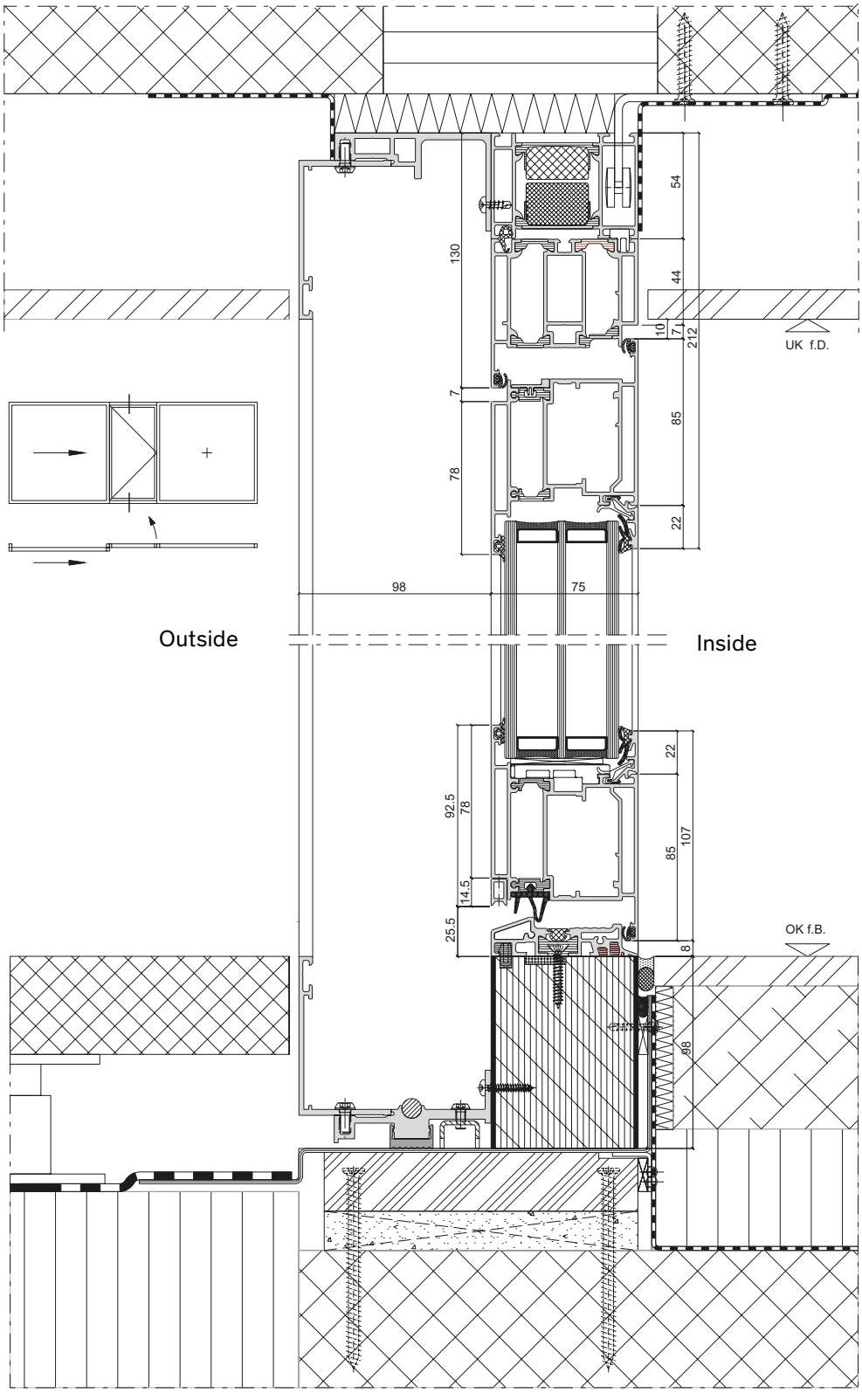




Schüco UP 75

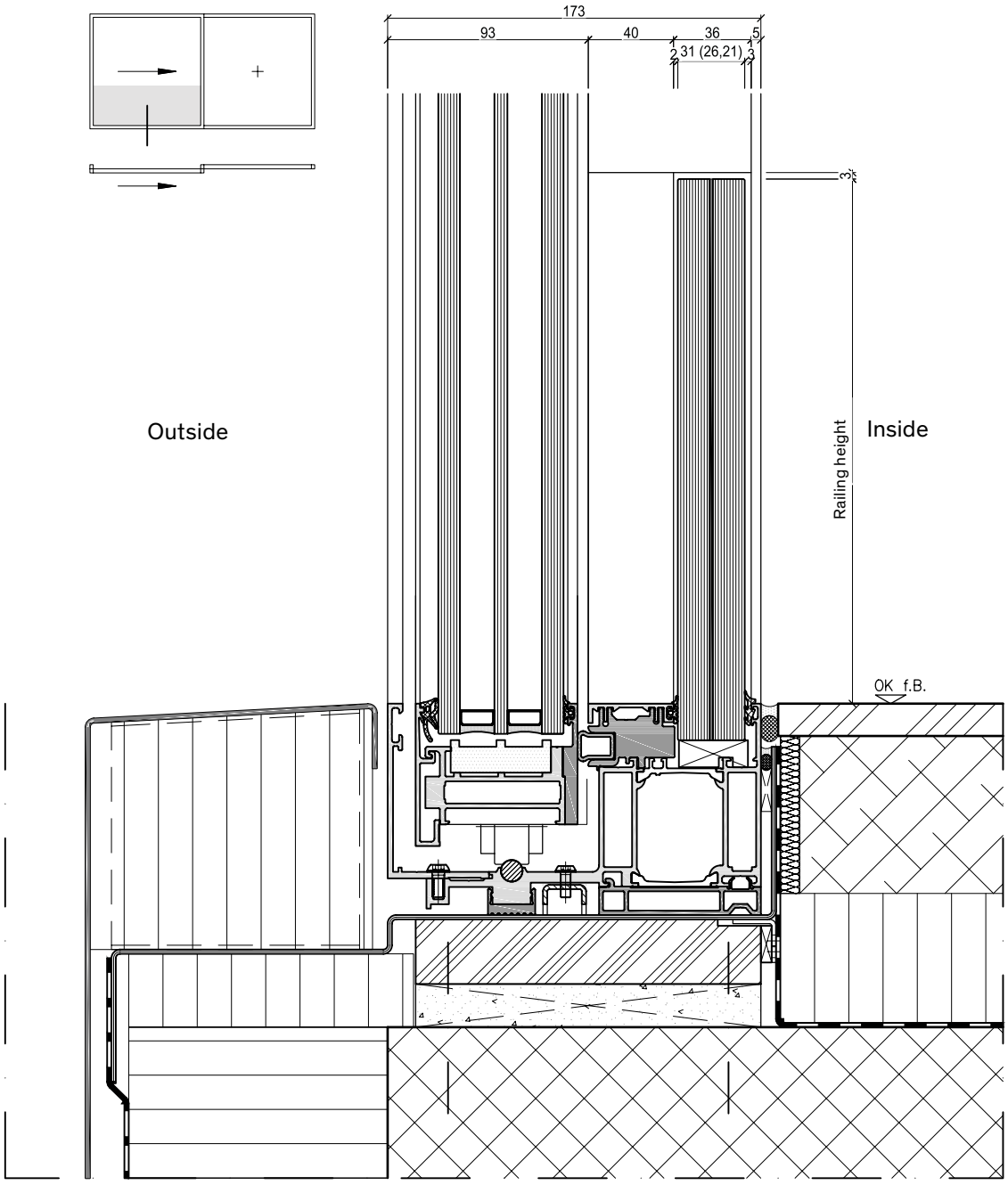
Inward-opening doors with continuous track profiles

DWG PDF



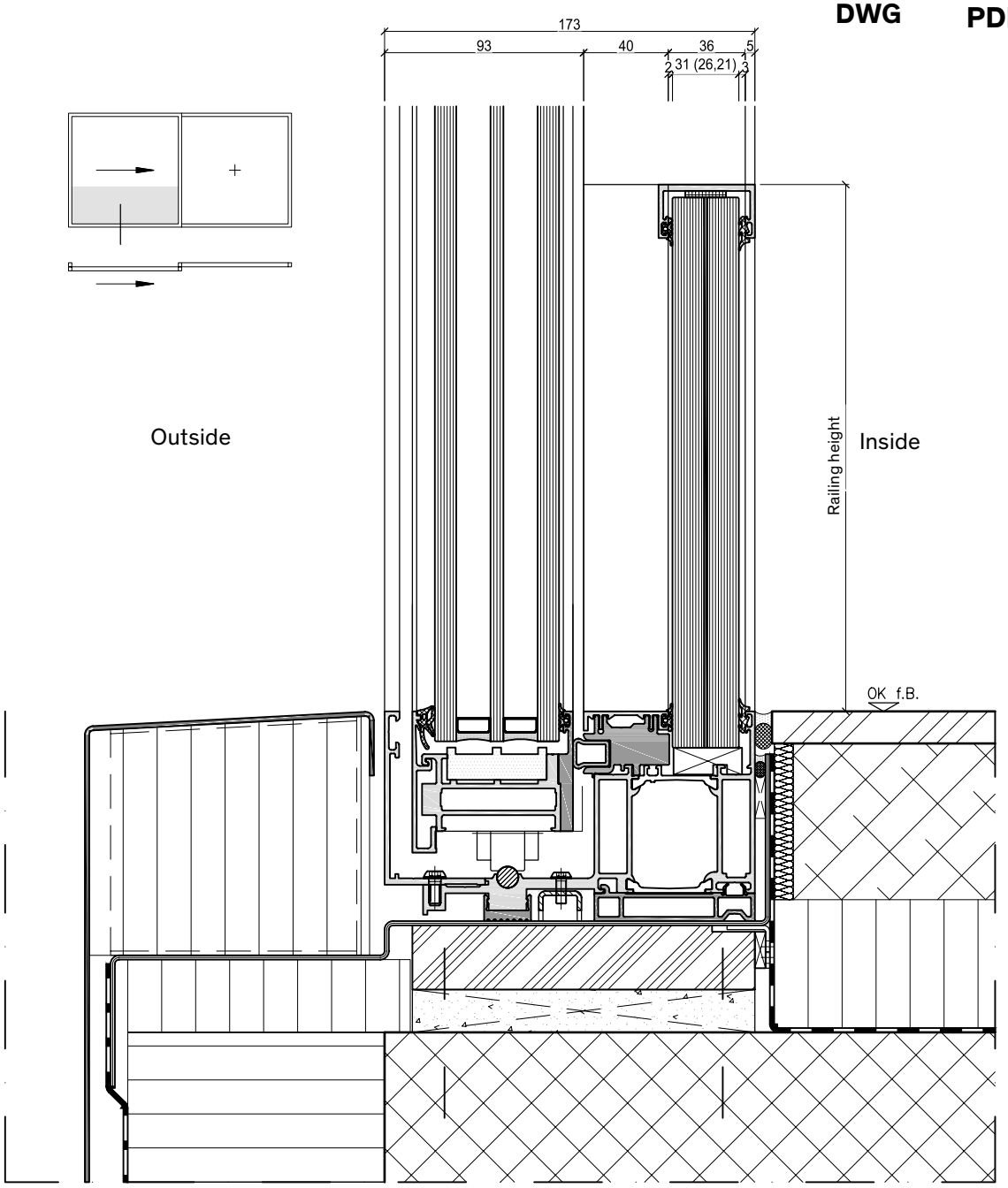
Fall protection without handrail

DWG PDF



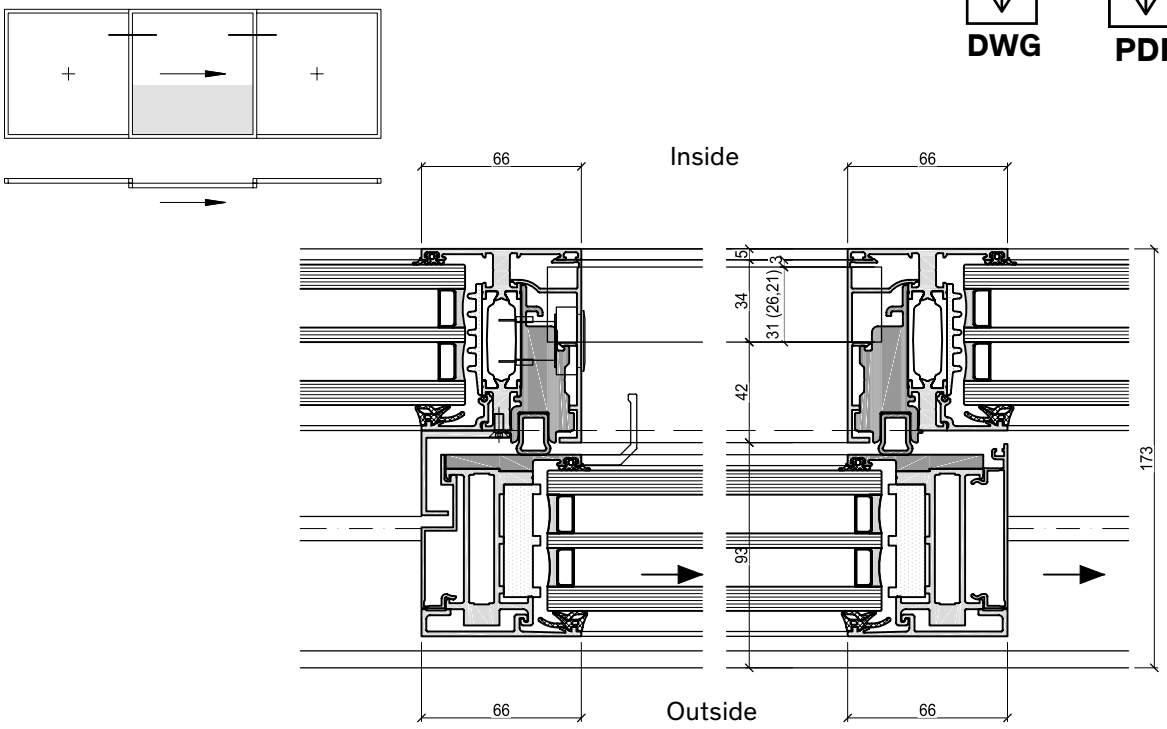
Fall protection with handrail

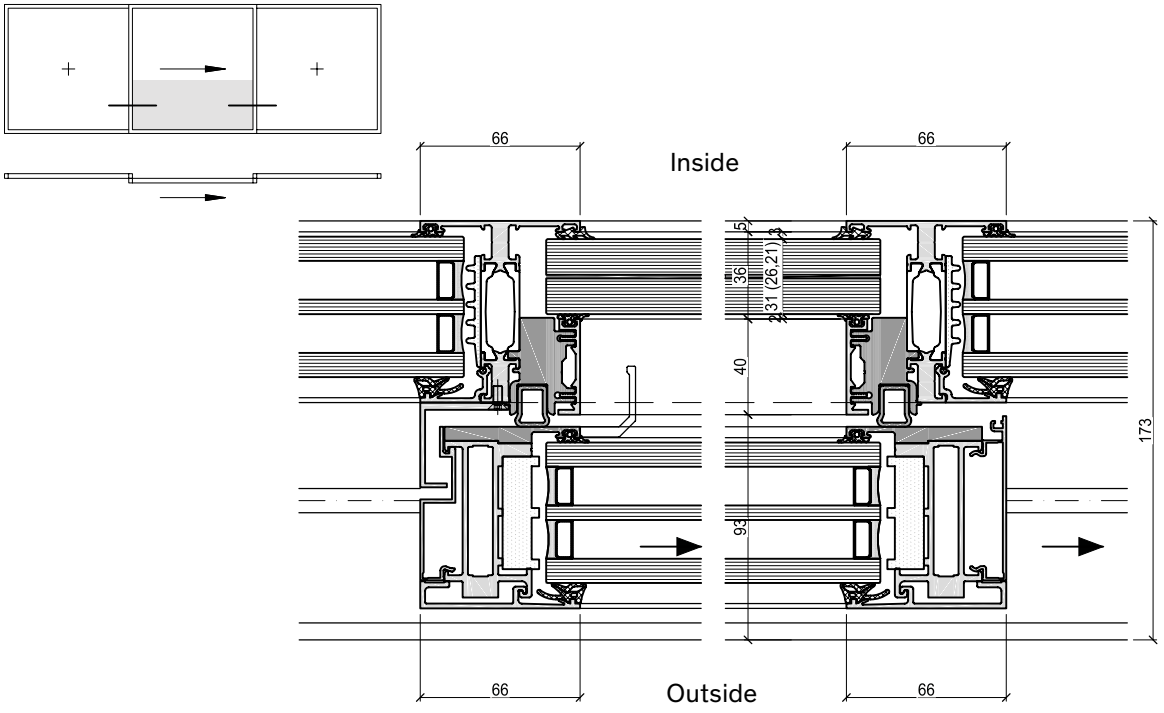
DWG PDF



Fall protection with/without handrail

DWG PDF

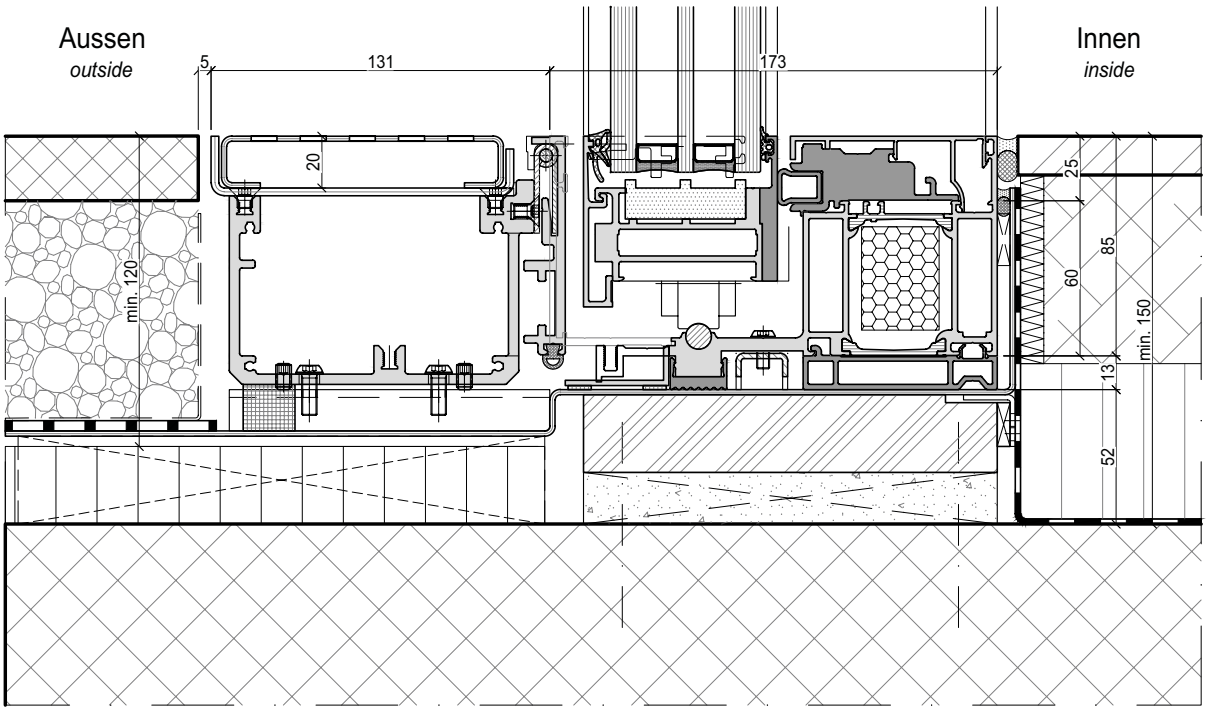


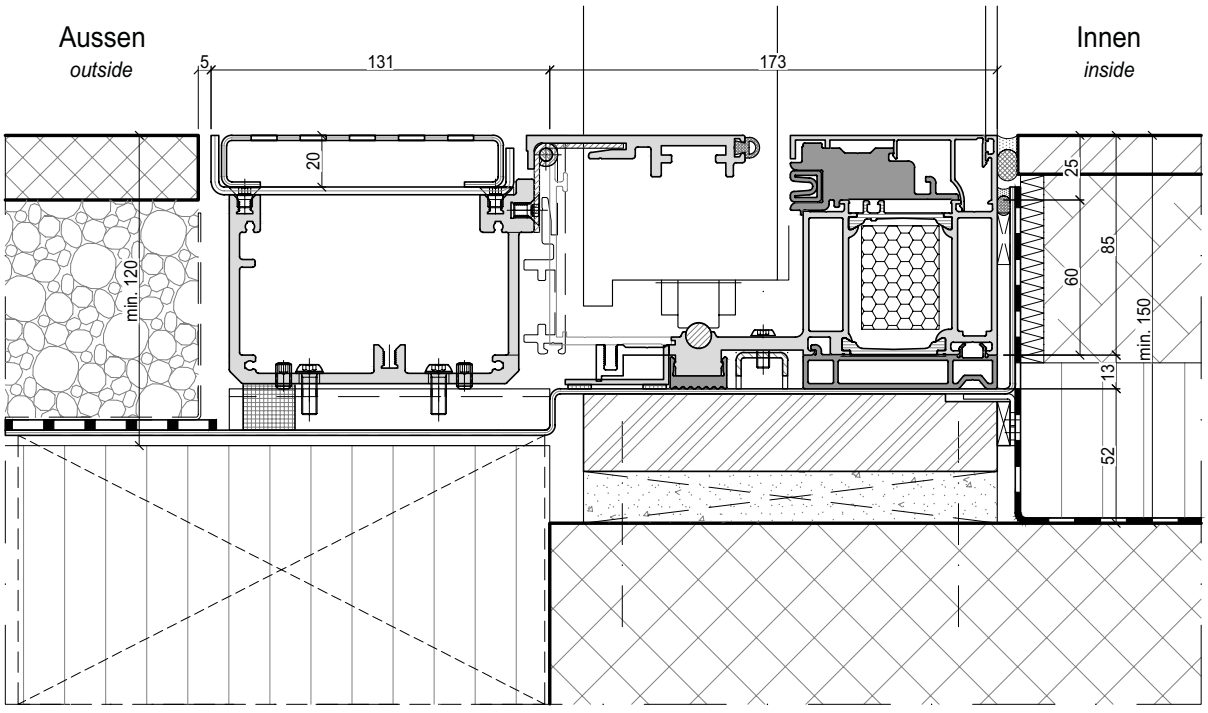


Glazing thicknesses for glass railings
Clear width up to 2,400 mm: glass 21 mm
Clear width up to 3,100 mm: glass 26 mm
Clear width up to 4,400 mm: glass 31 mm

Floor flap (grating)

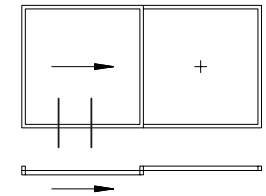
DWG PDF

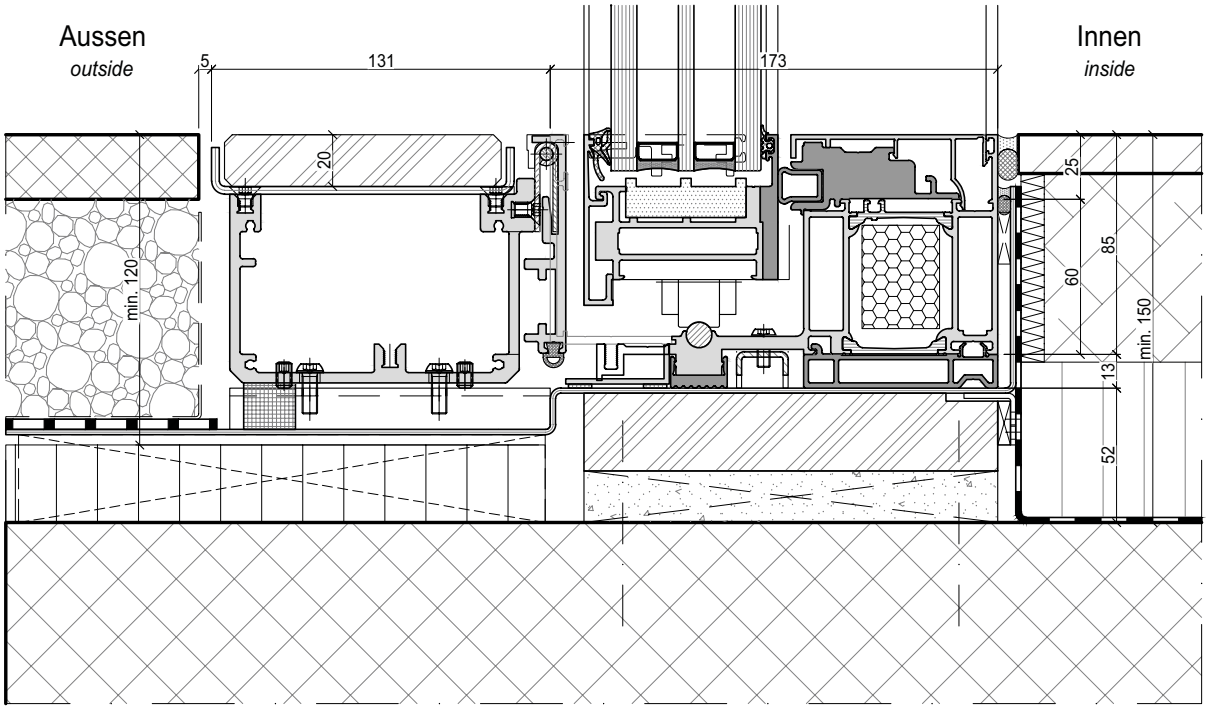


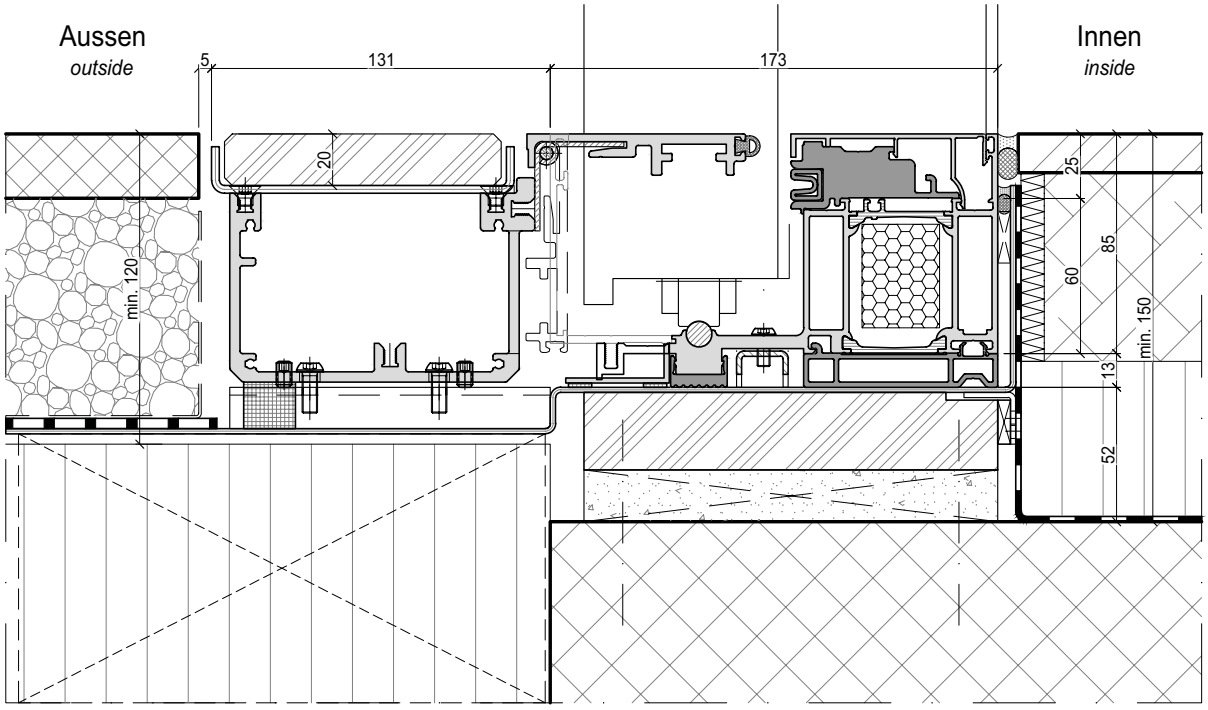


Floor flap (stone cover)

DWG PDF

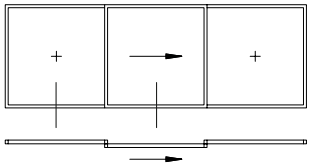


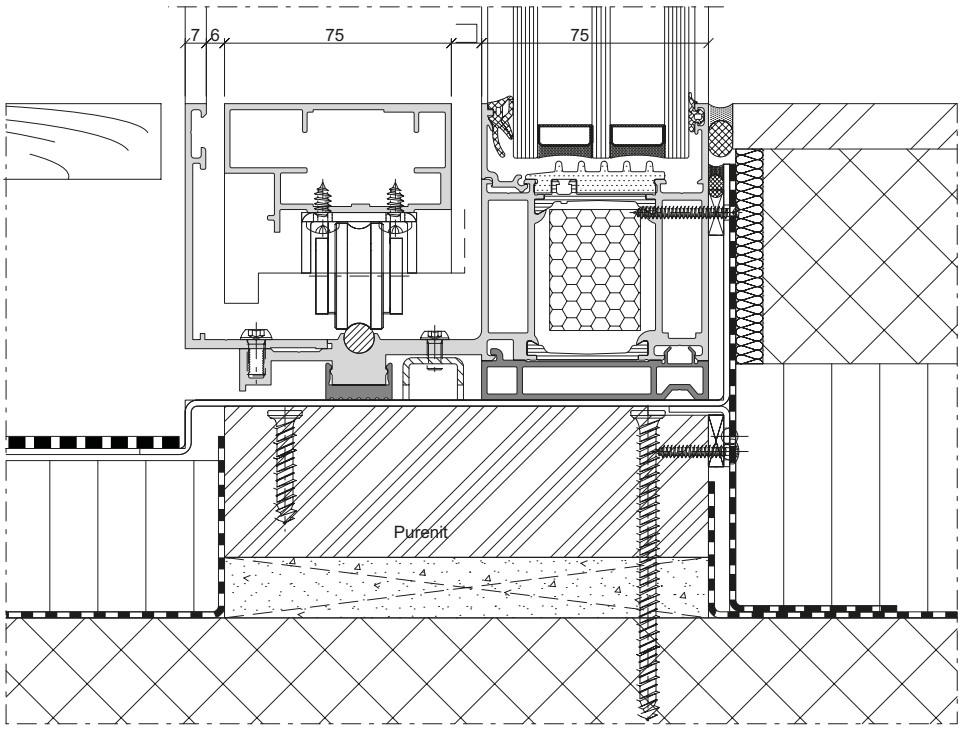


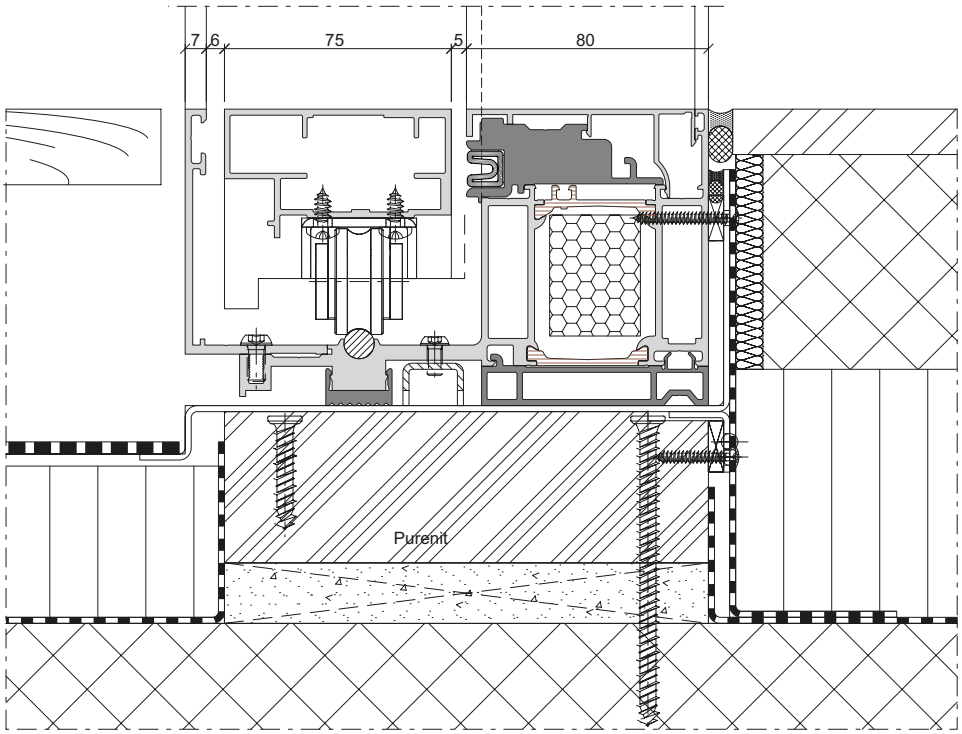


Bar slider without cover

DWG PDF

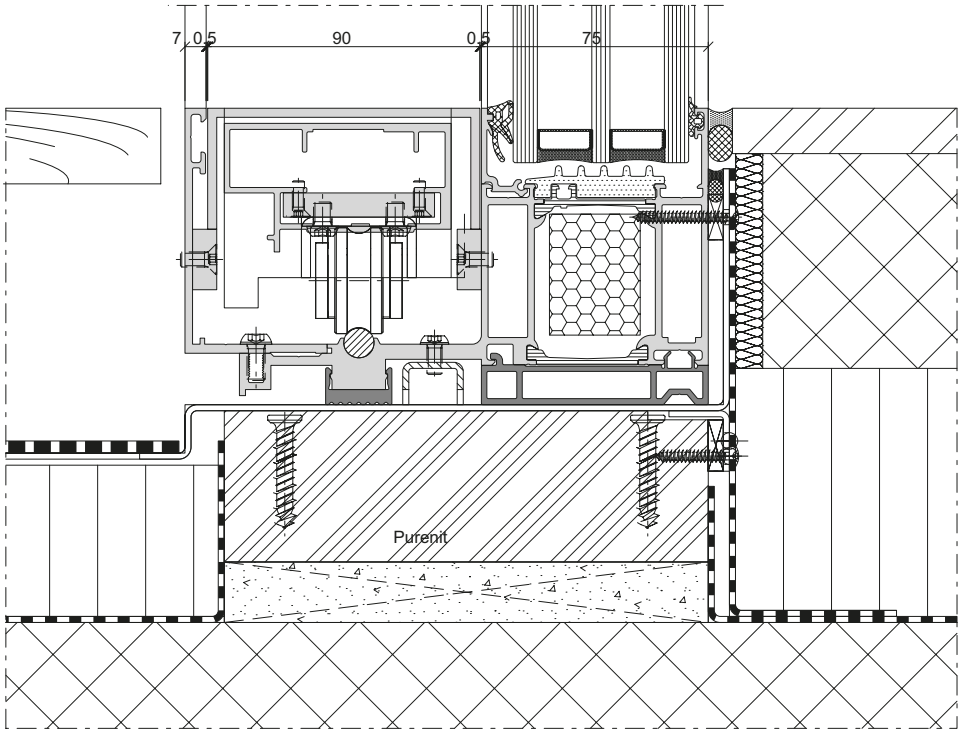


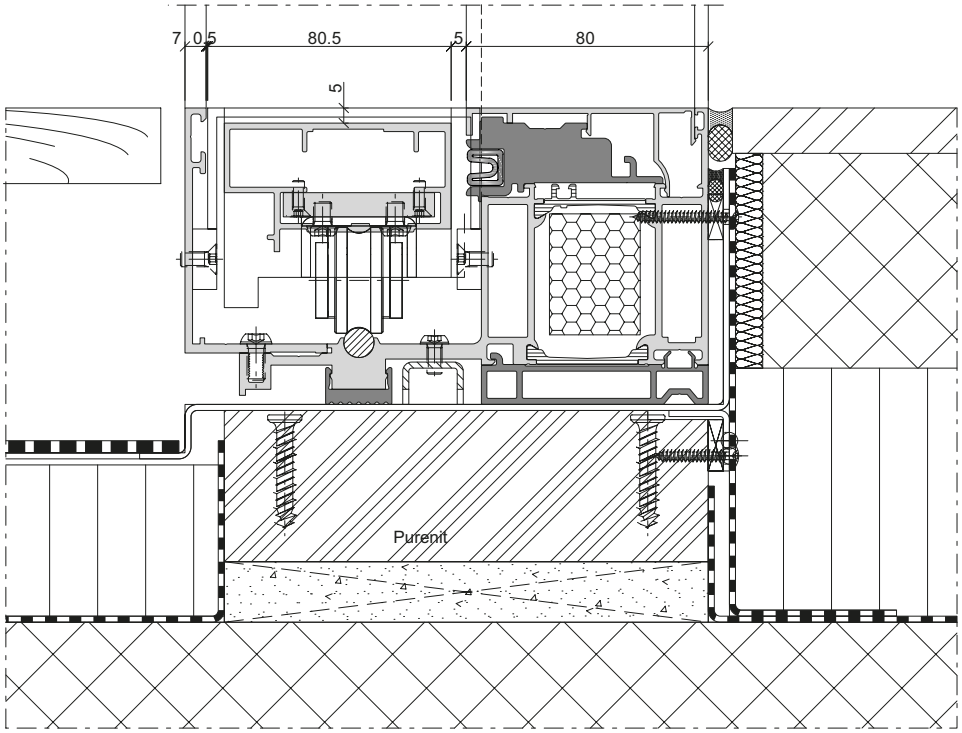




Bar slider with cover

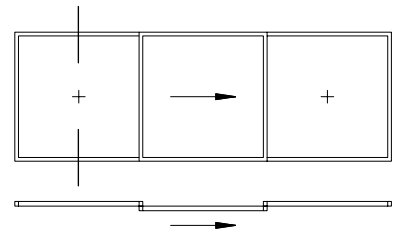
DWG PDF

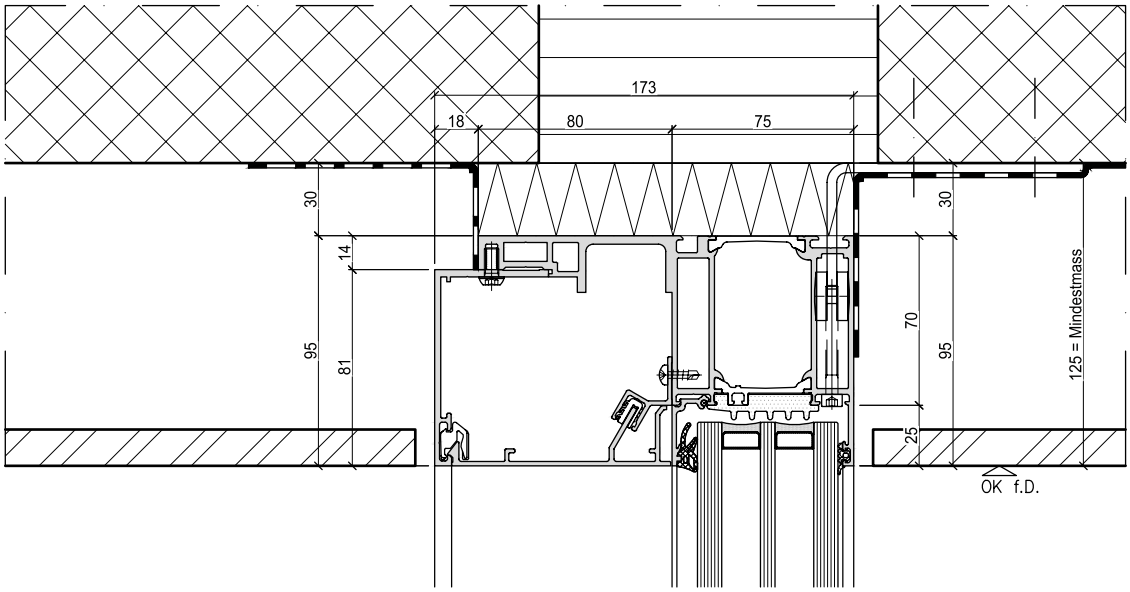




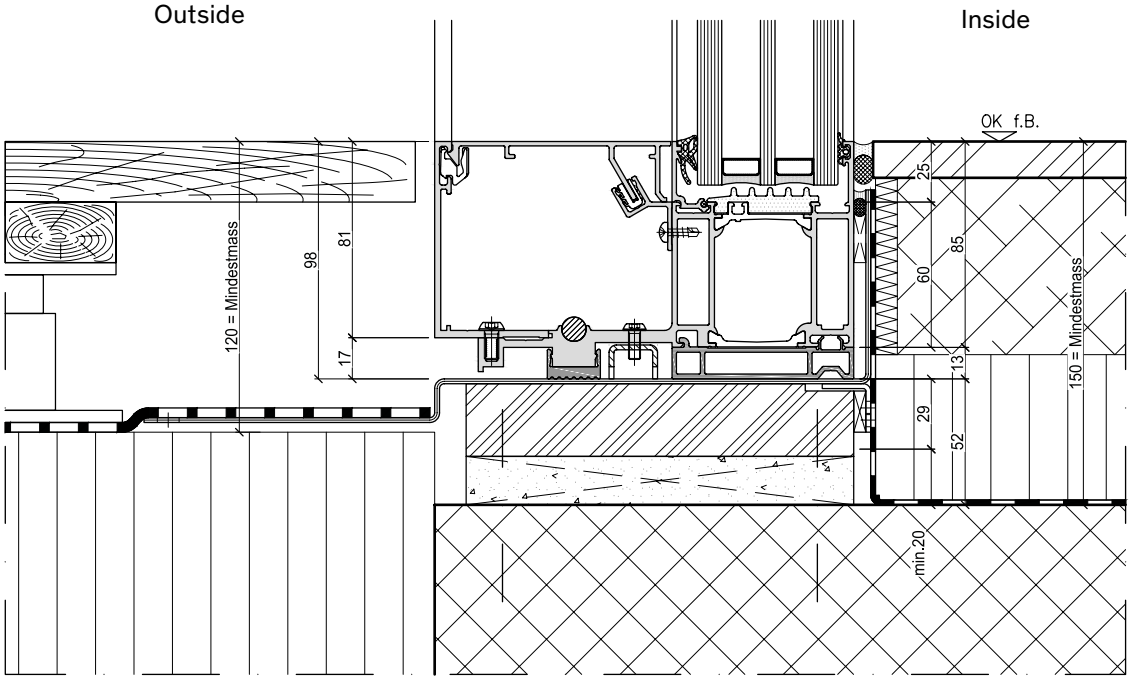
Filler trim

DWG PDF



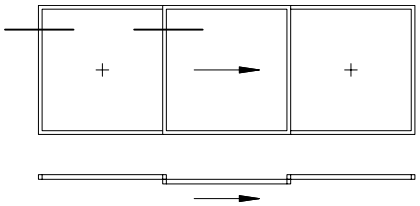


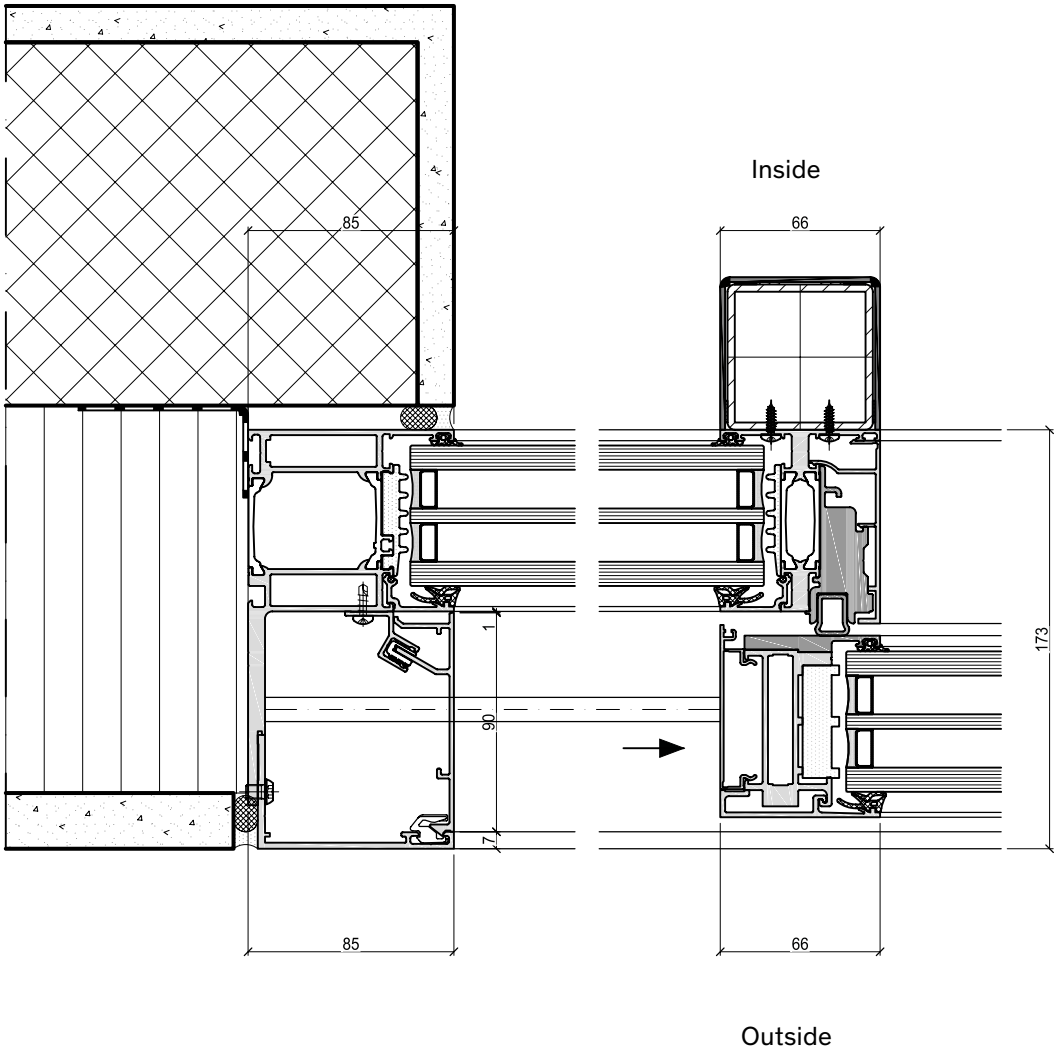
Outside Inside



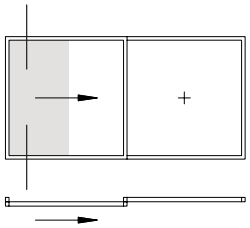
Filler trim

DWG PDF

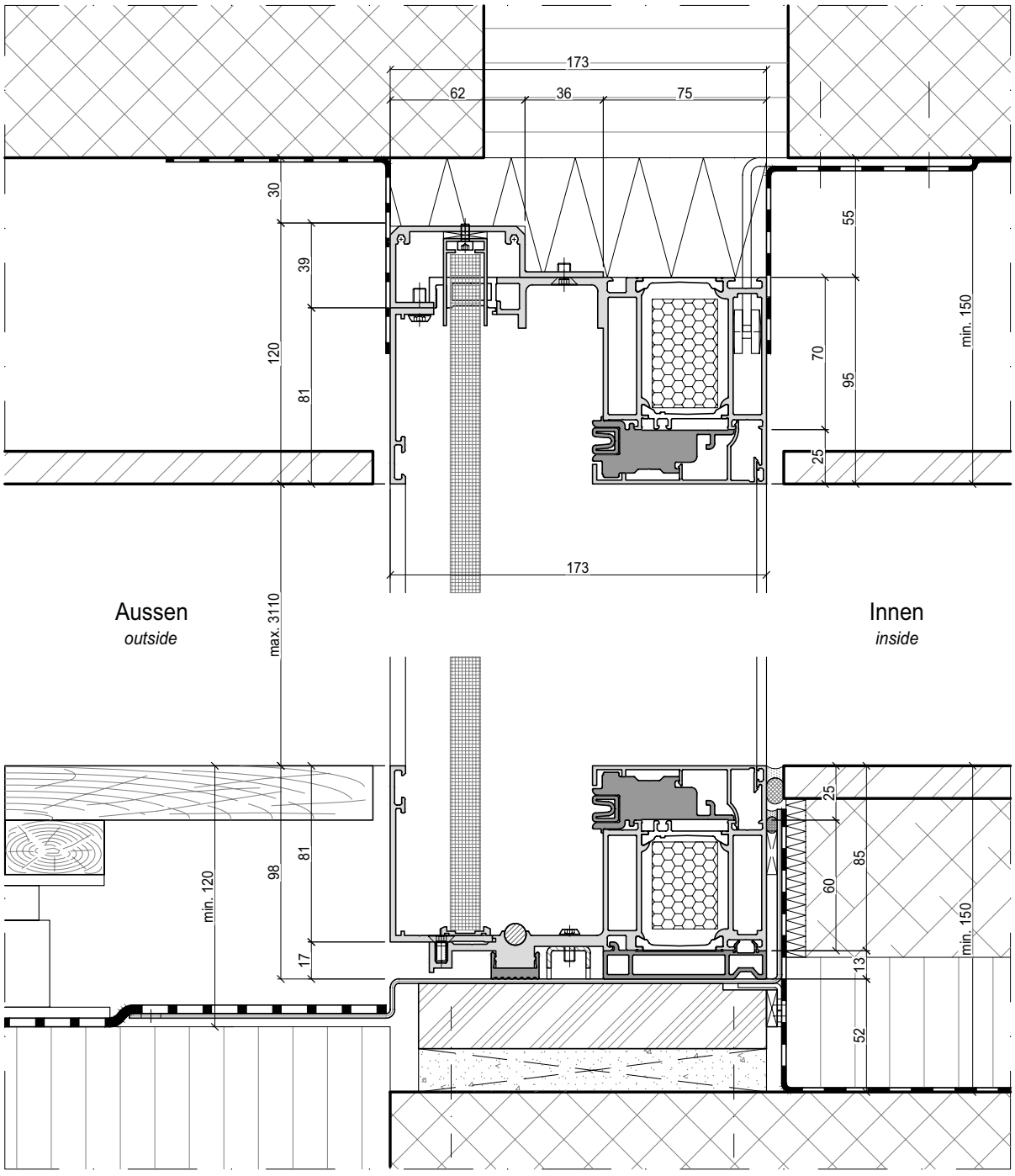




Insect screen



DWG PDF



Insect screen

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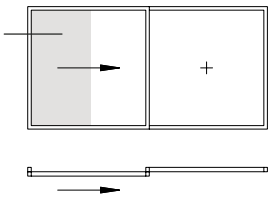

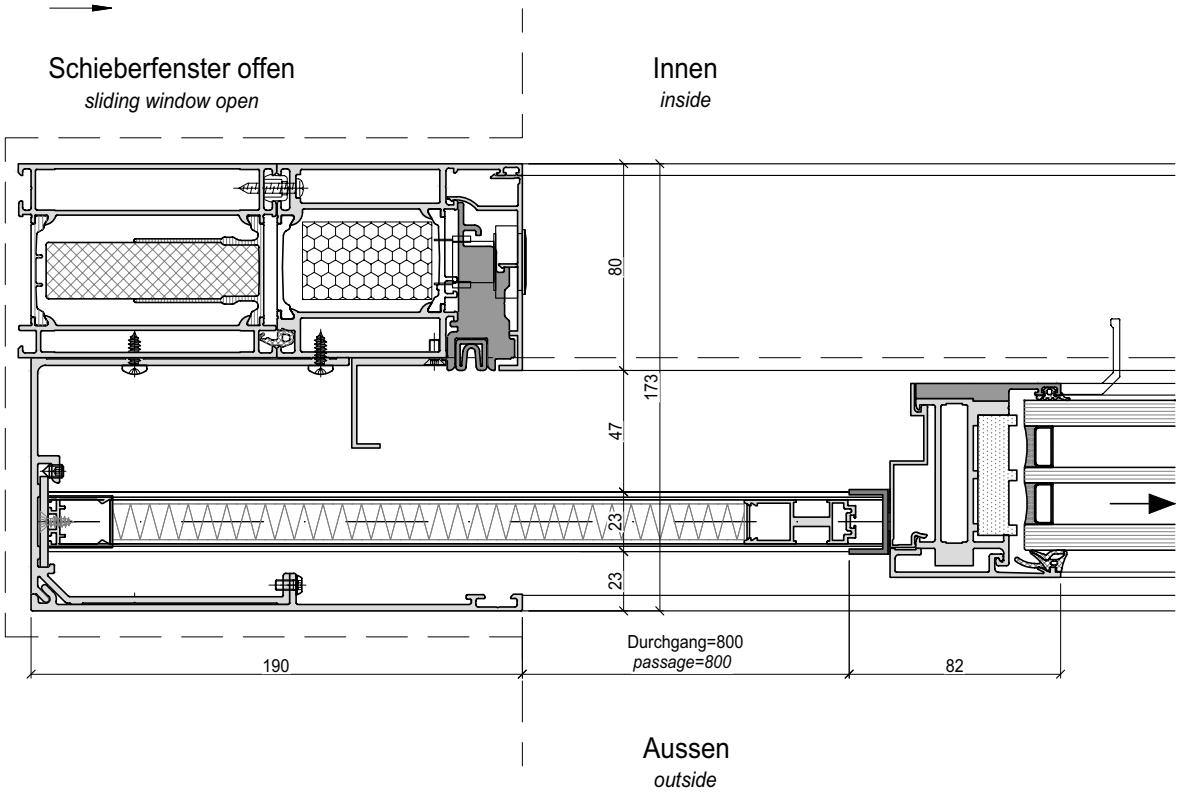

Insect screen

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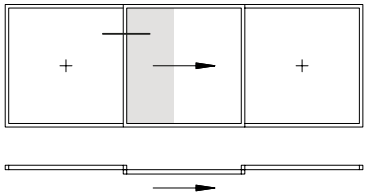
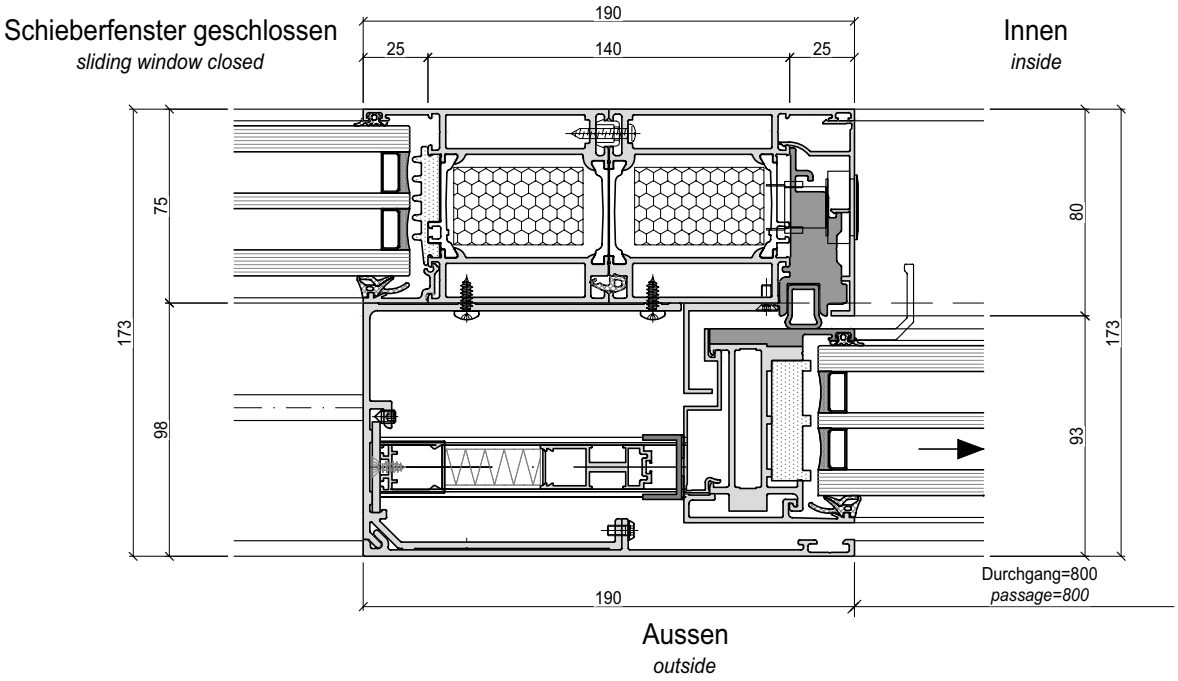
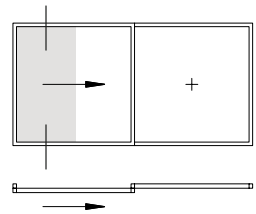
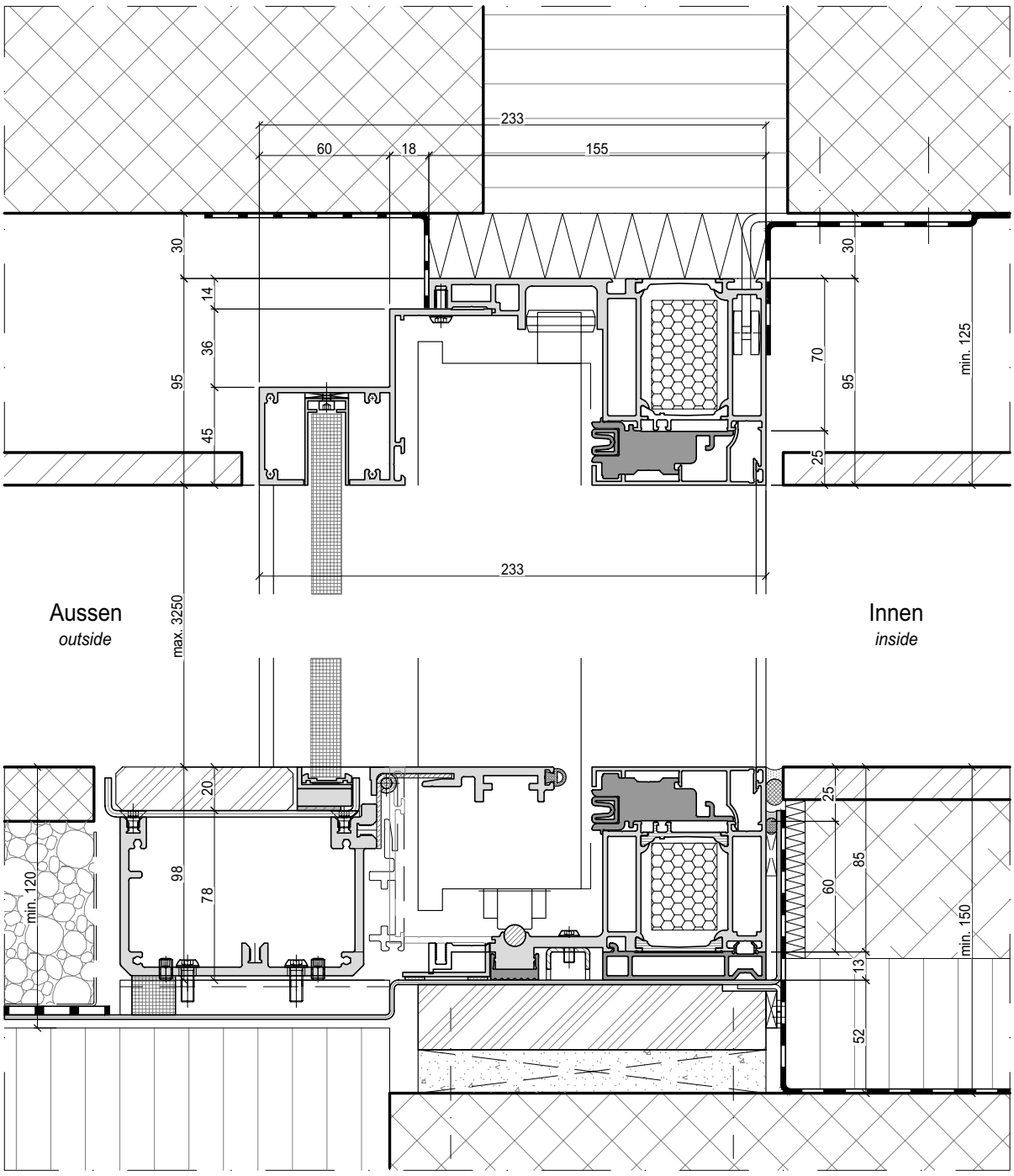




Insect screen (with floor flap)

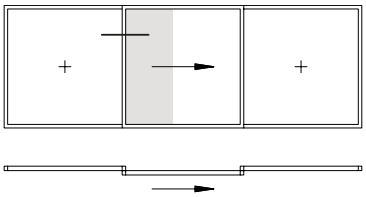
DWG PDF

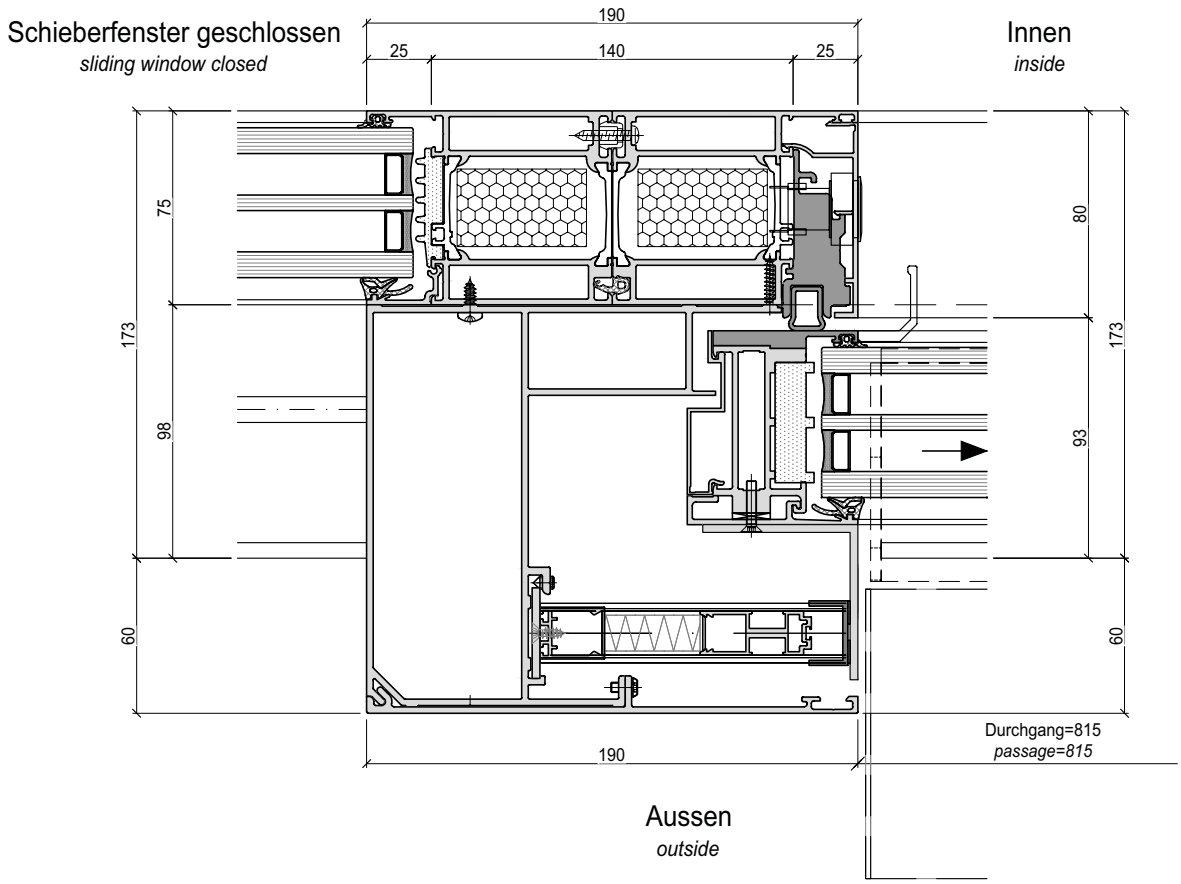




Insect screen (with floor flap)

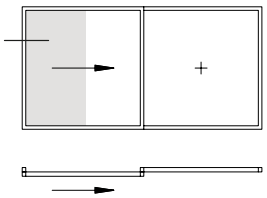
DWG PDF

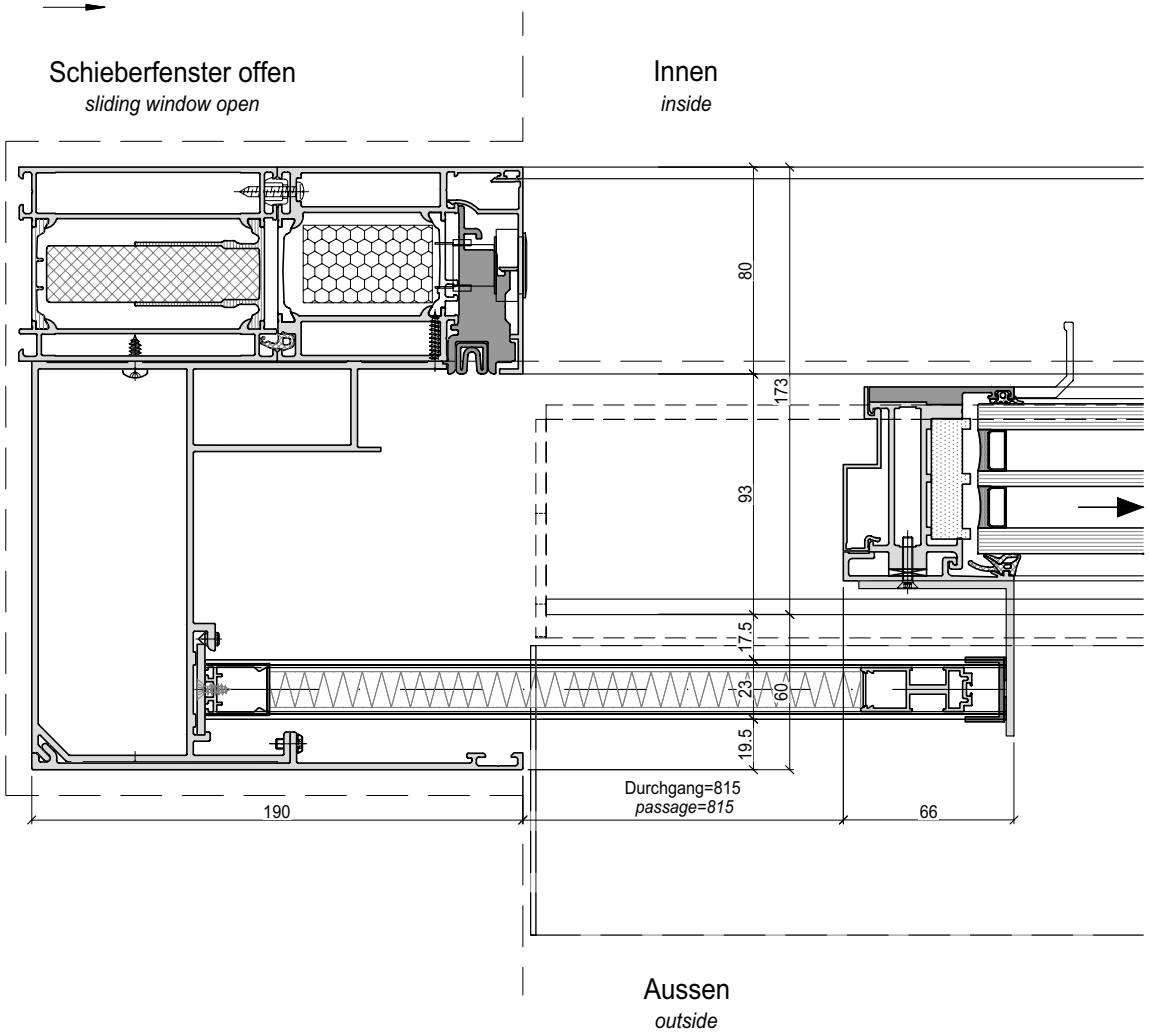




Insect screen (with floor flap)

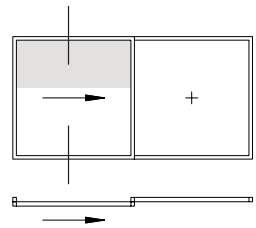
DWG PDF

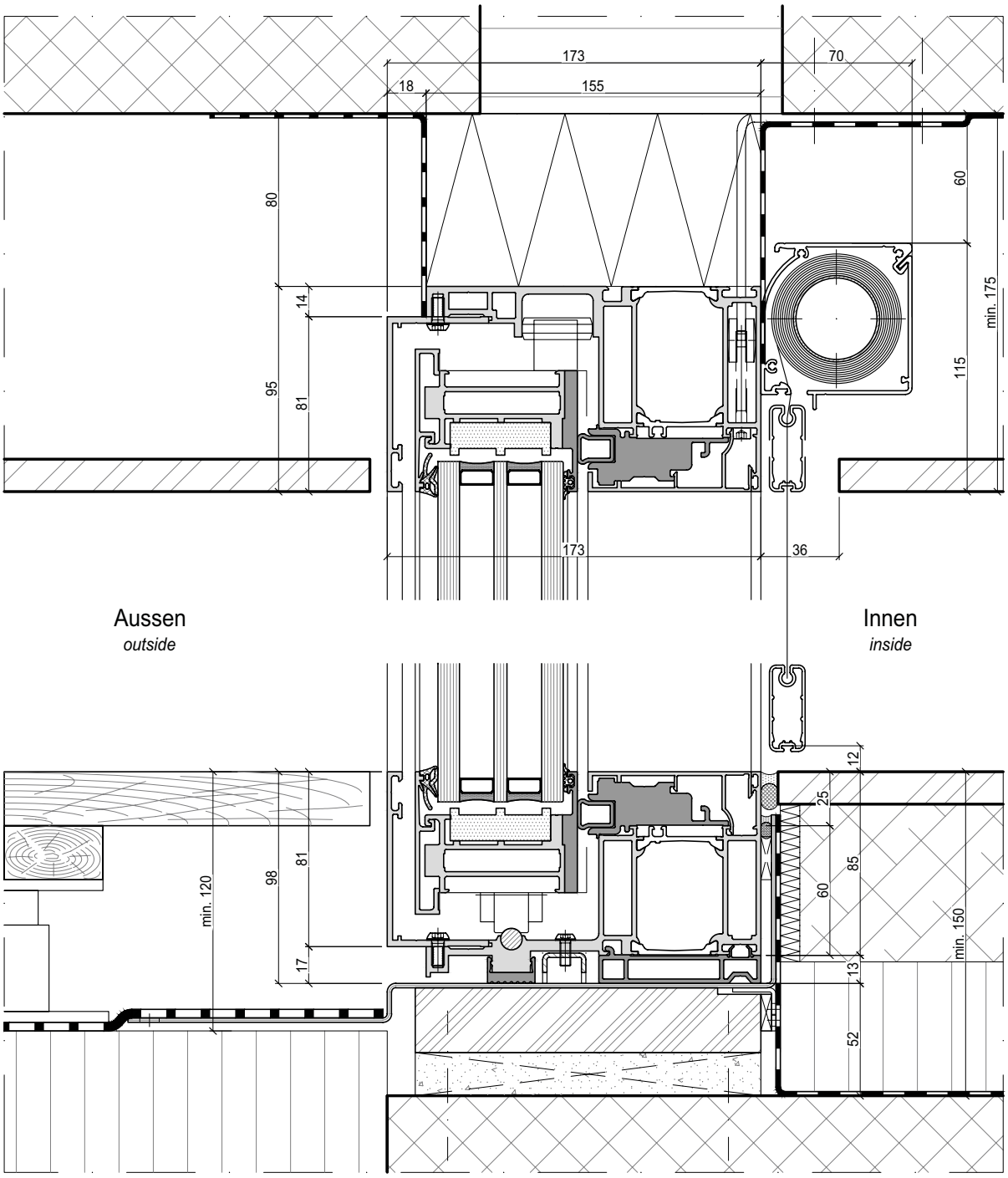




Insect screen (vertical inside)

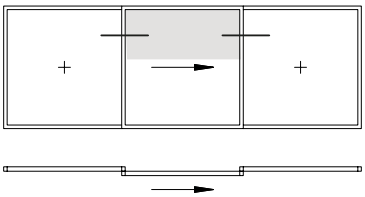
DWG PDF



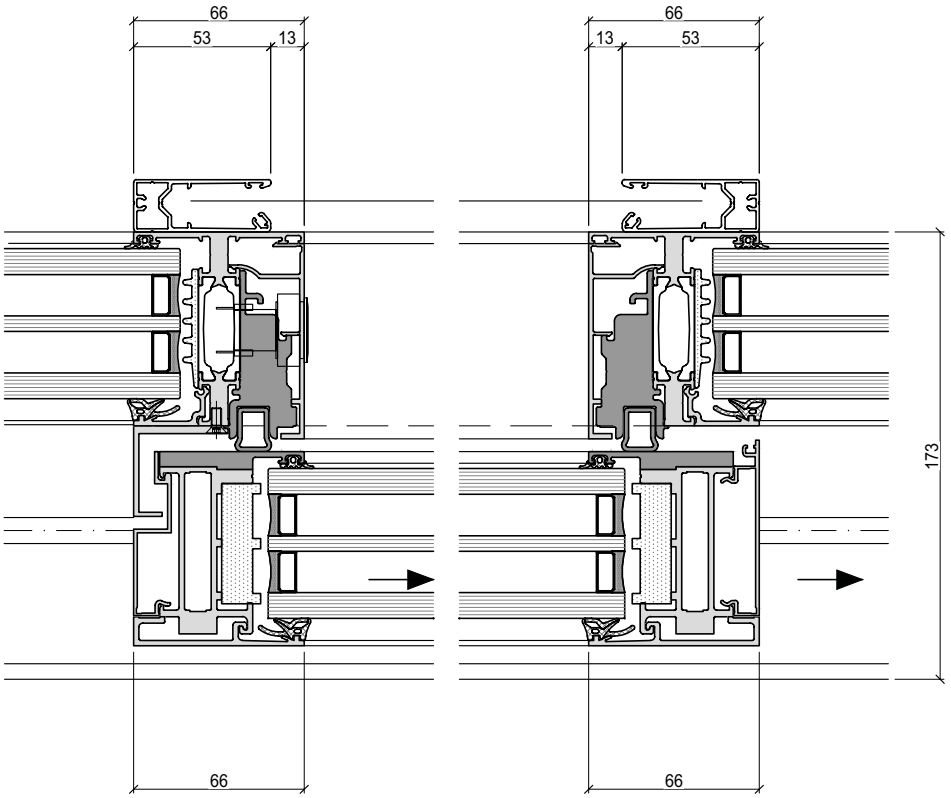


Insect screen (vertical inside)

DWG PDF



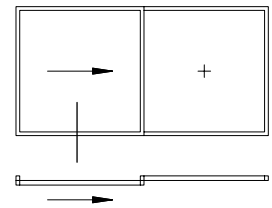
Innen
inside

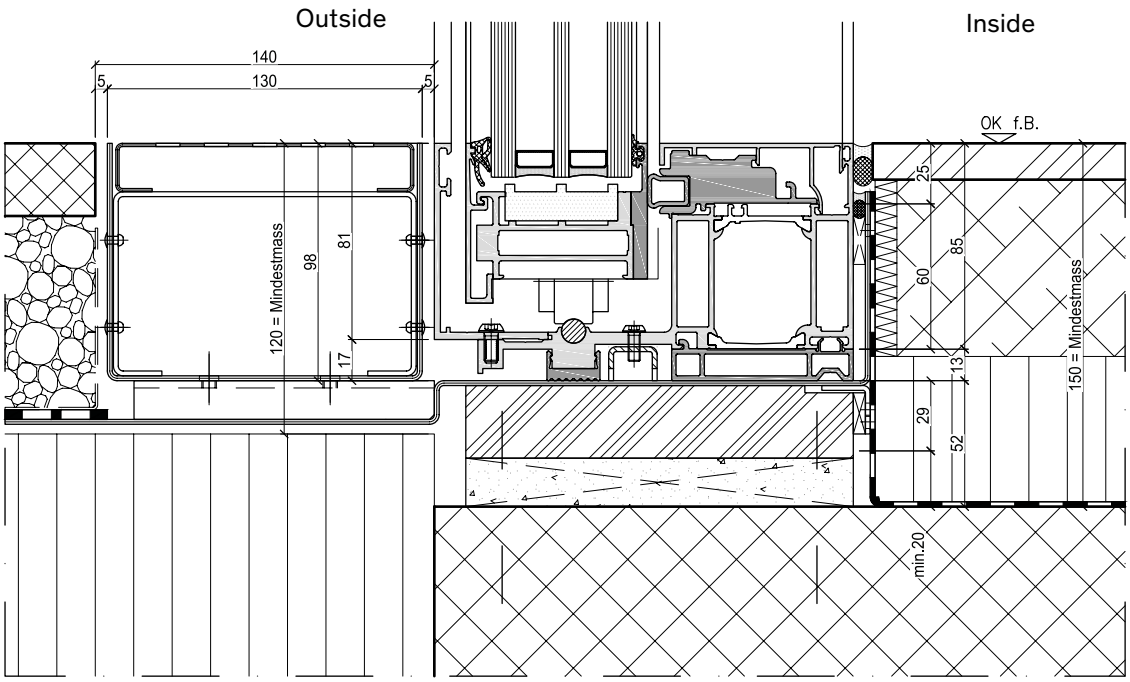


Aussen
outside

Drainage channels

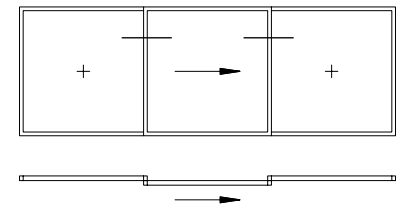
DWG PDF



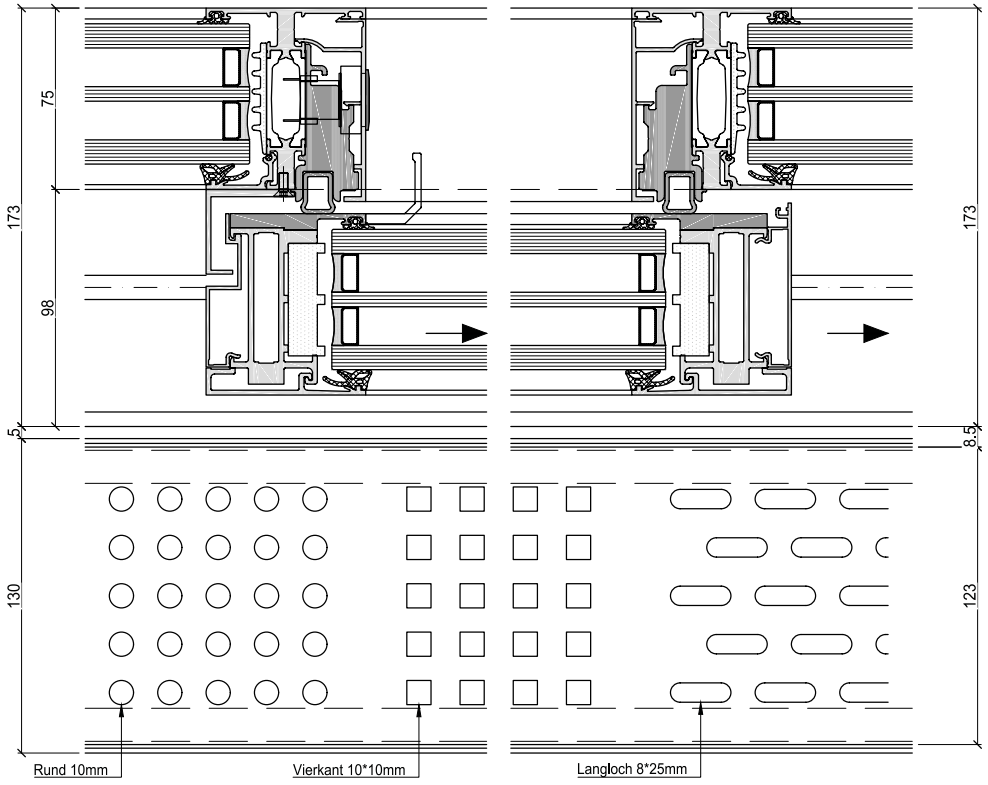


Drainage channels

DWG PDF



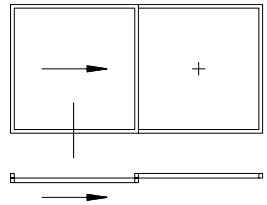
Inside



Outside

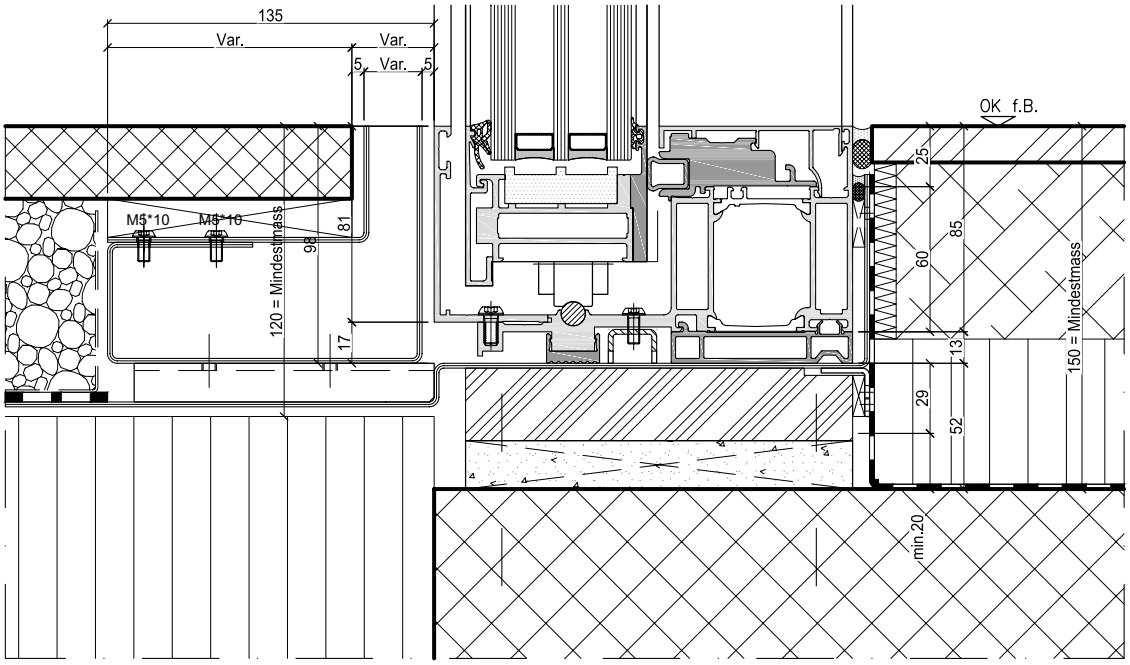
Drainage channels (narrow)

DWG PDF

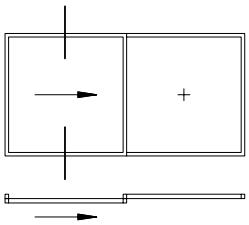


Outside

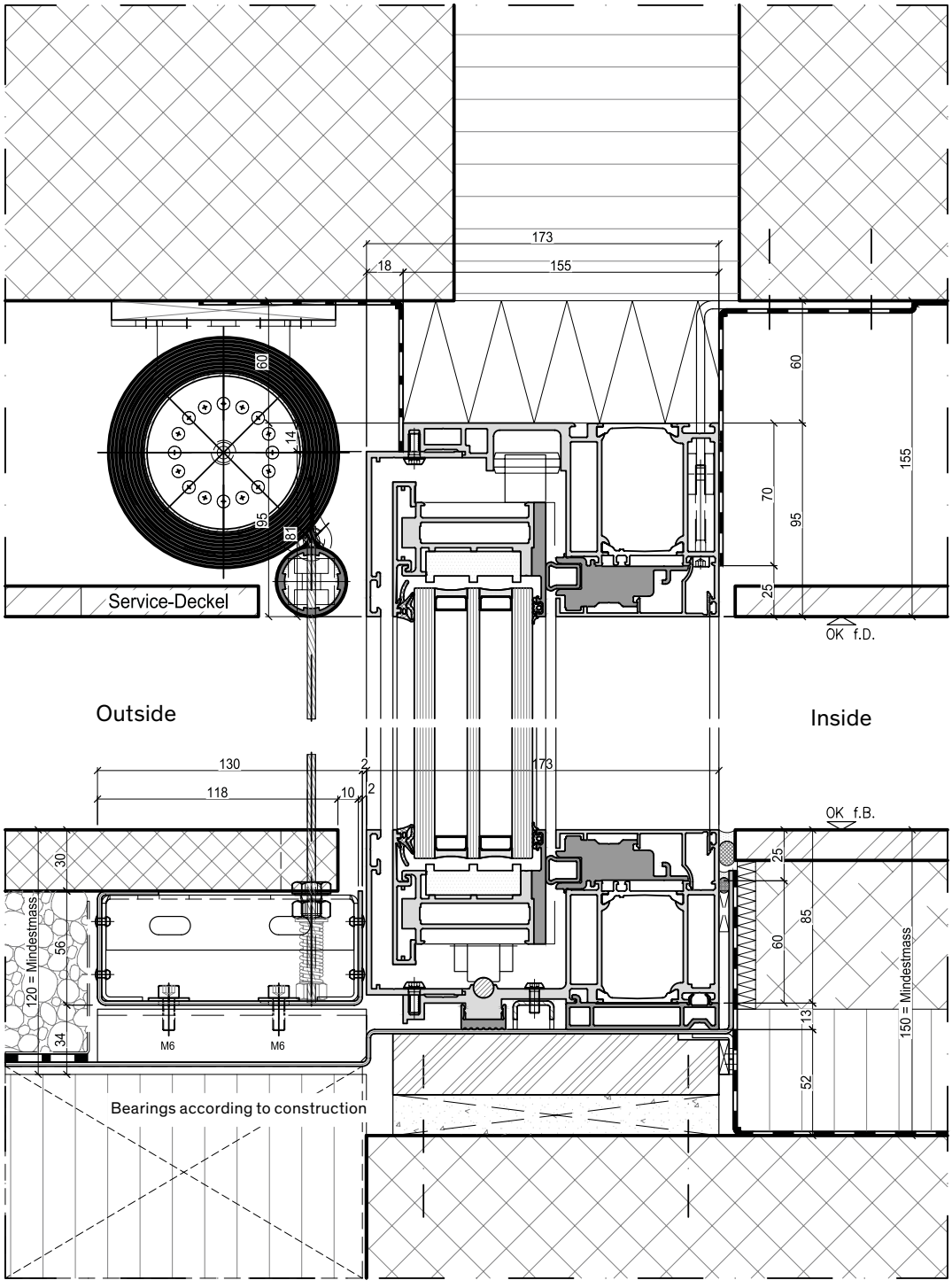
Inside



Exterior shading (rope guide with channel)

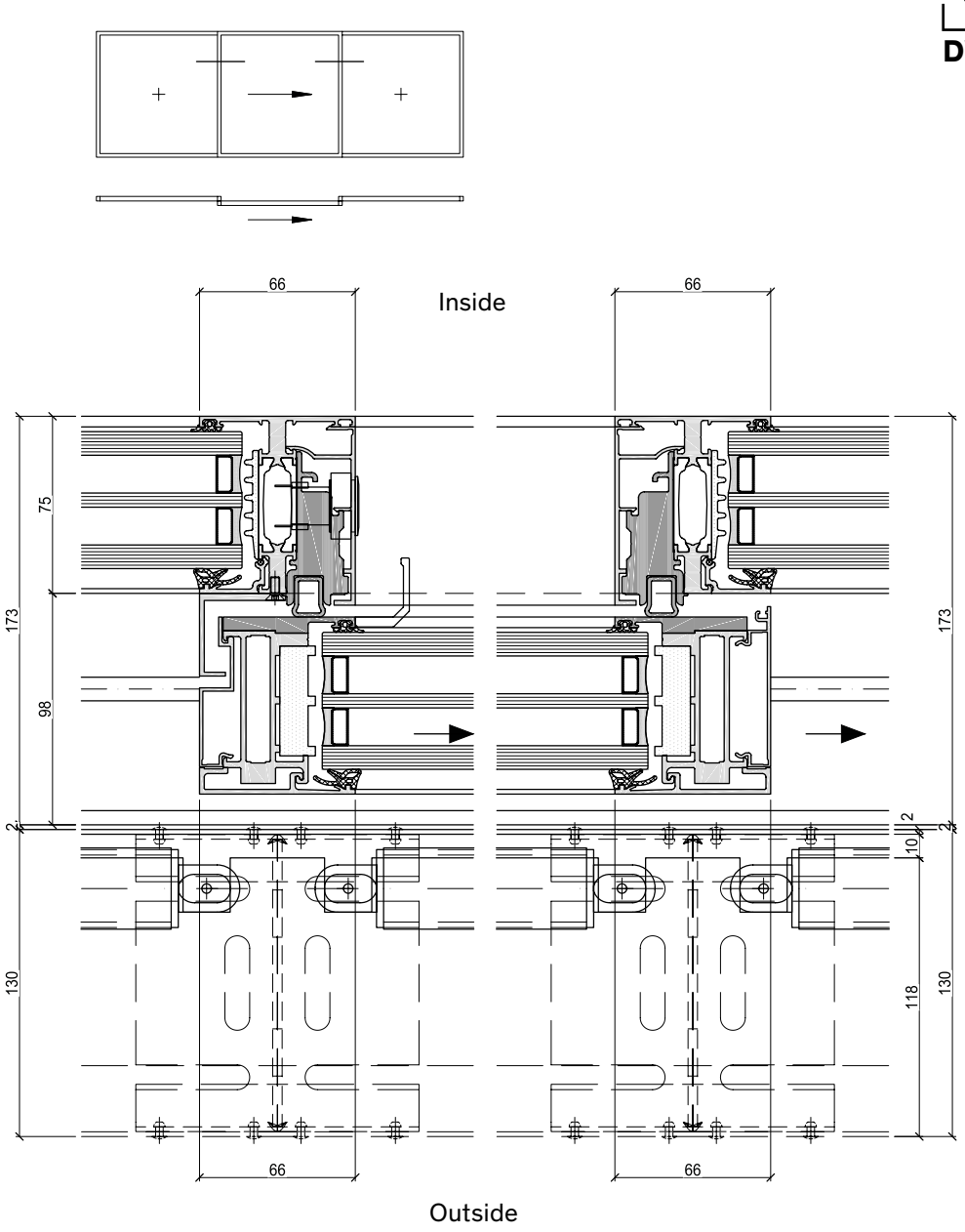


DWG PDF



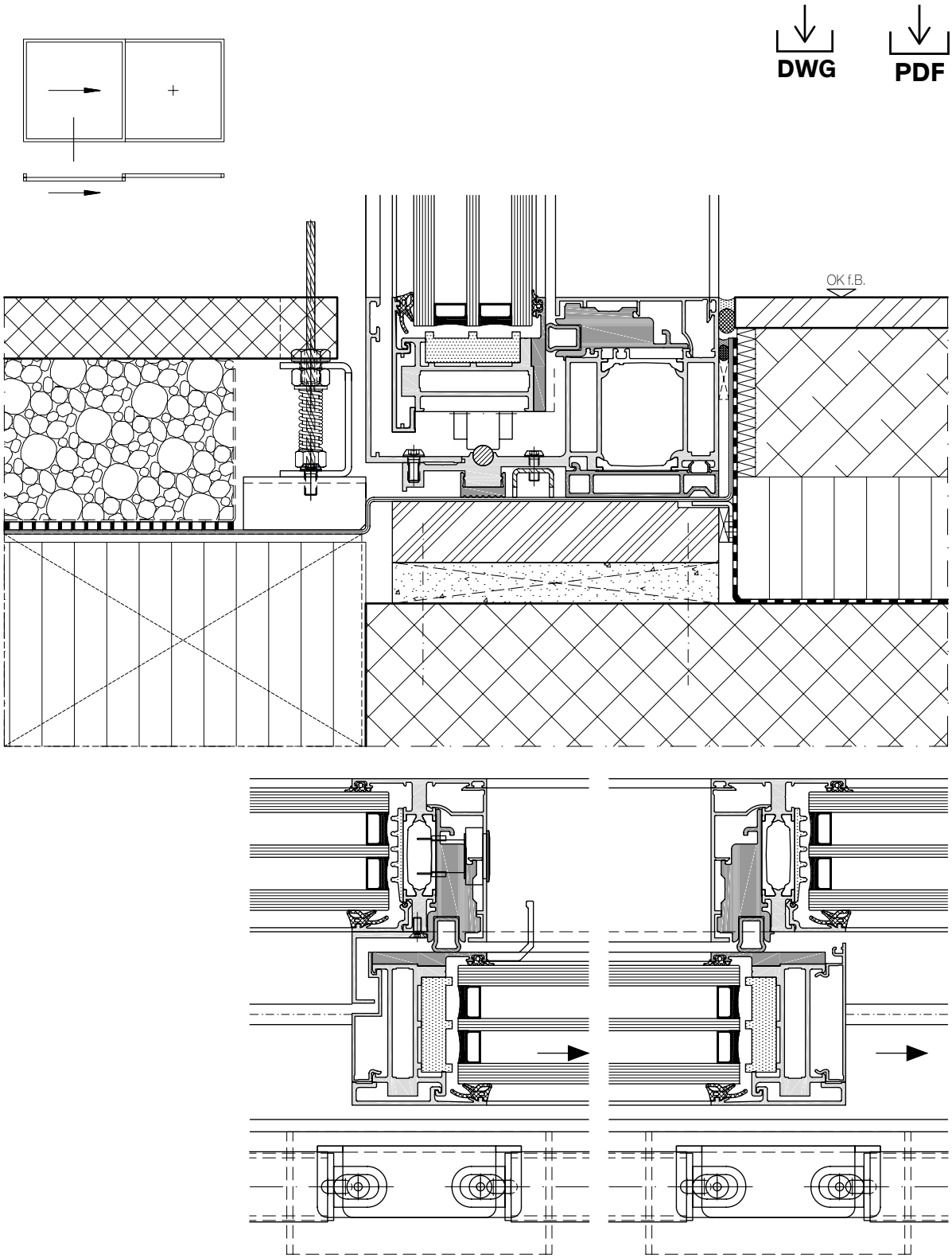
Exterior shading (rope guide)

DWG PDF

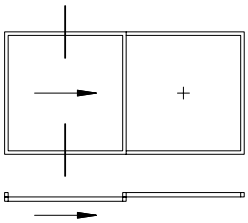


Exterior shading (rope guide without channel)

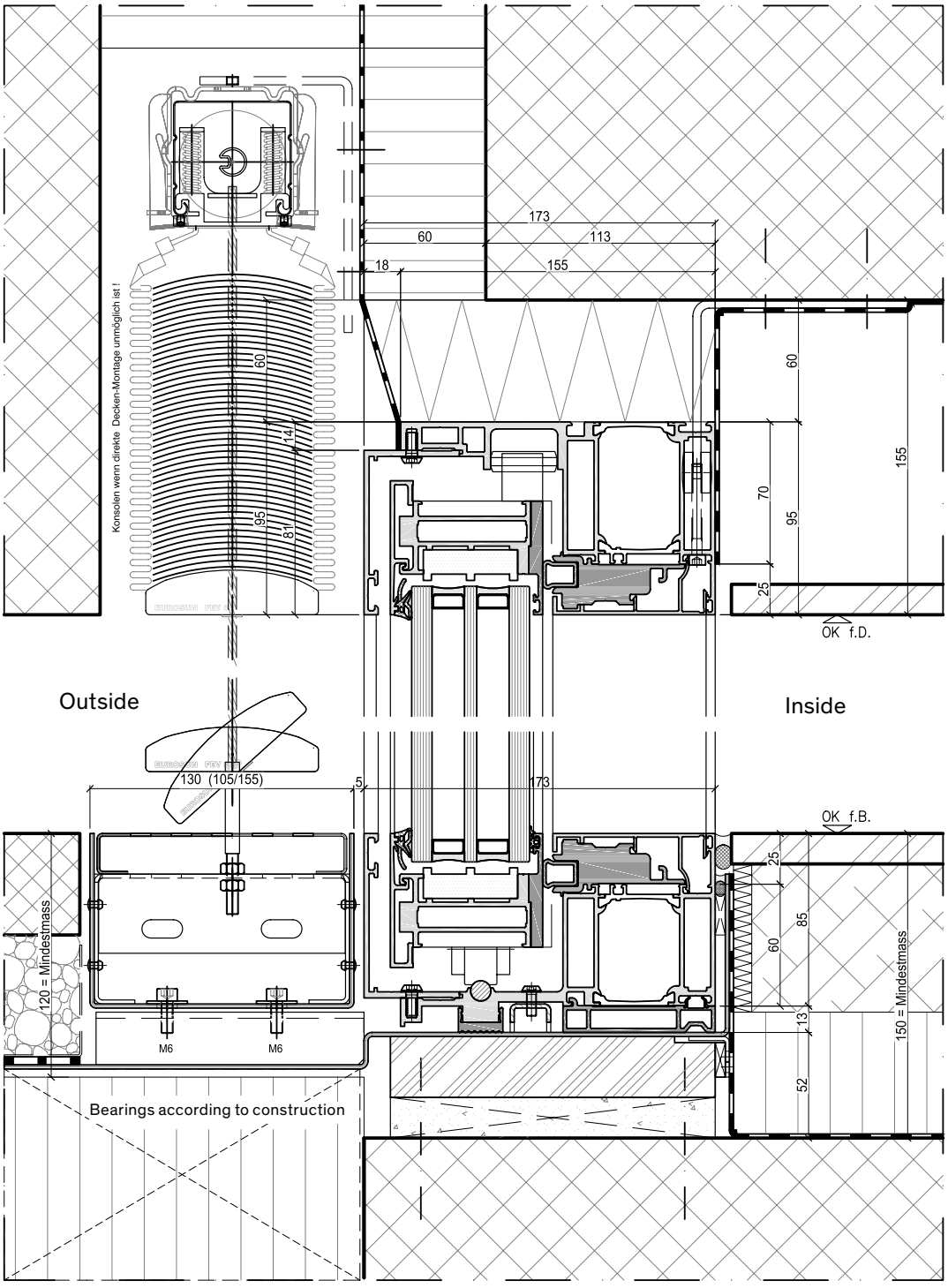
DWG PDF



Exterior shading (slat blinds)

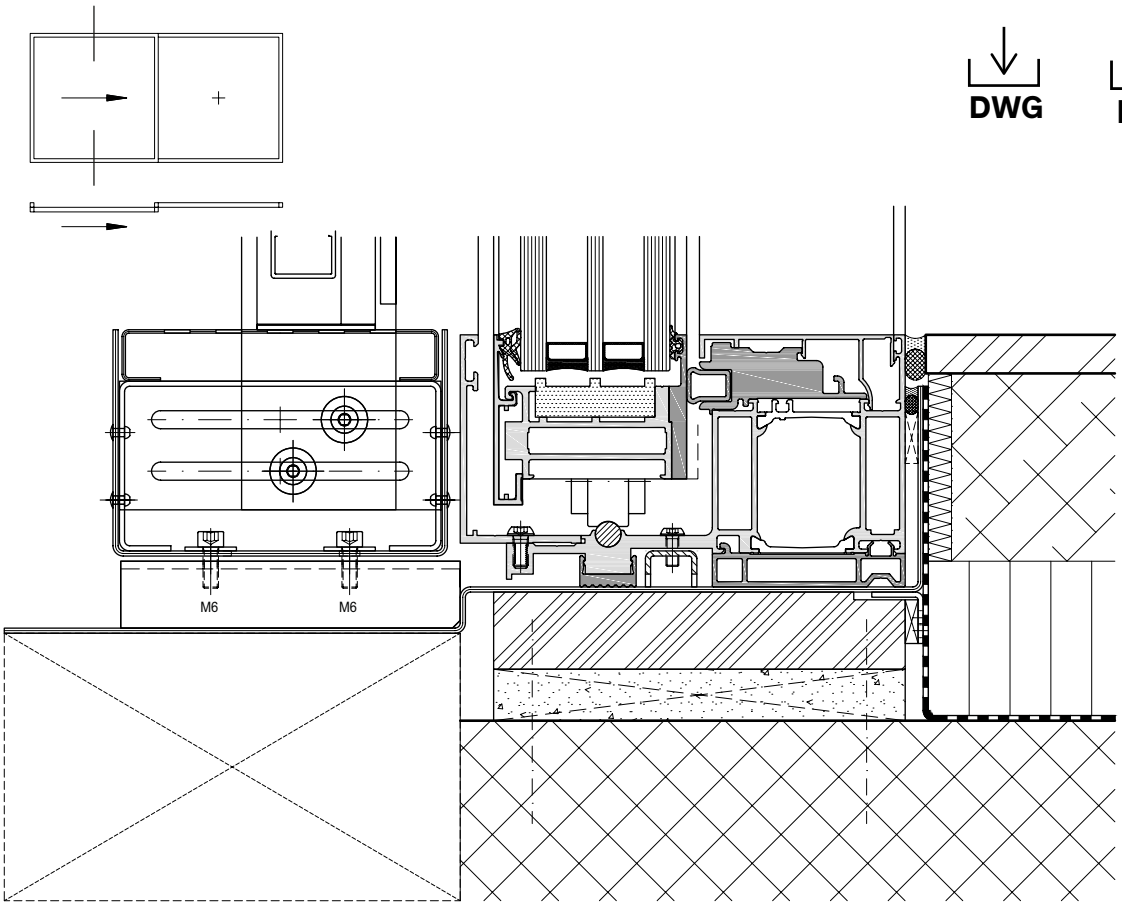


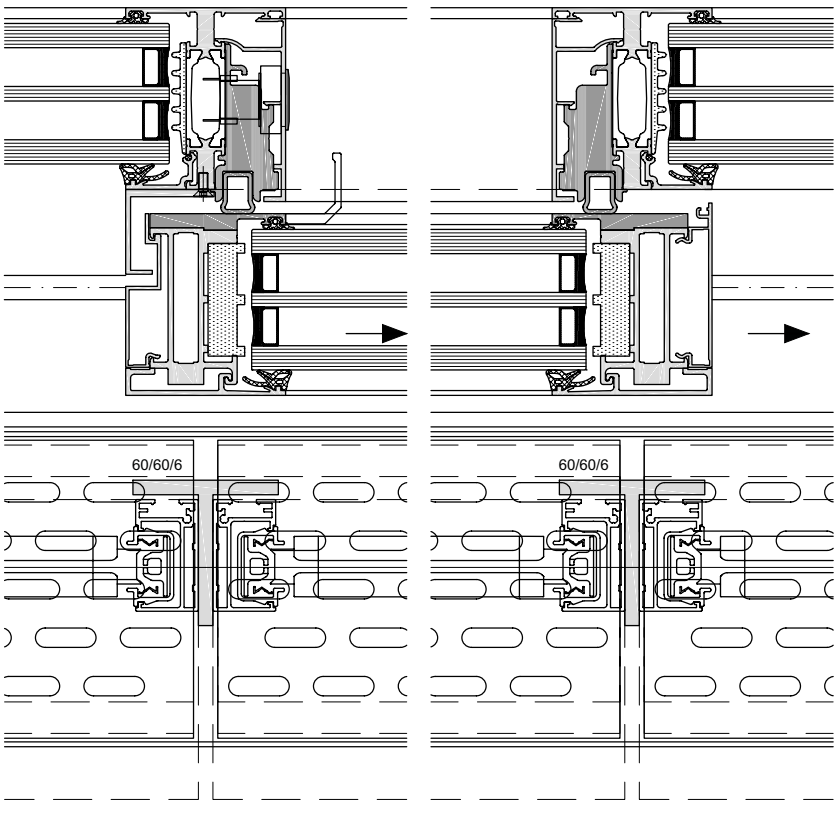
DWG PDF



Exterior shading (T-profiles for guide rails)

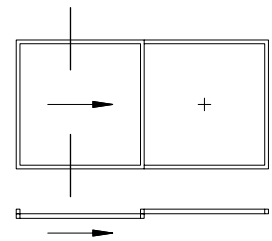
DWG PDF

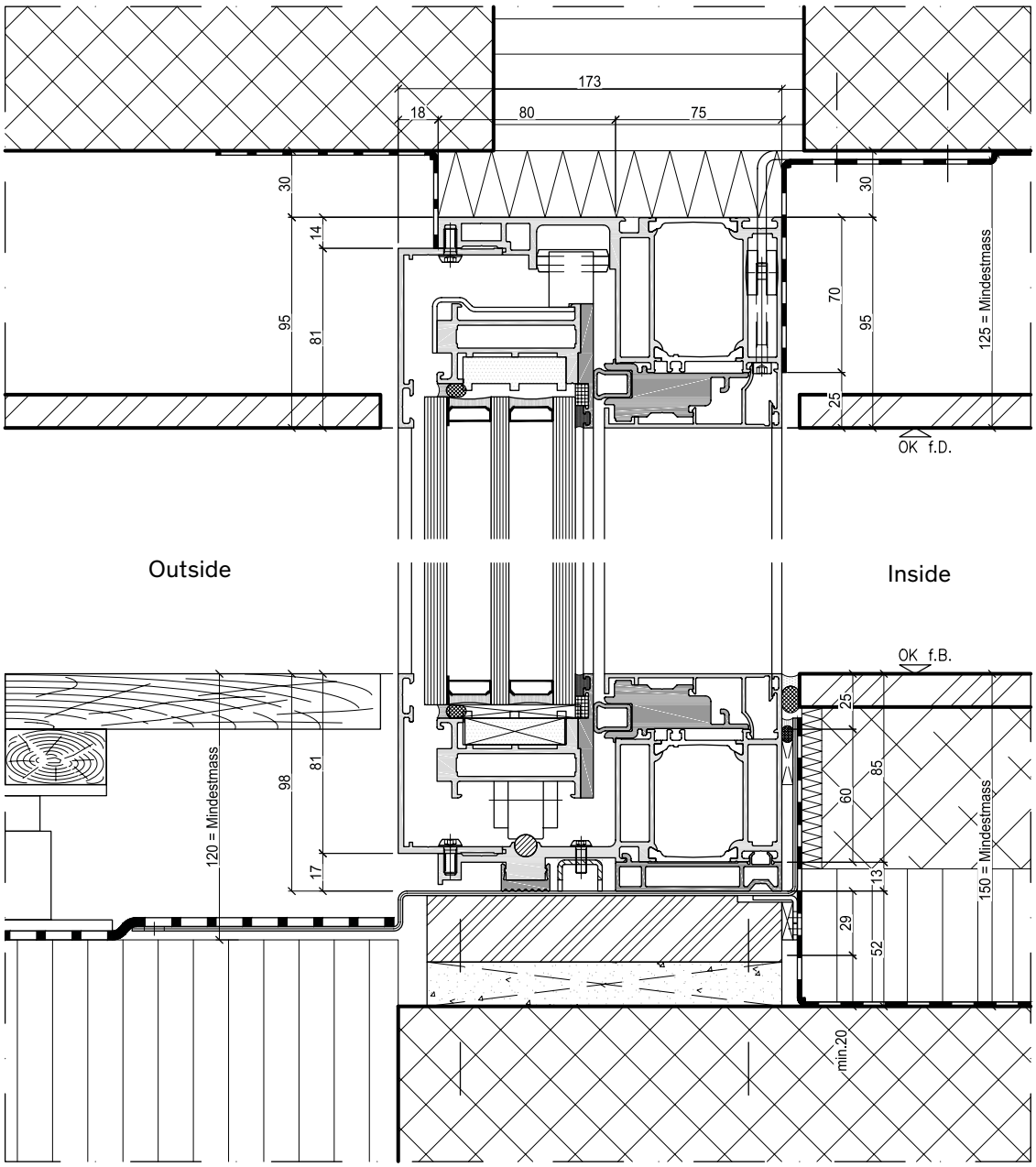




All-glass design

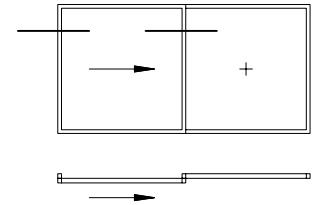
DWG PDF

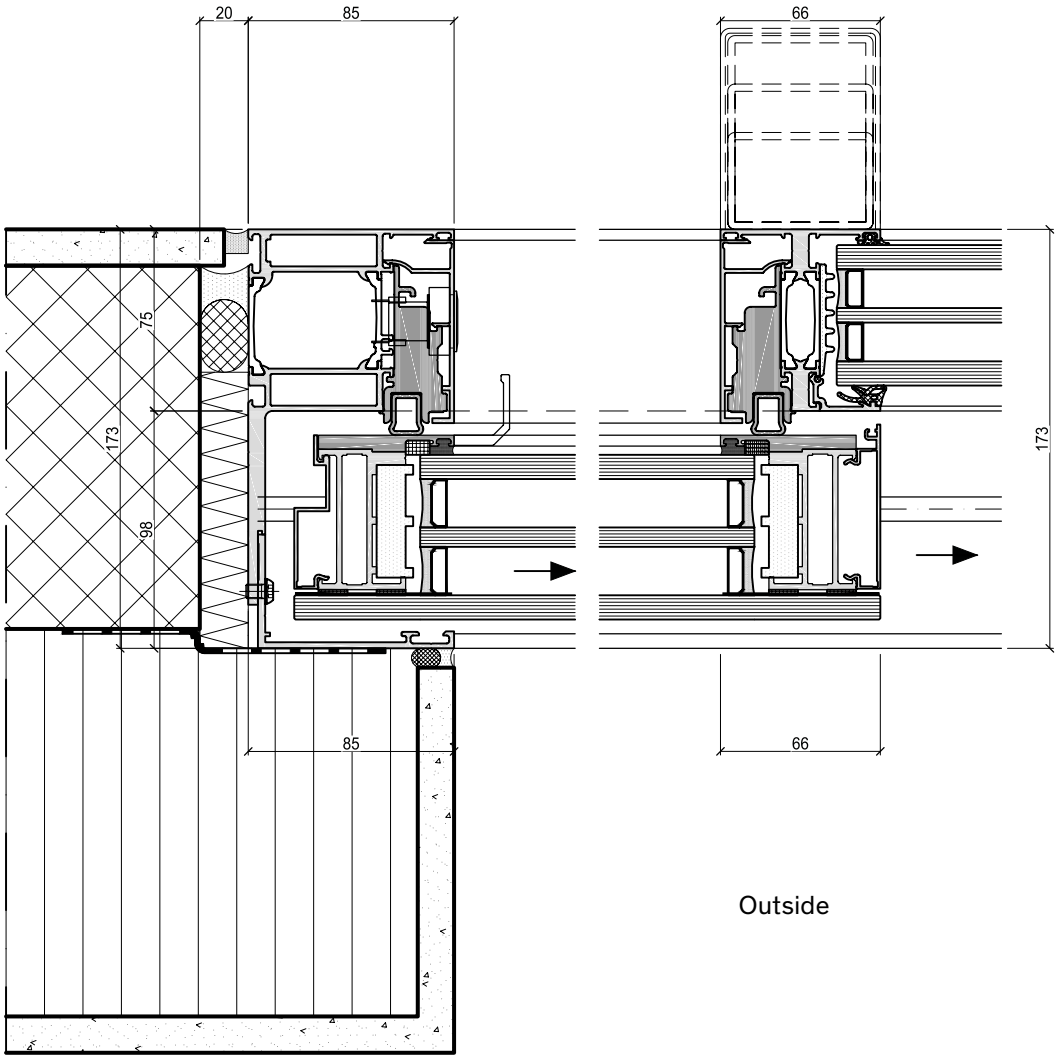




All-glass design

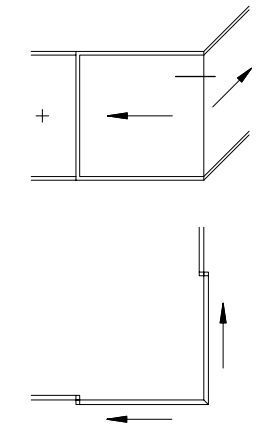
DWG PDF

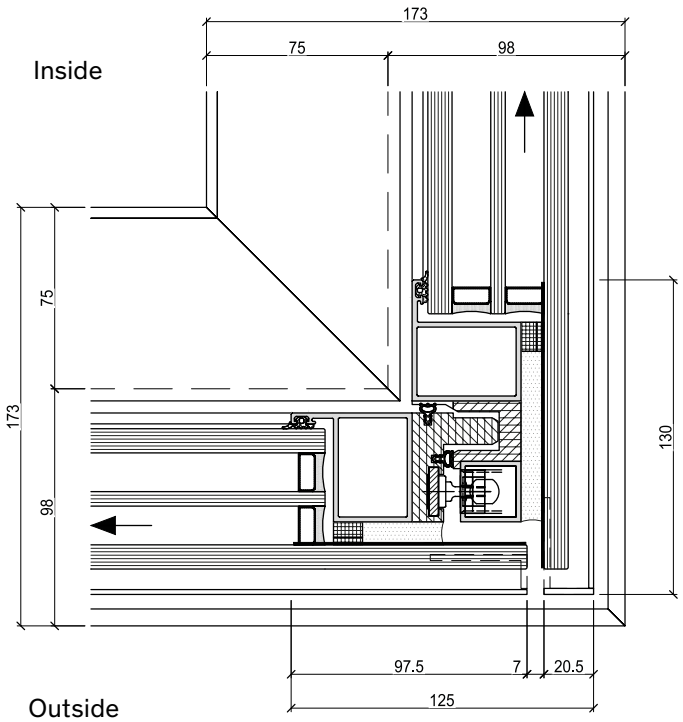




All-glass design with exterior corner track

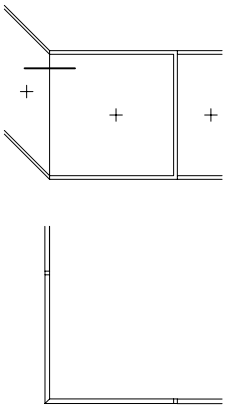
DWG PDF



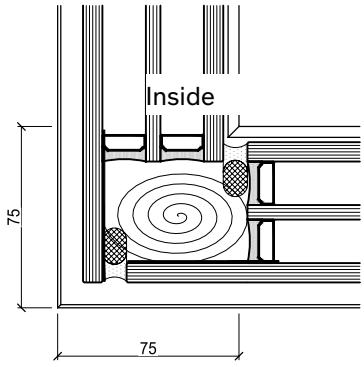


Exterior corner (fixed glazing)

DWG PDF



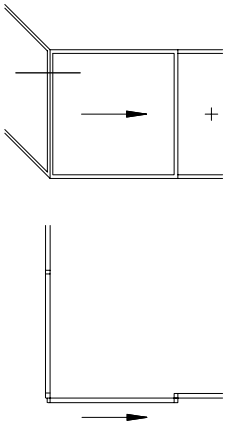
Inside

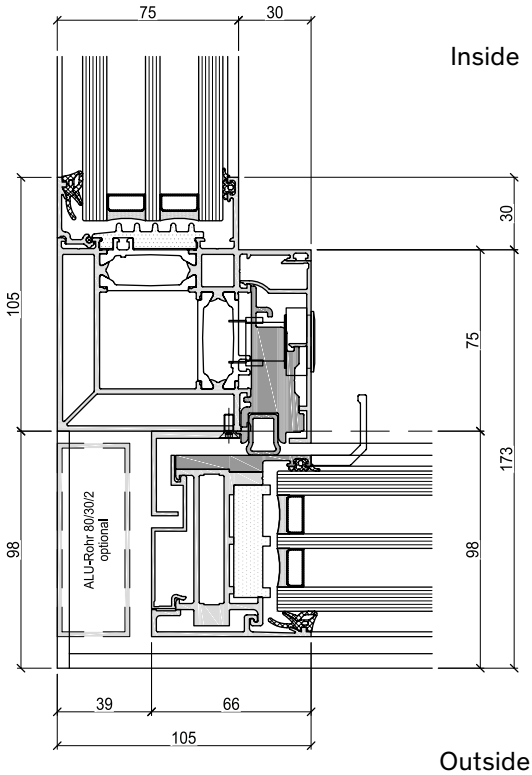


Outside

Exterior corner (fixed mullion with sliding window)

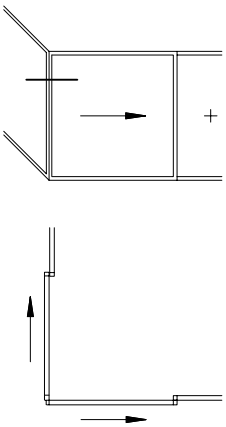
DWG PDF

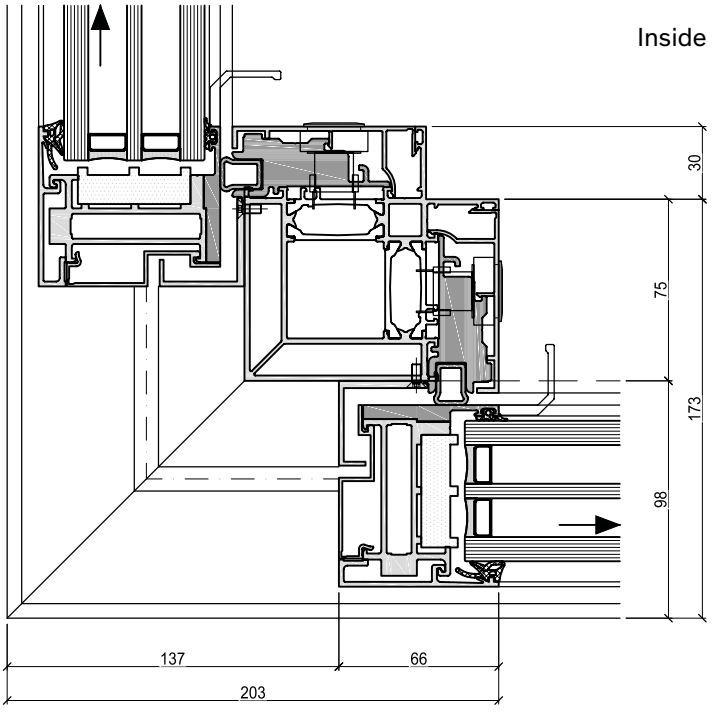




Exterior corner (fixed mullion with two sliding windows)

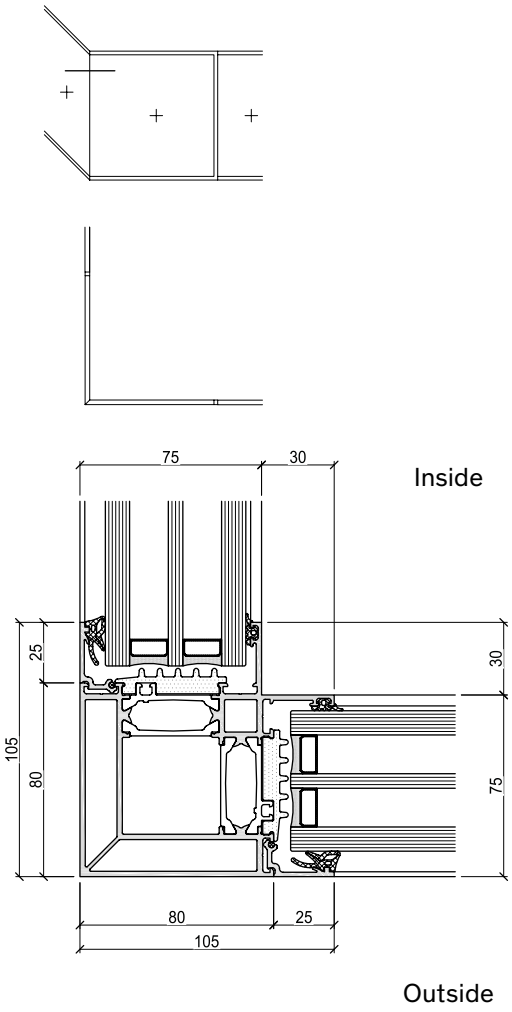
DWG PDF





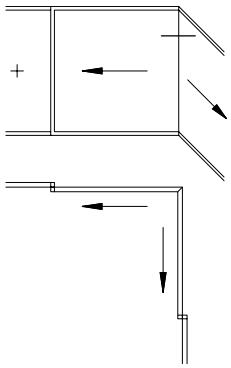
Exterior corner (fixed mullion)

DWG PDF

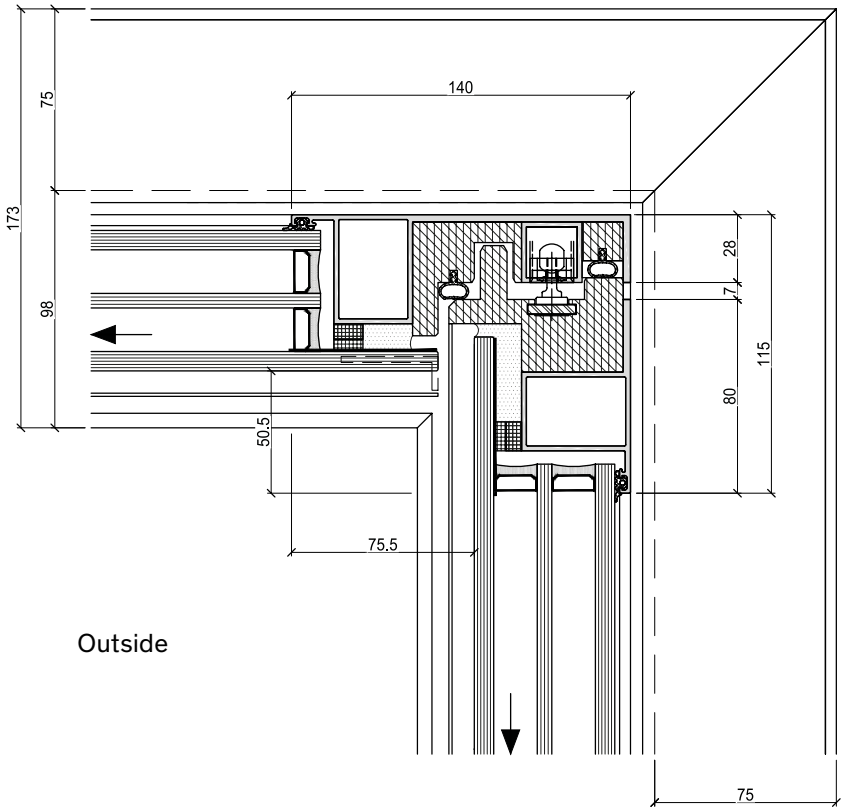


All-glass design with interior corner track

DWG PDF



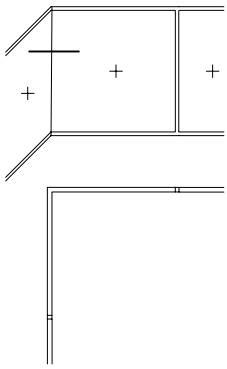
Inside



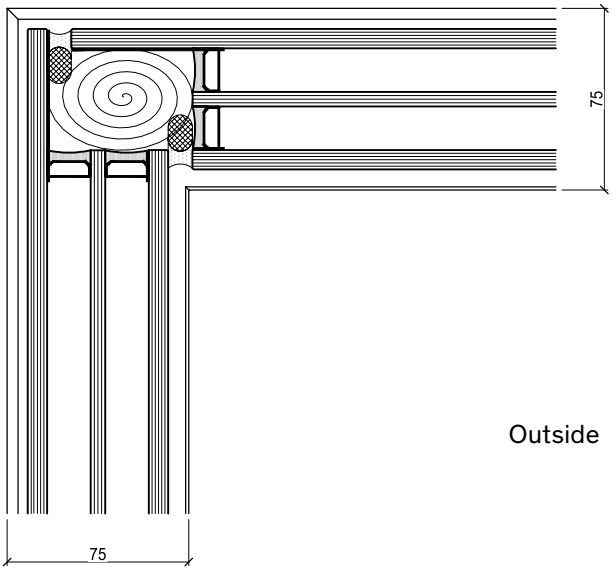
Outside

Interior corner (fixed glazing)

DWG PDF



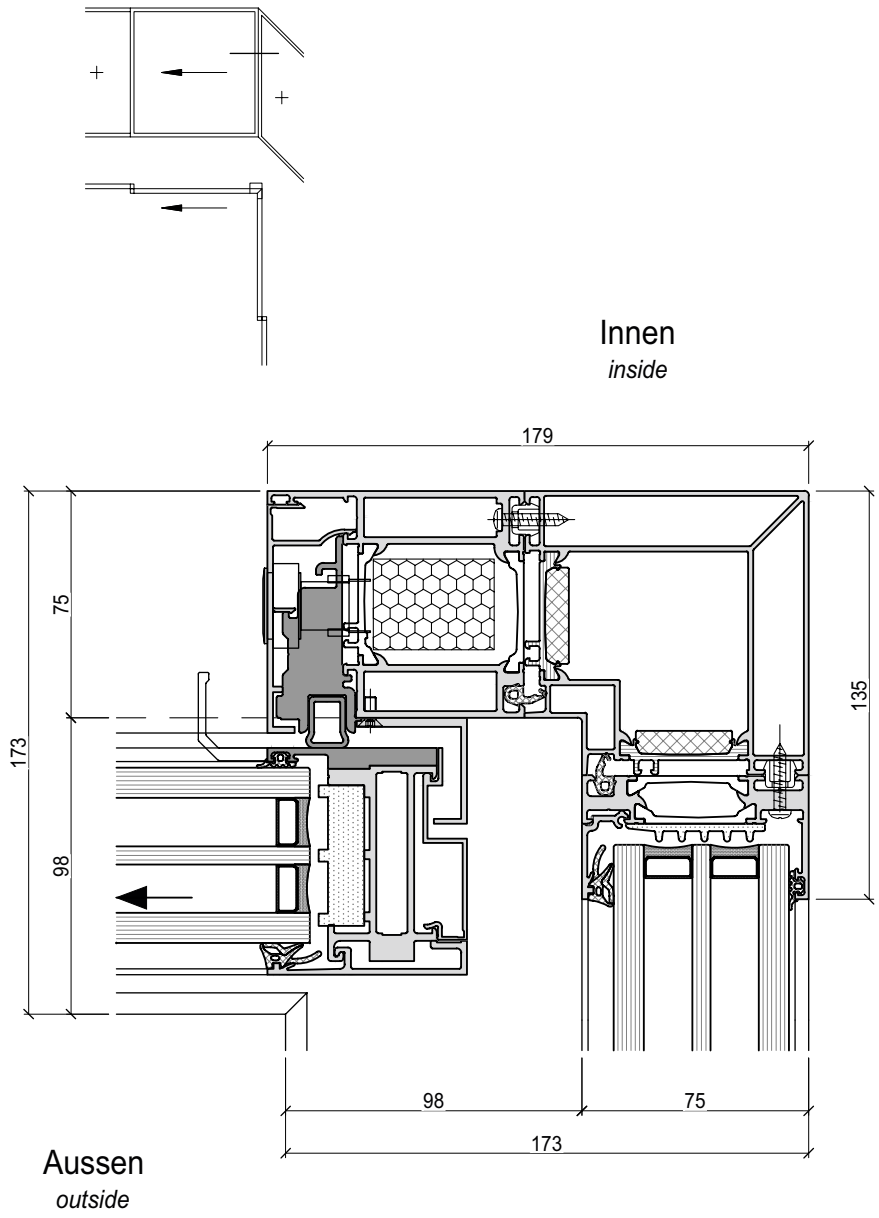
Inside



Outside

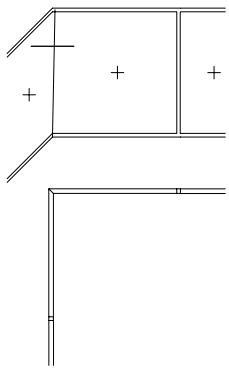
Interior corner (fixed mullion with sliding window)

DWG PDF

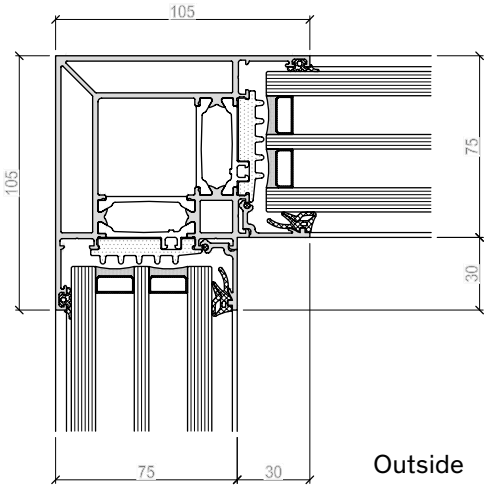


Interior corner (fixed mullion)

DWG PDF



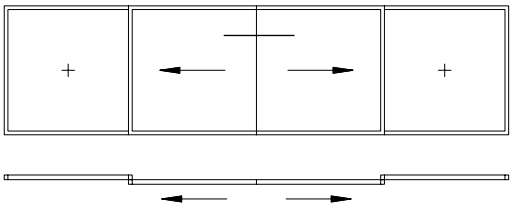
Inside



Outside

All-glass design with bi-parting track

DWG PDF



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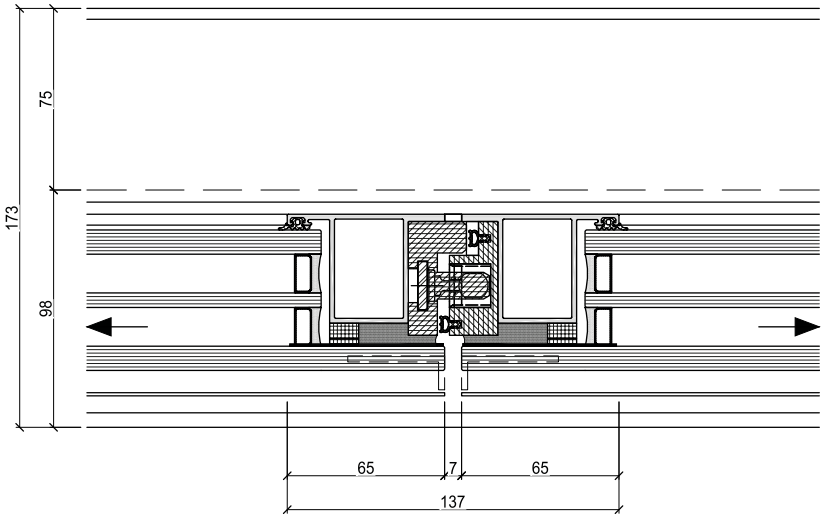
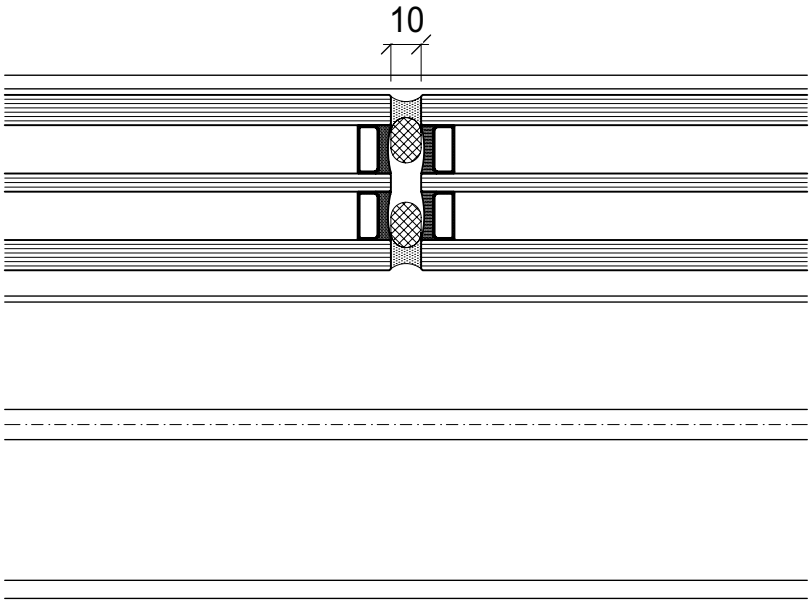


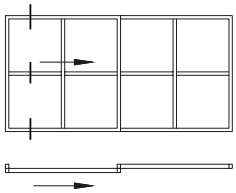
Outside

All-glass joint (fixed glazing)

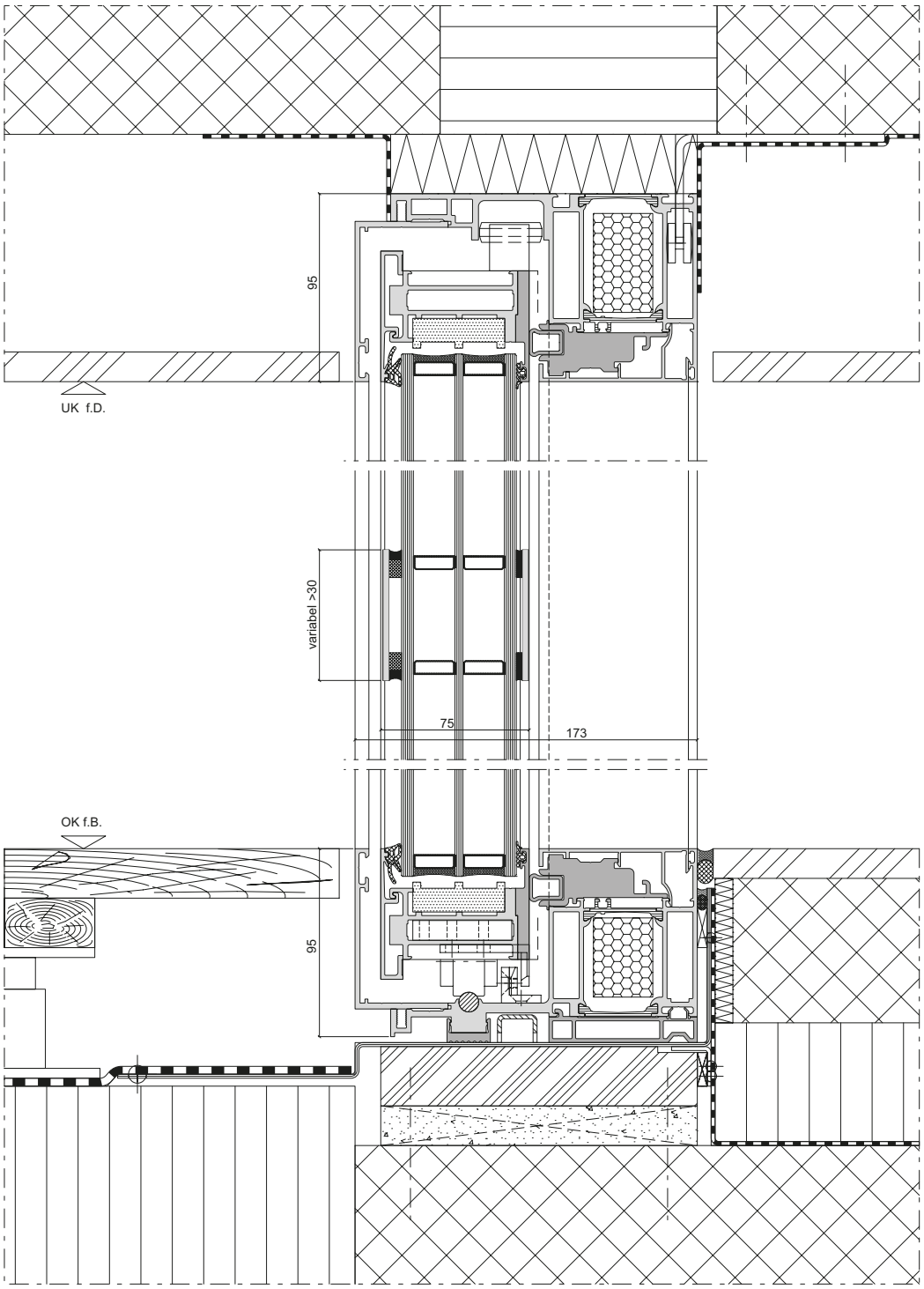
DWG PDF



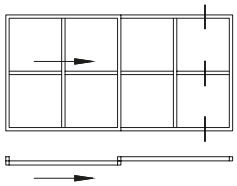
Viennese glazing bar



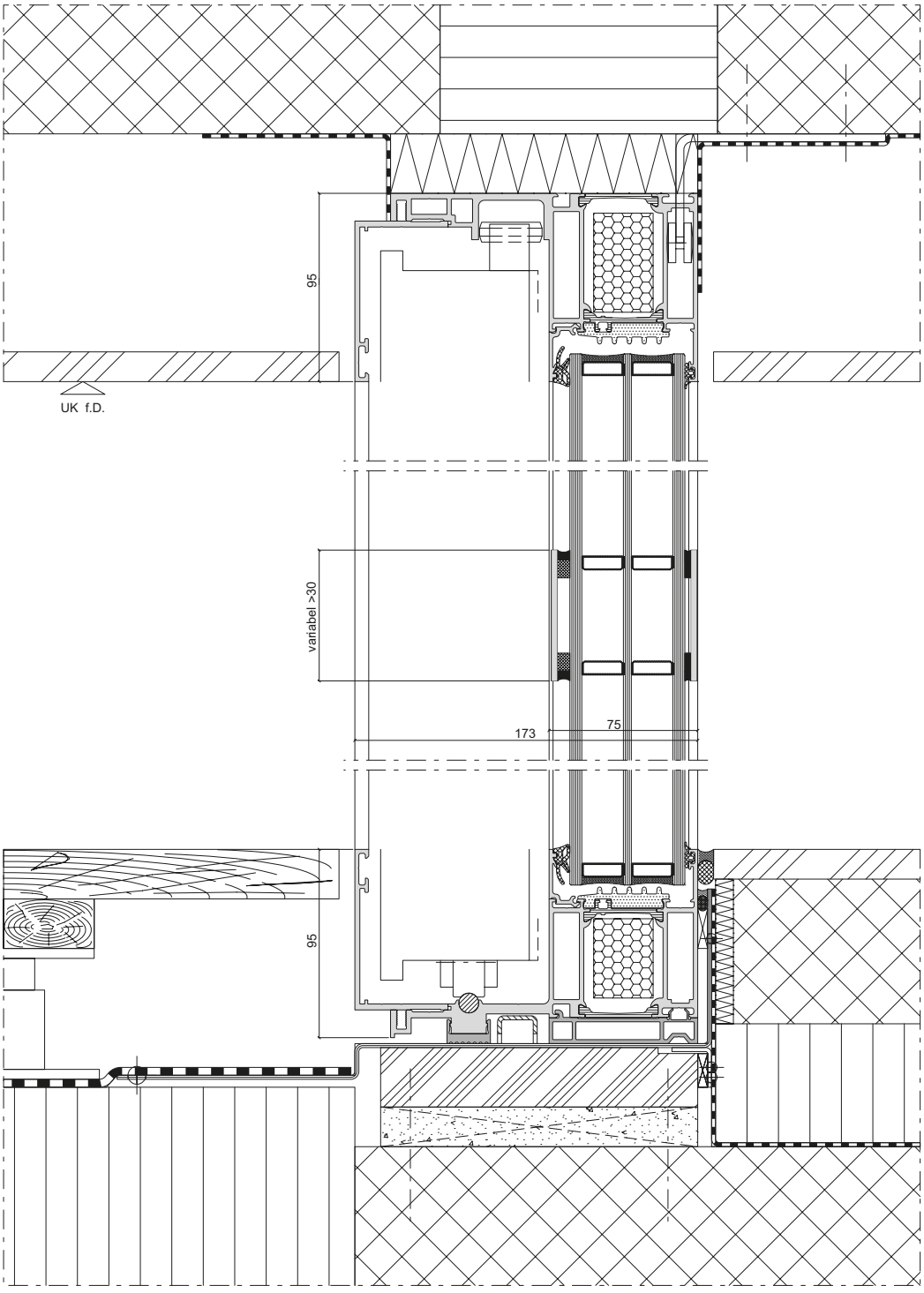
DWG PDF



Viennese glazing bar

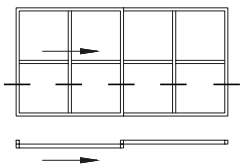


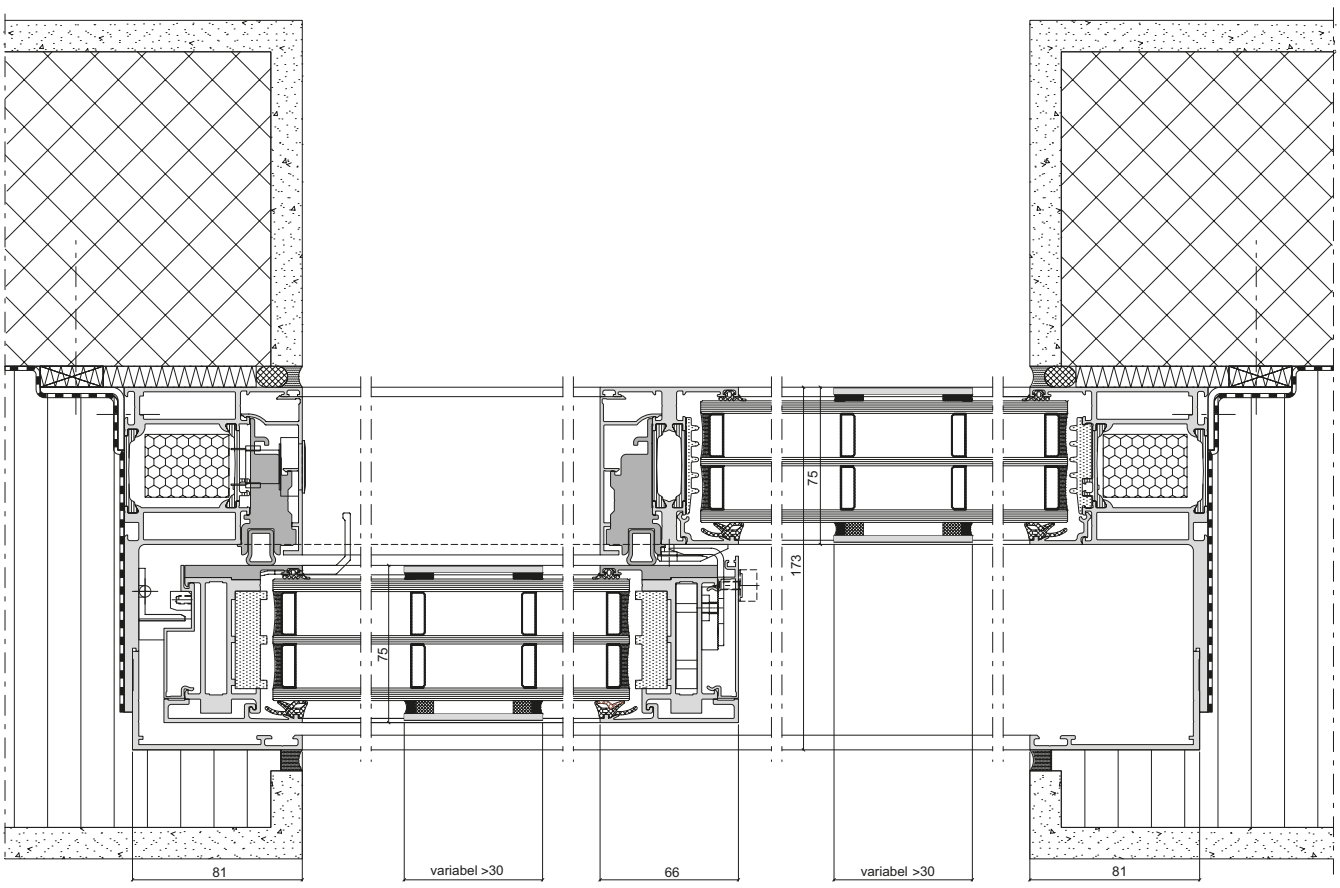
DWG PDF



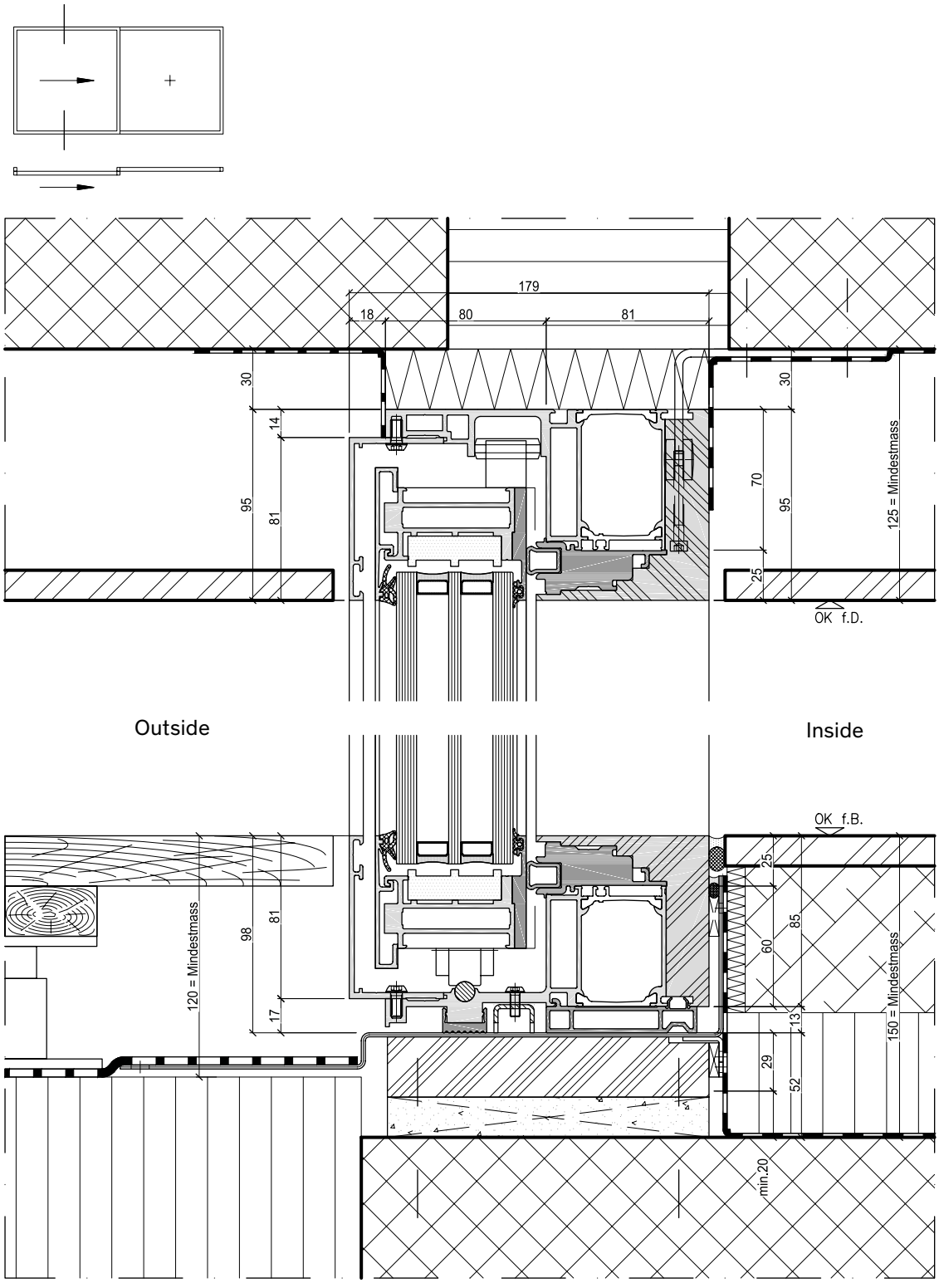
Viennese glazing bar

DWG PDF



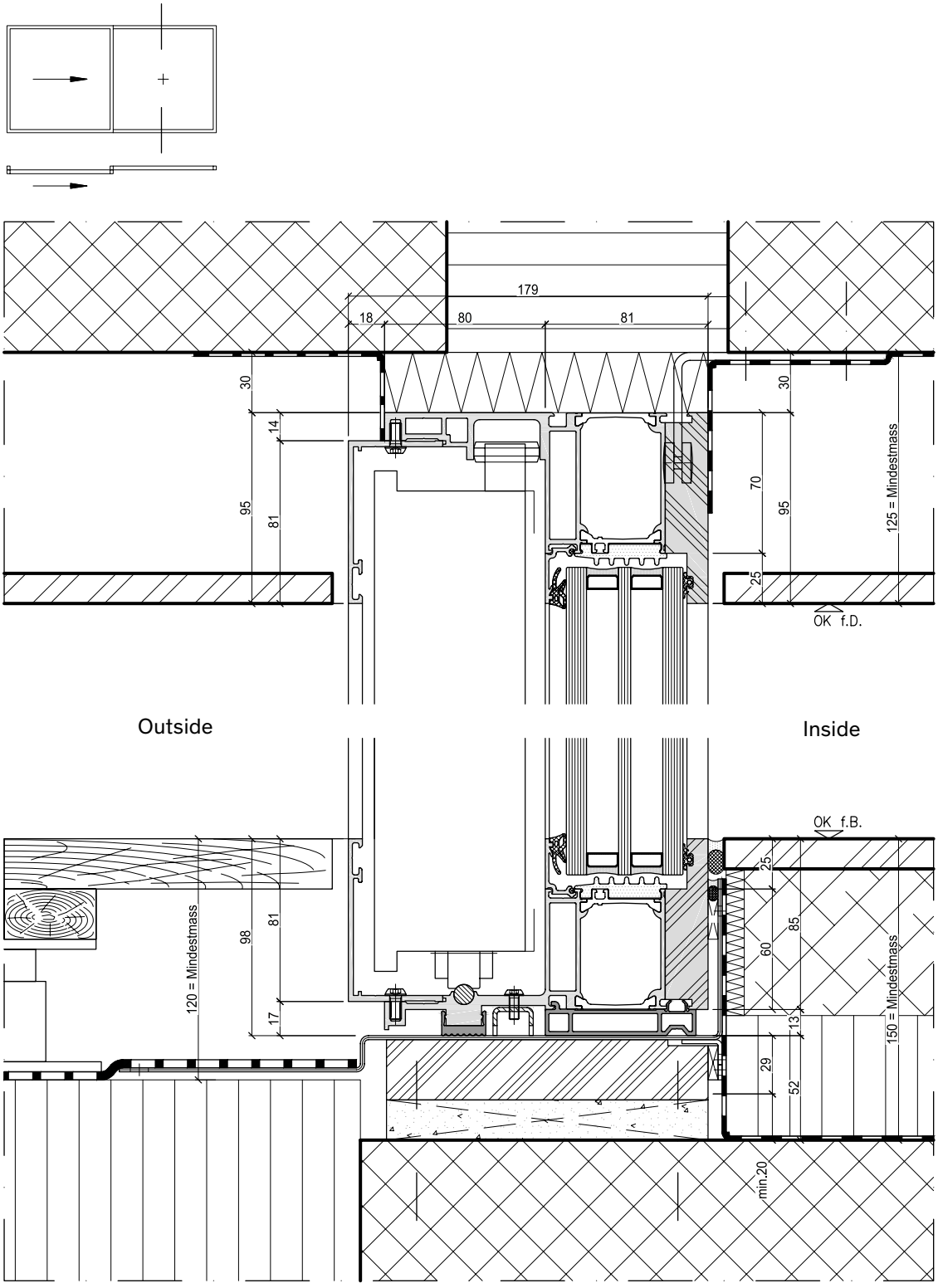


Connect wood/aluminium-bronze



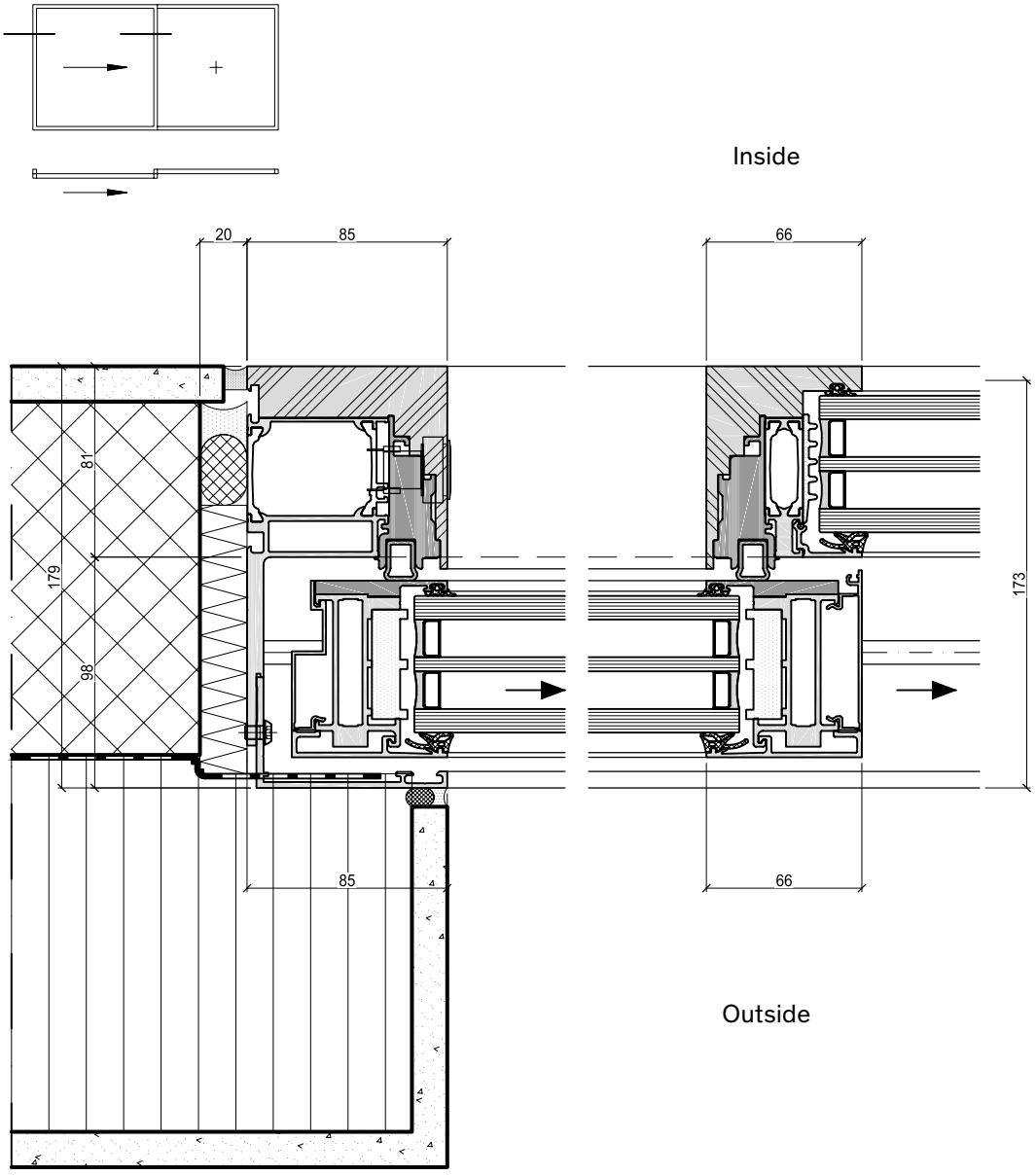
Detailed plans available on request

Connect wood/aluminium-bronze



Detailed plans available on request

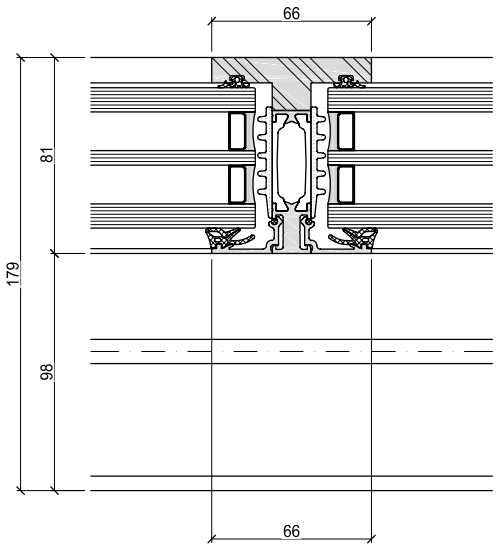
Connect wood/aluminium-bronze



Detailed plans available on request

Connect wood/aluminium-bronze

Inside



Outside

Detailed plans available on request

air-lux SW 75 threshold construction

Sealing and stowage heights for seamless components

Switzerland

Standards / Directives

- Standard SIA 271 Sealing in construction
- Standard SIA 274 Sealing of joints in buildings
- Standard SIA 331 Windows and French windows
- Standard SIA 343 Doors and gates
- Standard SIA 500 Barrier-free buildings
- suisstec directives for roof drainage

- A stowage height of 120 mm is usually applicable
- For doors, the stowage height can be reduced to 60 mm
- The wheelchair-accessible threshold < 25 mm can be achieved with the necessary measures
- The barrier-free threshold is not addressed in the SIA

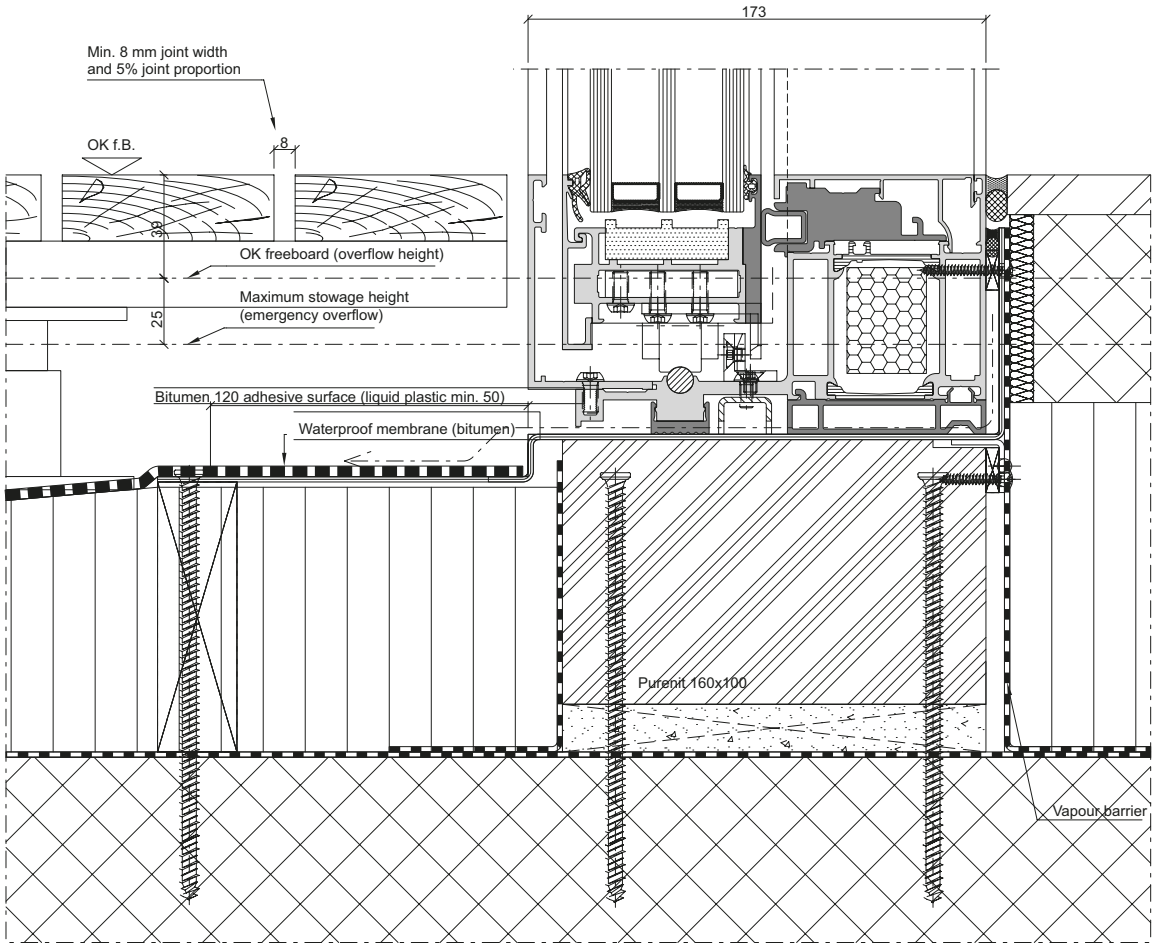
Germany

Standards / Directives

- DIN 18195 Sealing of buildings
- DIN generally requires a connection height of at least 150 mm.
- This can be reduced to 50 mm by implementing additional measures (channels, etc.).
- The barrier-free threshold model is not (yet) dealt with exhaustively in the DIN; it is therefore always a special solution requiring coordination between the planners and the people carrying out the work.

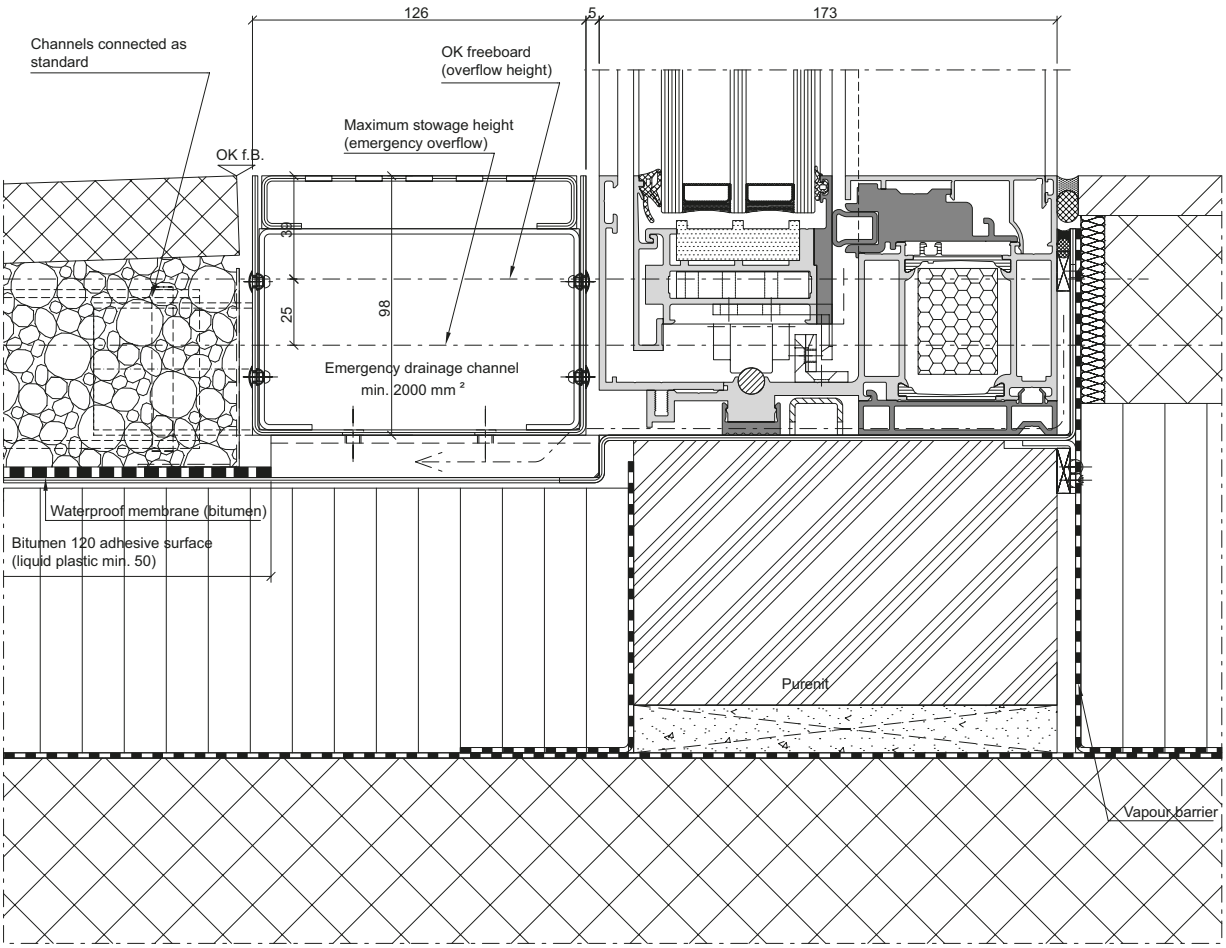
air-lux SW 75 threshold construction

Sealing heights with open surface (8 mm/5%)



air-lux SW 75 threshold construction

Sealing heights for stone slab with channel (non-organic)



air-lux SW 75 threshold construction

Pressure-tight substructure grouting
To ensure long-term sound insulation and reliable support for heavy glass elements, air-lux substructures must be grouted pressure-tight. This work must be carried out on site before the elements are installed. We recommend using SikaGrout®-314.

air-lux SW 75 threshold construction

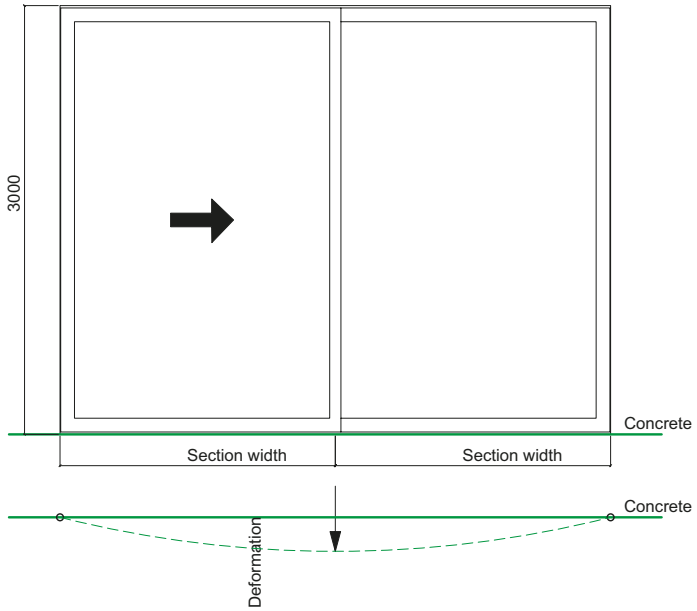
Threshold sealing:
After assembling the threshold construction from 2 mm stainless steel sheet, the soffit must be sealed with liquid plastic before window installation. Additional threshold sealing can be carried out either before or after the window is installed.

Recording building deformations in the lintel area

Variant:

- Standard variant (no postless corner or bi-parting sliding elements)
- Manual
- No safety features
- No insect screen

The below information refers to an element with the following dimensions:



l refers to the total length of the element

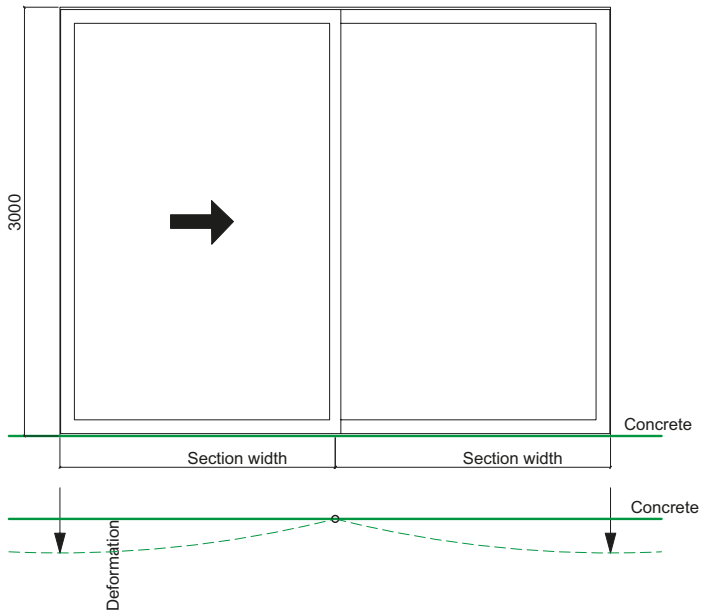
	Deformation over entire element (mm)					
Deformation per l/x	2,000	4,000	6,000	8,000	10,000	12,000
2,000	1.0	2.0	3.0	4.0	5.0	6.0
1,000	2.0	4.0	6.0	8.0	10.0	12.0
750	2.7	5.3	8.0	10.7	13.3	16.0
500	4.0	8.0	12.0	16.0	20.0	24.0
400	5.0	10.0	15.0	20.0	25.0	x
300	6.7	13.3	20.0	x	x	x
250	8.0	16.0	24.0	x	x	x
< l/200	x	x	x	x	x	x

Example A: **Installation between two supports**

Element length 8,000 mm
Max. deflection l/500

➔ Max. deformation 16 mm

Recording building deformations in the lintel area



	Deformation at section edge (mm)					
Section width	1,000	2,000	3,000	4,000	5,000	6,000
	2.0	4.0	6.0	8.0	10.0	12.0
	2.7	5.3	8.0	10.7	13.3	16.0
	4.0	8.0	12.0	16.0	20.0	24.0
	5.0	10.0	15.0	20.0	25.0	x
	6.7	13.3	20.0	x	x	x
	8.0	16.0	24.0	x	x	x
	x	x	x	x	x	x

Example B: **Installation with central mullion on axis support**

Section width 5,000 mm

→ Max. deformation at section edge 10 mm

Recording building deformations in the lintel area

Deformation	Effect on sliding system
> l/1,000	→ Full system functionality **➔ 100% impermeable system**
l/750–l/500	→ Fittings work without restrictions, → Sliding element opens/closes automatically (no lock) → Parallel alignment of vertical profiles impaired → Risk of glass breakage **➔ 100% impermeable system**
l/400	→ Installation of turned locking bolts → Tag closures must be re-drilled → Risk of glass breakage **➔ 100% impermeable system**
l/300–l/250	→ Countersunk screws in track and guide rail → Move the bolts in the locking plate → Re-block/align sliding sash → Risk of glass breakage **➔ 100% impermeable system**
< l/250	→ Substructure in the lintel area must be readjusted **➔ Risk of glass breakage**

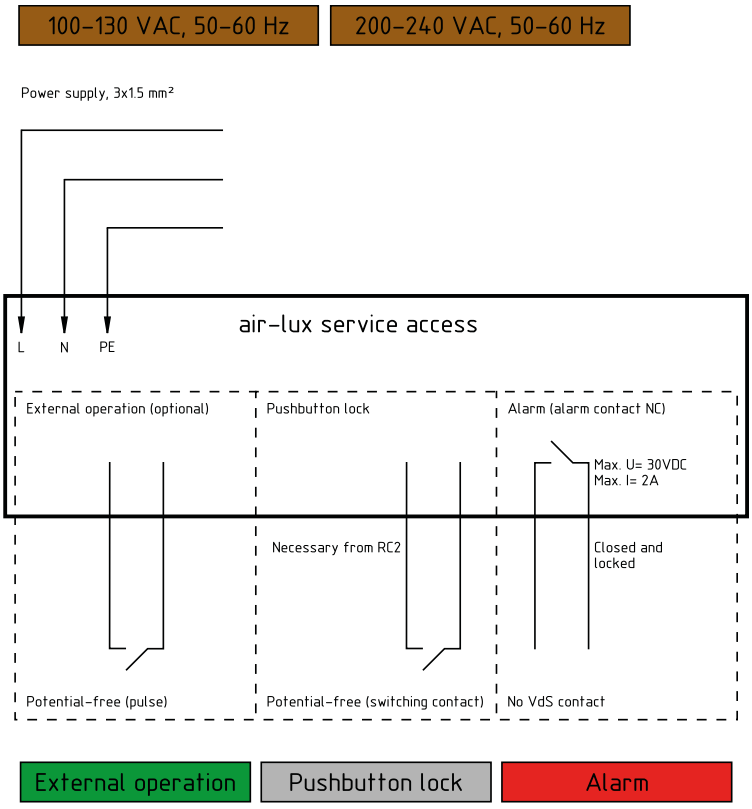
air-lux SW 75 motherboards

Which motherboard is used depends on the options chosen.
If at least one option with an X in ‘Integral’ is selected, an ‘Integral’ motherboard must be installed.

	Standard	Integral
Manual	x	o
Motorized	o	x
All schema C	o	x
Floor flap	o	x
Bar slider	x	o
Insect screen	x	o
Burglary protection	x	o
Fall protection	x	o
Connection to building management system	x	o
Smart home	o	x
Alarm bundle	x	o
Gap ventilation	x	o
Indirect ventilation	o	x

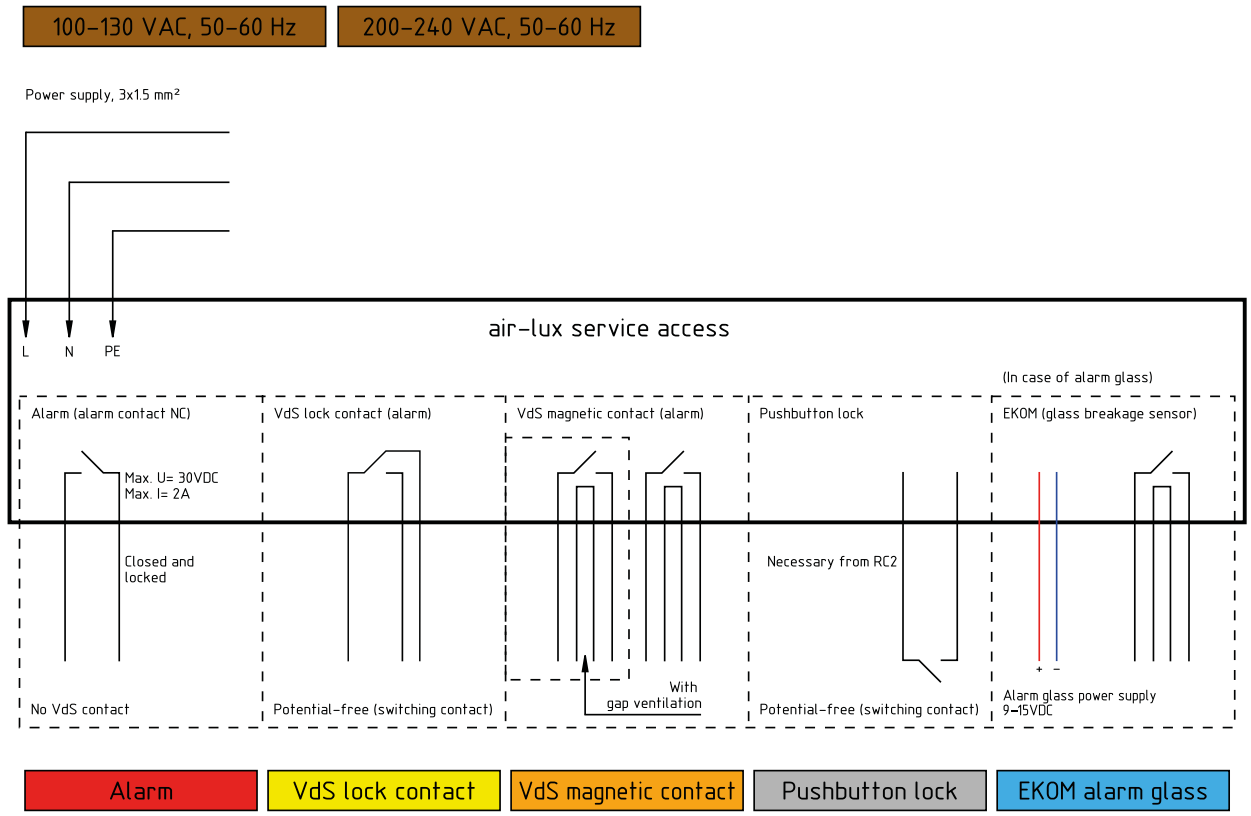
Wiring diagrams

Manual air-lux without VdS contacts



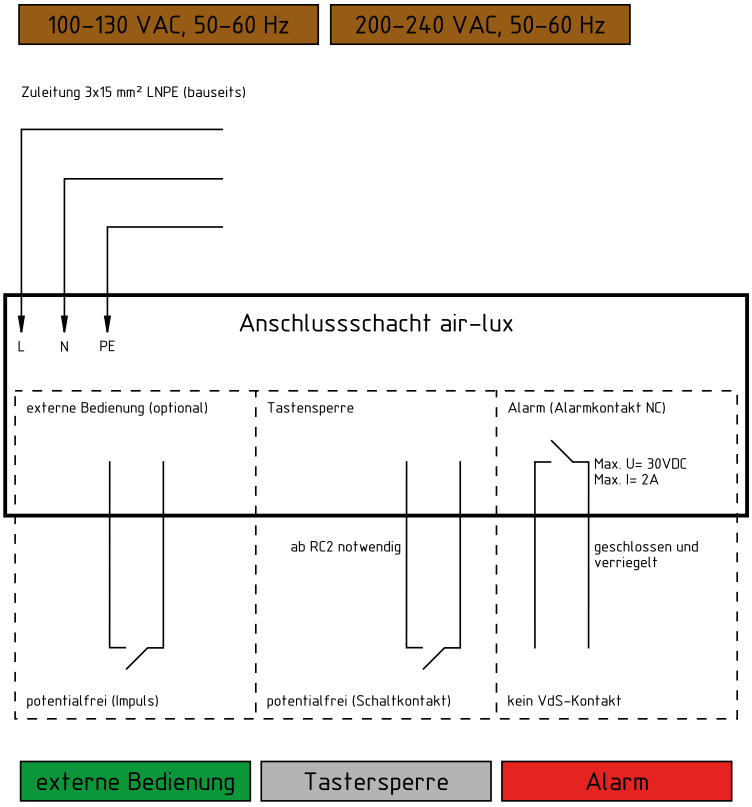
Wiring diagrams

Manual air-lux with VdS contacts (alarm contacts)



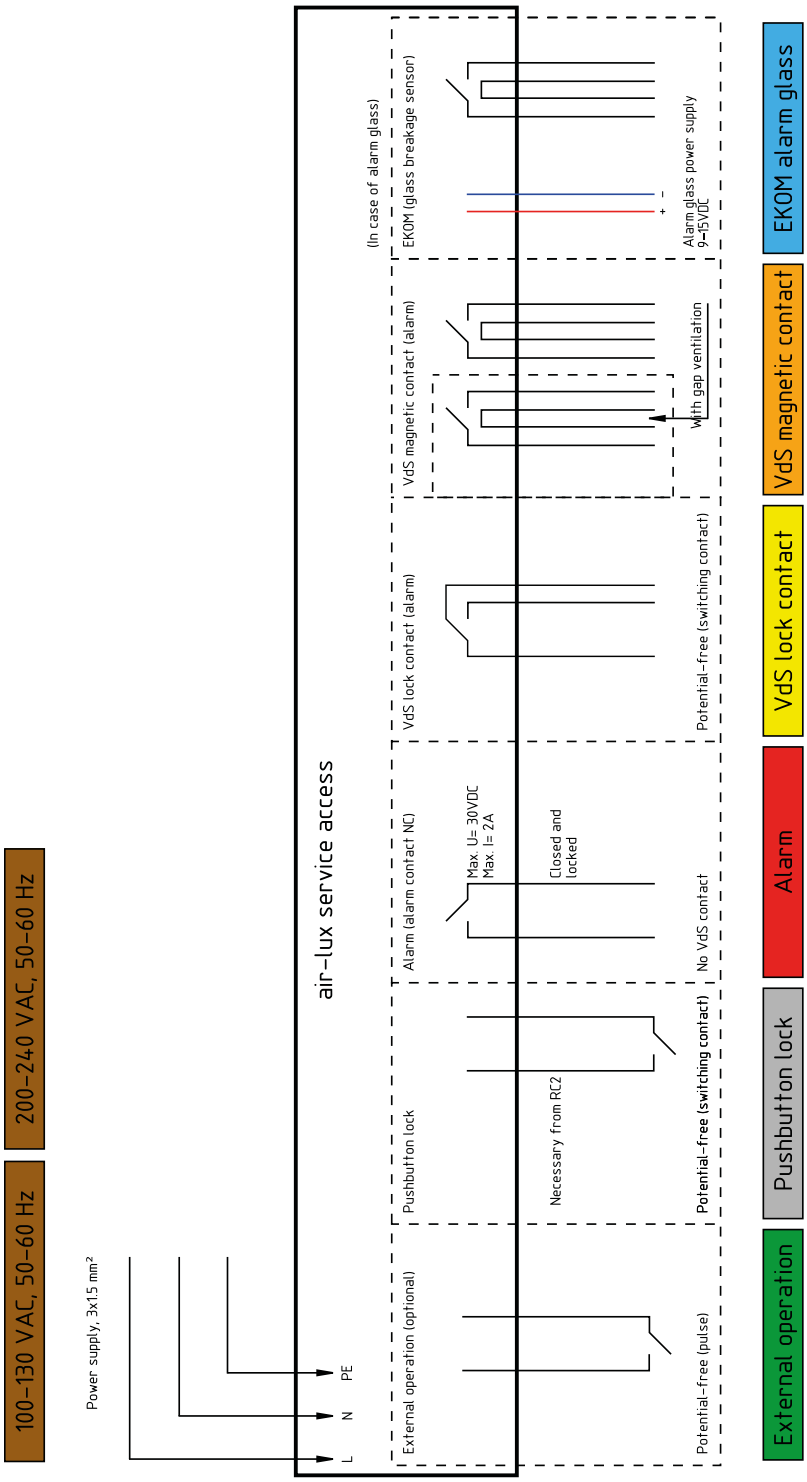
Wiring diagrams

Motorized air-lux without VdS contacts



Wiring diagrams

Motorized air-lux with VdS contacts (alarm contacts)



Description of automation

System design
The air-lux motor consists of a drive motor and control electronics. It is fully integrated into the frame system. The access point for setting the drive parameters is via a removable faceplate on the inside of the frame.

Drive functions / Operation
The window can be operated using a standard button with integrated LED for signalling the status, which is installed in the mullion at the closing edge. Alternatively, the system can be operated via the building management system, e.g. KNX, EIB, key switch, fingerprint, number code, external buttons and mobile devices, etc.
Caution: Do not push the sliding sash while it is being operated under electric power.

Functions
When the button is briefly pressed, the window receives a command to deflate the air-lux gasket, release the lock and move the sliding window.

While the sliding window is opening, it can be stopped by pressing the button again.

If no further signal is sent, the sliding window opens fully.

If the opening operation is interrupted, the window can be closed by briefly pressing the button again, or the opening operation can be re-started by holding down the button for more than 3 seconds.

The movement profile of the sliding window is set by an air-lux service technician during commissioning. (speed, acceleration, deceleration, etc.)

The obstacle detection/anti-pinch protection functions are controlled by force parameters that are individually set for opening and closing during commissioning. Individual controls (dead man's switch) are also available and are mandatory in public areas.

Control options
The standard means of controlling the window is by using the buttons built into the mullion.

In addition, the control can also be carried out via an external system, such as
- KNX
- EIB
- General building management systems
- Key switch
- Fingerprints
- Button
- Wirelessly
- Mobile devices
- etc.

Such systems shall be controlled using the floating contacts of the respective system. These designs require coordinating with the corresponding specialists – electrical consultants, electricians, safety planners, etc. – since the connection conduits as well as cables and switch contact types have to be configured in compliance with the air-lux interface.

Description of automation

Status display/response to building management system
The status of the window is indicated via an LED integrated in the button. The following statuses shall be displayed:
- LED off → Window closed and locked (or no power)
- LED illuminated → Window unlocked and/or open
- LED flashing → Malfunction (lock, motor)

Fault conditions can be acknowledged by pressing the button for 20 seconds.

One (or more) floating contacts enables the following statuses to be sent to the building management system:
- Contact 1 → Window closed and locked or without power
- Contact 2 → Window malfunction

These designs require coordinating with the corresponding specialists – electrical consultants, electricians, safety planners, etc. – since the connection conduits as well as cables and switch contact types have to be configured in compliance with the air-lux interface.

Options / combinations
In addition to the standard functions of the drive, the following options are available:
- Closing edge guard via pressure strips (as a supplement to obstacle detection)
- Partial opening (definable partial opening width, which can be triggered using another button)
- 'Dead man's control' for added safety (individual control)
- Combination of the drive for bi-parting solutions
- Combination of the drive for corner sliding element solutions
- VDS response system

Operation and maintenance
The air-lux drive system is maintenance-free. However, the track should be cleaned regularly, since accumulated dirt can affect the performance of the obstacle detection function.

Safety of automatic sliding windows

General product description

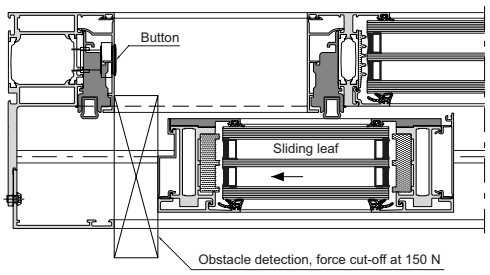
The automatic sliding windows in the air-lux SW 75 series from air-lux Technik AG are manufactured using environmentally friendly processes and meet the highest safety standards. In addition to simple operation, the system offers optimal operator protection in all product variants.
To ensure safe and environmentally friendly product design, the sliding windows have been subjected to a detailed risk analysis. The air-lux SW 75 series complies with the following relevant safety and environmental standards:

- EC Directive 2006/42/EC
- RoHS Directive 2011/65/EU
- DIN EN 16005: 2013-01; Power operated pedestrian doorsets – Safety in use – Requirements and test methods
- DIN EN 12978: 2009-10; Industrial, commercial and garage doors and gates and pedestrian doorsets – Protective devices for power operated doors and gates – Requirements and test methods

For safety reasons, all automatic sliding windows are equipped with an integrated safety cut-off. There are additional safety precautions available in addition to the safety cut-off.

Standard variant

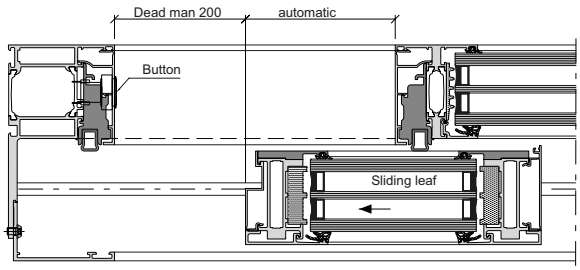
Safety cut-off
In this variant, the sliding window automatically stops the closing movement as soon as an obstacle with a predefined force (default value 150 N/15 kg) acts on the sliding element. This value can be individually adjusted and is dependent on the size and weight of the sliding window. A ‘creep distance’ can also be adjusted, in which the sliding window moves slower and with less force towards the closing edge to ensure optimum safety.



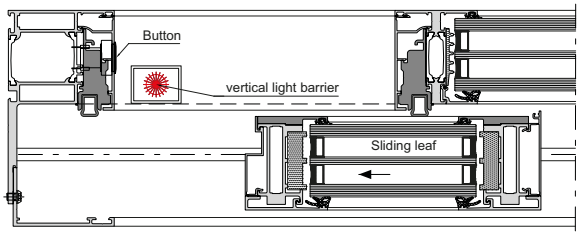
Safety of automatic sliding windows

Optional safety add-ons

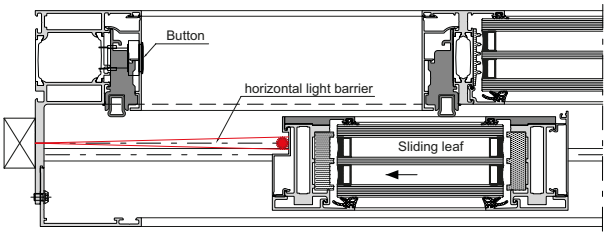
Dead man's switch
This variant has two levels. The sliding window automatically stops the closing movement as soon as the sliding element has travelled a predefined distance (e.g. 200 mm) to the closing edge. To close the sliding window completely, the operator then holds down the button. The service technician can easily activate and program this function.



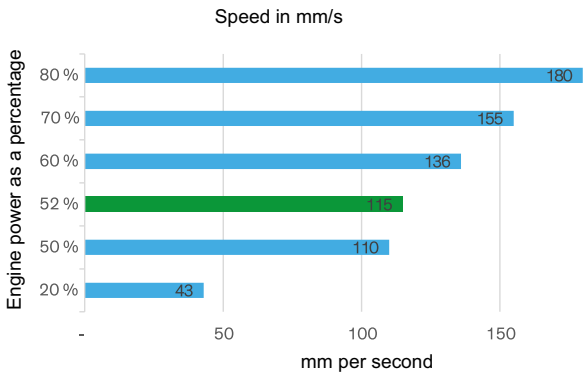
Visible closing edge guard via vertical light barrier
This variant has a visible, vertical light barrier with reflector. As soon as an obstacle interrupts the light barrier, the sliding sash stops moving. To fully close the sliding window after it has stopped, the operator needs to press the button again. The sliding window then automatically moves into the end position.



Horizontal light barrier
This variant features a horizontal light barrier at the level of the sliding sash. The system monitors the entire closing path and stops the movement of the sliding sash as soon as an obstacle interrupts the light barrier. To fully close the sliding window after it has stopped, the operator needs to press the button again. The sliding sash then automatically moves into the end position.



Speed of automatic sliding windows
The travel speed can be adjusted according to the size of the sliding sash. By default, the sliding window moves at a speed of approx. 115 mm/s.
In the start-up and final phases, the sliding window moves at approx. 43 mm/s. The start-up and braking ramps are determined by the air-lux technician based on the size of the sliding sash.



U_w value tables

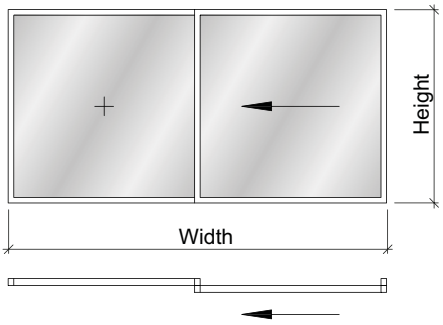


Table for schema A

Width + height = outer frame
Glass: U_g = 0.6 W/m²K
ψg values: 0.032 W/mK

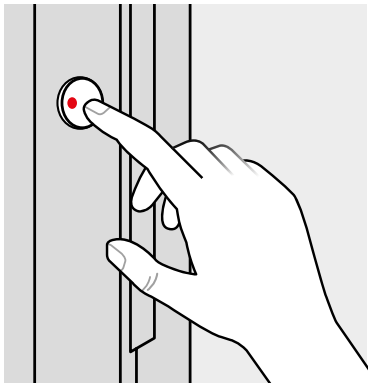
Example:

Individual evaluation
Width: 5,000 mm
Height: 2,600 mm
U_w value: 0.87 W/m²K

Height mm / Width mm	1,000	1,500	2,000	2,200	2,400	2,600	2,800	3,000	3,200	3,400	3,600	3,800	4,000
2,000	1.28	1.16	1.10	1.08	1.06	1.05	1.04	1.03	1.03	1.02	1.01	1.01	1.00
2,500	1.22	1.10	1.03	1.02	1.00	0.99	0.98	0.97	0.96	0.96	0.95	0.95	0.94
3,000	1.18	1.05	0.99	0.98	0.96	0.95	0.94	0.93	0.92	0.92	0.91	0.90	0.90
3,500	1.15	1.03	0.96	0.95	0.93	0.92	0.91	0.90					
4,000	1.13	1.00	0.94	0.92	0.91	0.90	0.89	0.88					
4,500	1.11	0.99	0.92	0.91	0.89	0.88	0.87	0.86					
5,000	1.10	0.97	0.91	0.89	0.88	0.87	0.86	0.85					
5,500	1.09	0.96	0.90	0.88	0.87	0.86	0.85	0.84					
6,000	1.08	0.95	0.89	0.87	0.86	0.85	0.84	0.83					
6,500	1.07	0.94	0.88	0.86	0.85	0.84	0.83	0.82					
7,000	1.06	0.94	0.87	0.86	0.84	0.83	0.82	0.81					
7,500	1.06	0.93	0.87	0.85	0.84	0.83	0.82	0.81					
8,000	1.05	0.93	0.86	0.85	0.83	0.82	0.81	0.80					
8,500	1.05	0.92	0.86	0.84	0.83	0.82	0.81	0.80					
9,000	1.04	0.92	0.86	0.84	0.82	0.81	0.80	0.79					
9,500	1.04	0.91	0.85	0.83	0.82	0.81	0.80	0.79					
10,000	1.03	0.91	0.85	0.83	0.82	0.81	0.80	0.79					
10,500	1.03	0.91	0.85	0.83	0.81	0.80	0.79	0.78					
11,000	1.03	0.90	0.84	0.83	0.81	0.80	0.79	0.78					
11,500	1.03	0.90	0.84	0.82	0.81	0.80	0.79	0.78					
12,000	1.02	0.90	0.84	0.82	0.81	0.80	0.78	0.78					

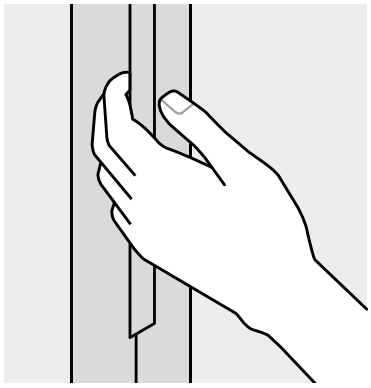

air–lux

Instructions for manual operation



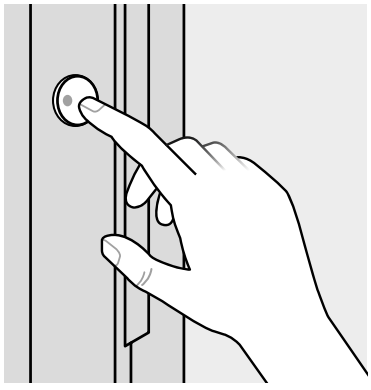
Unlocking

Press the button – the electromechanical lock will audibly retract and the gasket will begin to deflate. When the LED in the button lights up red (status: unlocked/deflated), you can open the sliding window.



Pushing open/closed

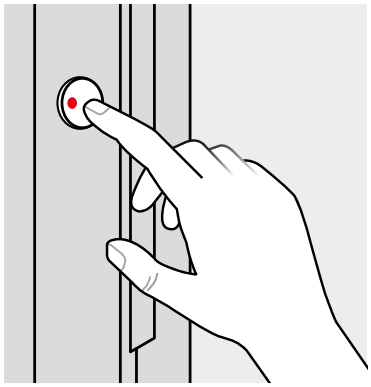
Use the handle to push the sliding window open or closed (directly next to the button). The button performs no function when the sliding window is open.



Locking

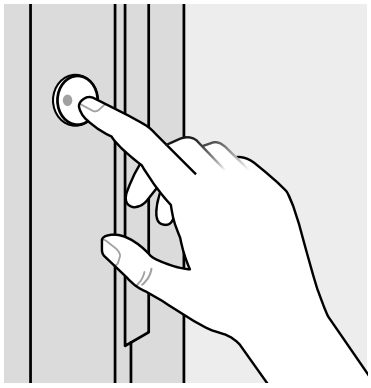
Ensure the sliding window is pushed right up against the stop. Press the button. The locking bolt audibly locks the sliding window and the gasket is inflated. The LED will go out (status: locked and sealed).

Instructions for automatic operation



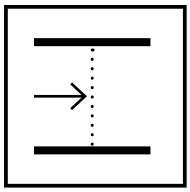
Open

Press the button once for approx. 1 second. The electromechanical lock will audibly retract and the gasket will deflate. The LED in the button lights up red (status: unlocked/deflated) and the sliding window opens.



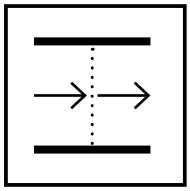
Close

Press the button once for approx. 1 second. The sliding window closes. Once the sliding window is fully closed, the locking bolt will audibly lock and the gasket will be inflated. The LED will go out (status: locked and sealed).



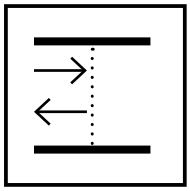
Stop

Press the button once for approx. 1 second.



Continue opening

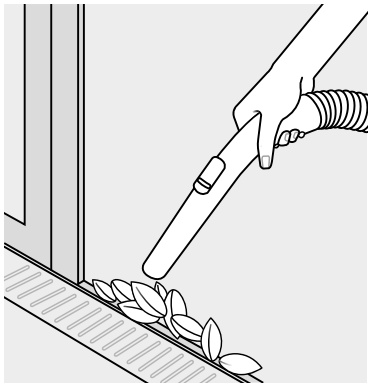
Press the button once for approx. 3 seconds.



Continue closing

Press the button once for approx. 1 second.
The sliding window can also be slowly pushed by hand when stationary and open.

Cleaning and maintenance



Maintenance

In general, do not use any abrasives or solvents for cleaning and maintenance. When cleaning, observe the specific notes for the surface and any information from the manufacturer of the cleaning agents and maintenance products as well as SZFF[1)] guideline 61.01 ‘Maintenance and cleaning of façades’.

Track

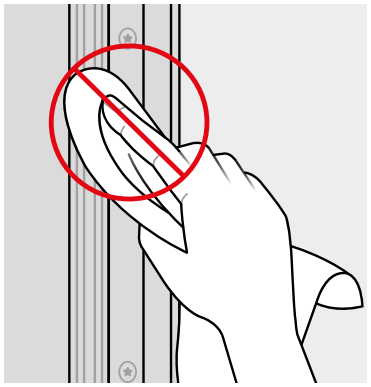
Remove contamination and dirt from the track using a vacuum cleaner. Carefully loosen any debris from the chromium steel round profile using a brush and water, making sure that the surface of the profile does not get scratched.

Glass

Only clean the glass with clean water, commercially available glass cleaning agents and suitable glass cloths. For further information, please refer to SIGAB[2)] guideline 102 ‘Cleaning glass’.

Profile

Clean the surfaces as gently as possible and rinse them afterwards with water. In the event of stubborn stains, contact a certified cleaning specialist.

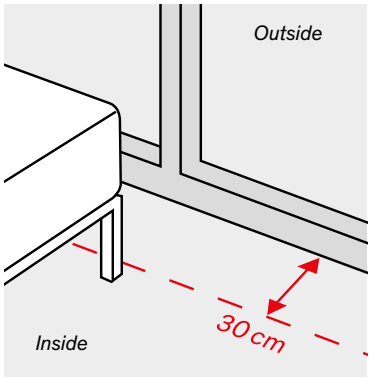


Gaskets

The gaskets have a permanent coating and must be protected against mechanical damage.
They must not be cleaned or treated in any other way.

1) SZFF – Swiss Centre for Windows and Façades
2) SIGAB – Swiss Institute for Glass in Construction

Safety instructions



Glass protection

Do not place furniture or other larger items directly behind or in front of the glass. A minimum distance of 30 cm should be maintained to avoid thermal cracking.

Personal protection

air-lux sliding windows are very easy to move. Ensure there are no people, animals or objects in the path of the sliding window during operation. The same applies when operating electrical base valves.

When operating automatic sliding windows from outside, the sliding window must be within eyeshot.

Assistance in the event of malfunction

Manual and automatic

A flashing red LED in the button indicates a malfunction:

1 × short flash
Gasket is inflated but there is a small leak.
→ Contact the air-lux service centre.

2 × short flashes
Gasket cannot inflate, significant leak.
→ Contact the air-lux service centre.

3 × short flashes
Inactive lock or alarm contacts.
→ Open/close the sliding window again; then press the button.

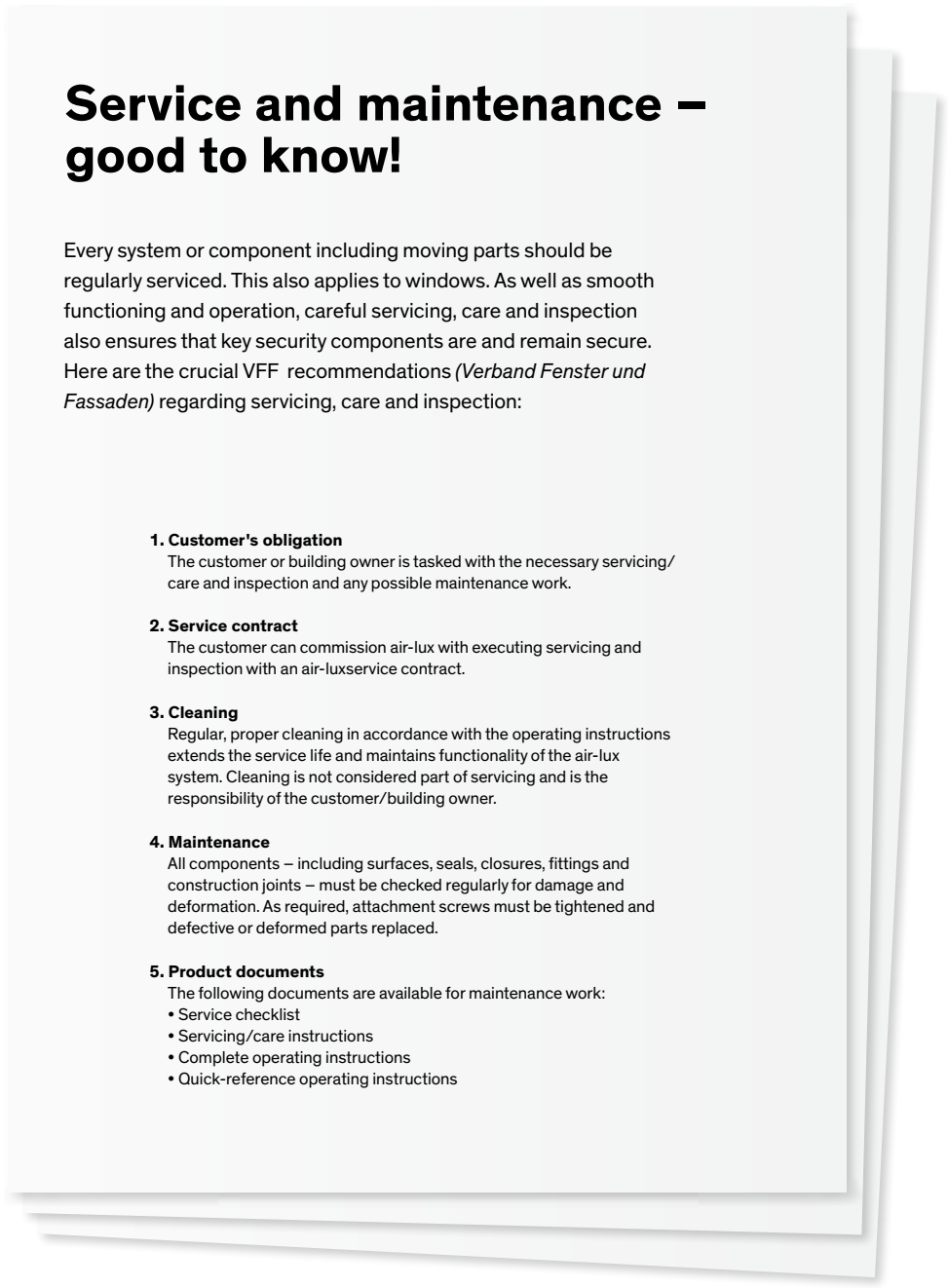
Sliding window jammed
Check whether there is an object in the track which is blocking the sliding window.

Automatic

Constant flashing
The drive has malfunctioned.
→ Press and hold the button for approx. 20 seconds (reset). A reset can be carried out in any position.
If the button continues to flash, manually push the sliding window closed (the locking bolts will lock automatically) and contact the air-lux service centre.

Power failure when the sliding window is open
Slowly push the window closed by hand; the locking bolts will lock automatically without a power source.

The air-lux service contract – automatically perfectly maintained



Service and maintenance – good to know!

Every system or component including moving parts should be regularly serviced. This also applies to windows. As well as smooth functioning and operation, careful servicing, care and inspection also ensures that key security components are and remain secure. Here are the crucial VFF recommendations *(Verband Fenster und Fassaden)* regarding servicing, care and inspection:

1. Customer's obligation
The customer or building owner is tasked with the necessary servicing/care and inspection and any possible maintenance work.

2. Service contract
The customer can commission air-lux with executing servicing and inspection with an air-luxservice contract.

3. Cleaning
Regular, proper cleaning in accordance with the operating instructions extends the service life and maintains functionality of the air-lux system. Cleaning is not considered part of servicing and is the responsibility of the customer/building owner.

4. Maintenance
All components – including surfaces, seals, closures, fittings and construction joints – must be checked regularly for damage and deformation. As required, attachment screws must be tightened and defective or deformed parts replaced.

5. Product documents
The following documents are available for maintenance work:
- Service checklist
- Servicing/care instructions
- Complete operating instructions
- Quick-reference operating instructions

air-lux – a good decision guaranteed

Your air-lux sliding window is a good investment that helps to increase the value of your property, so you deserve to enjoy it long into the future. In addition to the high-quality workmanship and premium materials, this is also ensured by the air-lux warranty and services.

The air-lux warranty –
an extra layer of security
We guarantee quality down to the last detail. That's why we go beyond the legal requirements and provide a ten-year warranty on the frame, gasket, fittings and function for all configurations of air-lux components (sliding windows, pivot doors and descending windows). If any problems occur, our 24-hour standby service is available to provide the required assistance.

The air-lux service contract –
for peace of mind
Our complete service also includes the supply of spare parts, as well as servicing and maintenance of components to preserve function and value. With the air-lux service contract, you get a complete service package that avoids unnecessary costs and guarantees the best possible functioning of the air-lux systems.

air-lux and standardised window elements
We also offer a service for our window elements without air gaskets (tilt-and-turn windows, doors, skylights etc.). These elements are covered by the warranty in accordance with SIA standard 118 (or VOB for construction projects in Germany). For electrical components, this is one year.

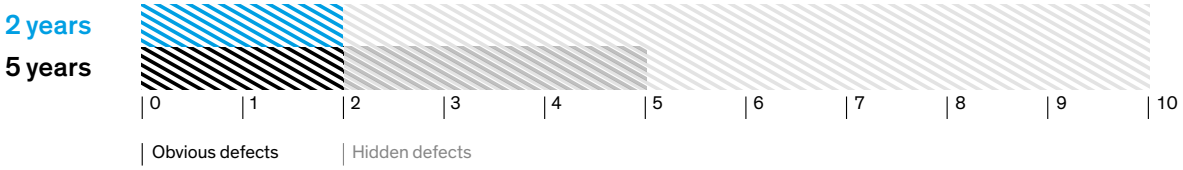
Warranty services at a glance

There are three different warranty levels.

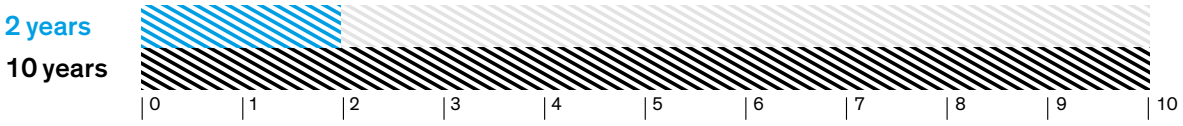
This is based on the warranty services in accordance with SIA standard 118 (1).

We also provide special air-lux guarantee services for the air-lux system (2). And on request, the warranty services for air-lux components can be further extended with an **air-lux service agreement** (3).

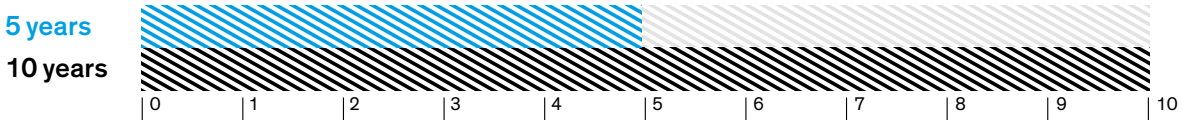
1. Warranty services in accordance with SIA 118 or the contract.



2. air-lux warranty services



3. air-lux warranty with a service contract



Electrical components
- Button
- Motherboard
- Compressor
- Motor incl. drive belt
- Locking bolt

System/fittings
1. Frame
2. Gasket
3. Fittings and function
   - Bottom roller
   - Top guide rollers
   - Fasteners, stoppers, dampers
   - RC2/RC3 safety components

air-lux warranty services – greater guarantee for greater quality

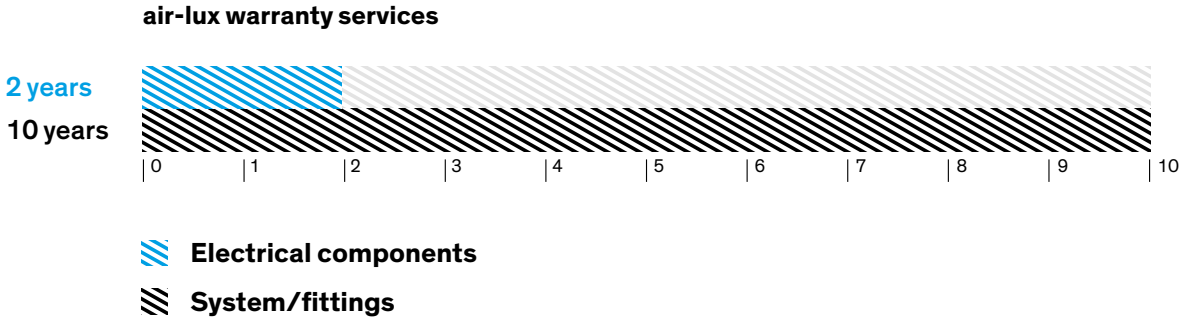
air-lux sliding windows are manufactured in Switzerland from high-quality aluminium profiles and materials. We then back this up with our extended air-lux warranty services.

The following applies in addition to the warranty benefits in accordance with
SIA 118:
Any defect in the system or the fittings within ten years will be replaced free of charge.

The extended warranty applies to all air-lux products (sliding windows, pivot doors, descending windows) with a inflatable gasket.

Defective components attributable to improper operation or inadequate maintenance (in accordance with the air-lux operating instructions), as well as the components listed below, are not covered by the extended warranty:

– Insulating glass
– Surface (depending on coating)
– Shading
– Insect screen



air-lux warranty with a service contract – total peace of mind

The air-lux service contract not only includes regular inspections by air-lux specialists, but also a five-year warranty on all electrical components. For lasting value preservation of the entire air-lux system.

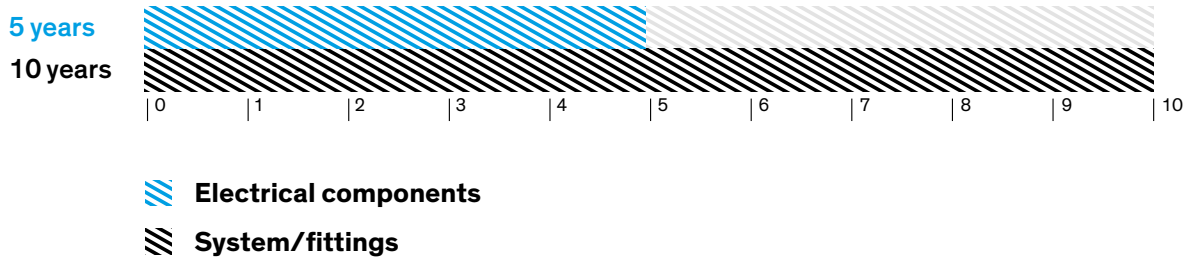
In addition to the air-lux warranty on frames, gaskets and fittings, the five-year warranty with the air-lux service agreement also applies to all electrical components (with the exception of defects caused by improper operation).

The fees for the service contract depend on the location and size of the property and are calculated on a case-by-case basis. You can find an overview of the services on the next page.

Defective components attributable to improper operation or inadequate maintenance (in accordance with the air-lux operating instructions), as well as the components listed below, are not covered by the extended warranty:

– Insulating glass
– Surface (depending on coating)
– Shading
– Insect screen

air-lux warranty with a service contract



air-lux services at a glance

Even the most advanced technology and systems require regular inspection, care and maintenance.

air-lux was developed and built for the highest standards and most extreme conditions. Our aim for the system is to guarantee consistent performance over its entire service life. The air-lux gaskets make this possible because, unlike conventional brush gaskets, they are not prone to wear. In addition, the gasket is service-free, which is beneficial for the service interval and the associated costs. An annual service is all that is needed to ensure the functionality of the system. Extending the warranty for electrical components from two years to five years offers additional peace of mind. If a defective component leads to a malfunction within the specified warranty period, the fault will be rectified as quickly as possible at no cost to the customer.

Service package with the air-lux service contract

Checks
- Running characteristics/function of all components
- Function of all safety components
- Reading of electrical parameters (error messages, number of openings, compressor running times, travel mode, drive etc.)

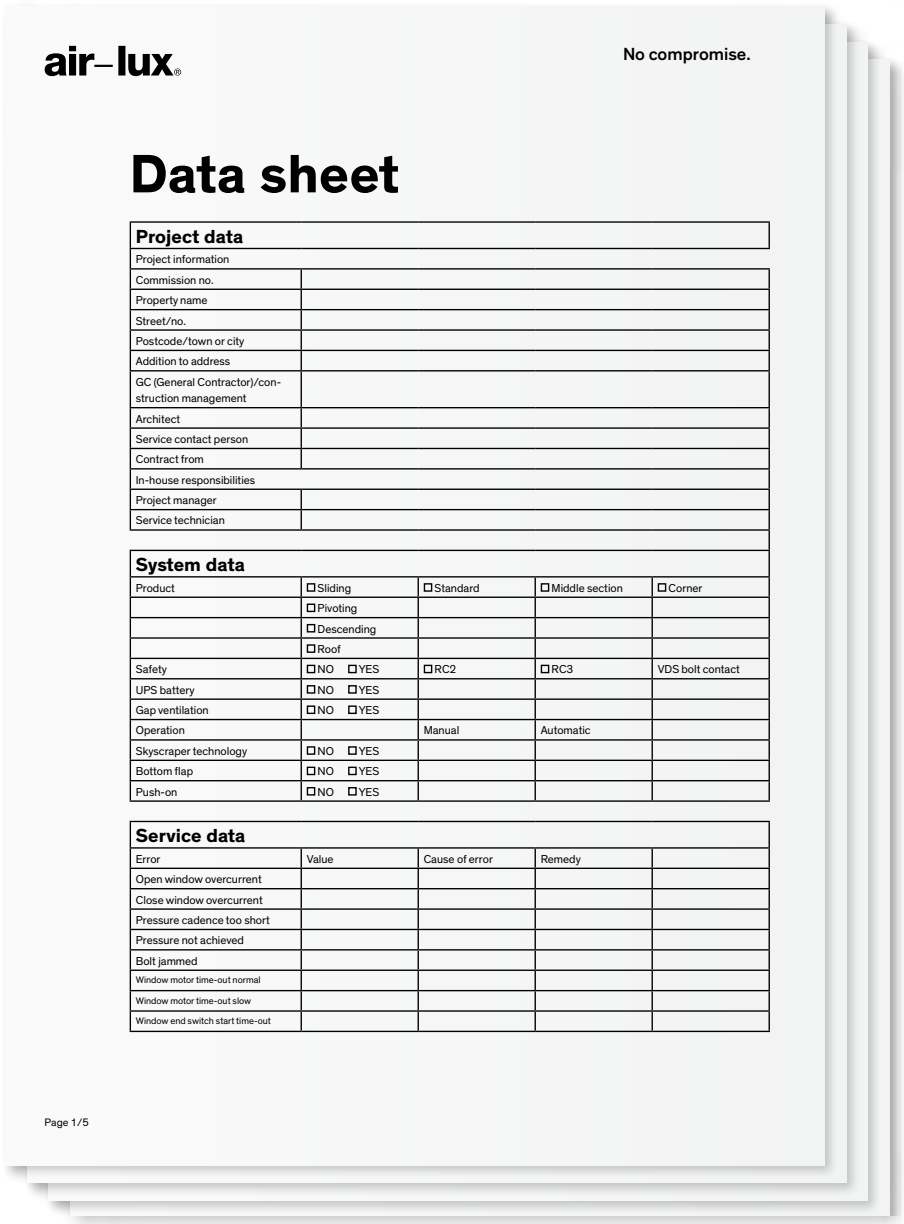
Settings and adjustments
- Cleaning of mechanical components (track, locking bolts etc.)
- Troubleshooting
- Resetting of error messages/ updating to the latest software version

Replacements
- Replacement of damaged/ defective components
- Replacement of heavily worn components

Documentation
- Saving the read electrical parameters
- Written documentation of all work carried out
- Recording of replaced components with new warranty periods

Service check – professional inspection down to the smallest component

With the air-lux service contract, you are always on the safe side. This checklist provides a detailed list of all services. The air-lux service professional meticulously checks and documents every aspect of the air-lux system to ensure that it is functioning smoothly and safely.



air–lux®

No compromise.

Data sheet

Project data				
Project information				
Commission no.				
Property name				
Street/no.				
Postcode/town or city				
Addition to address				
GC (General Contractor)/construction management				
Architect				
Service contact person				
Contract from				
In-house responsibilities				
Project manager				
Service technician				

System data				
Product	☐ Sliding	☐ Standard	☐ Middle section	☐ Corner
	☐ Pivoting			
	☐ Descending			
	☐ Roof			
Safety	☐ NO ☐ YES	☐ RC2	☐ RC3	VDS bolt contact
UPS battery	☐ NO ☐ YES			
Gap ventilation	☐ NO ☐ YES			
Operation		Manual	Automatic	
Skyscraper technology	☐ NO ☐ YES			
Bottom flap	☐ NO ☐ YES			
Push-on	☐ NO ☐ YES			

Service data				
Error	Value	Cause of error	Remedy	
Open window overcurrent				
Close window overcurrent				
Pressure cadence too short				
Pressure not achieved				
Bolt jammed				
Window motor time-out normal				
Window motor time-out slow				
Window end switch start time-out				

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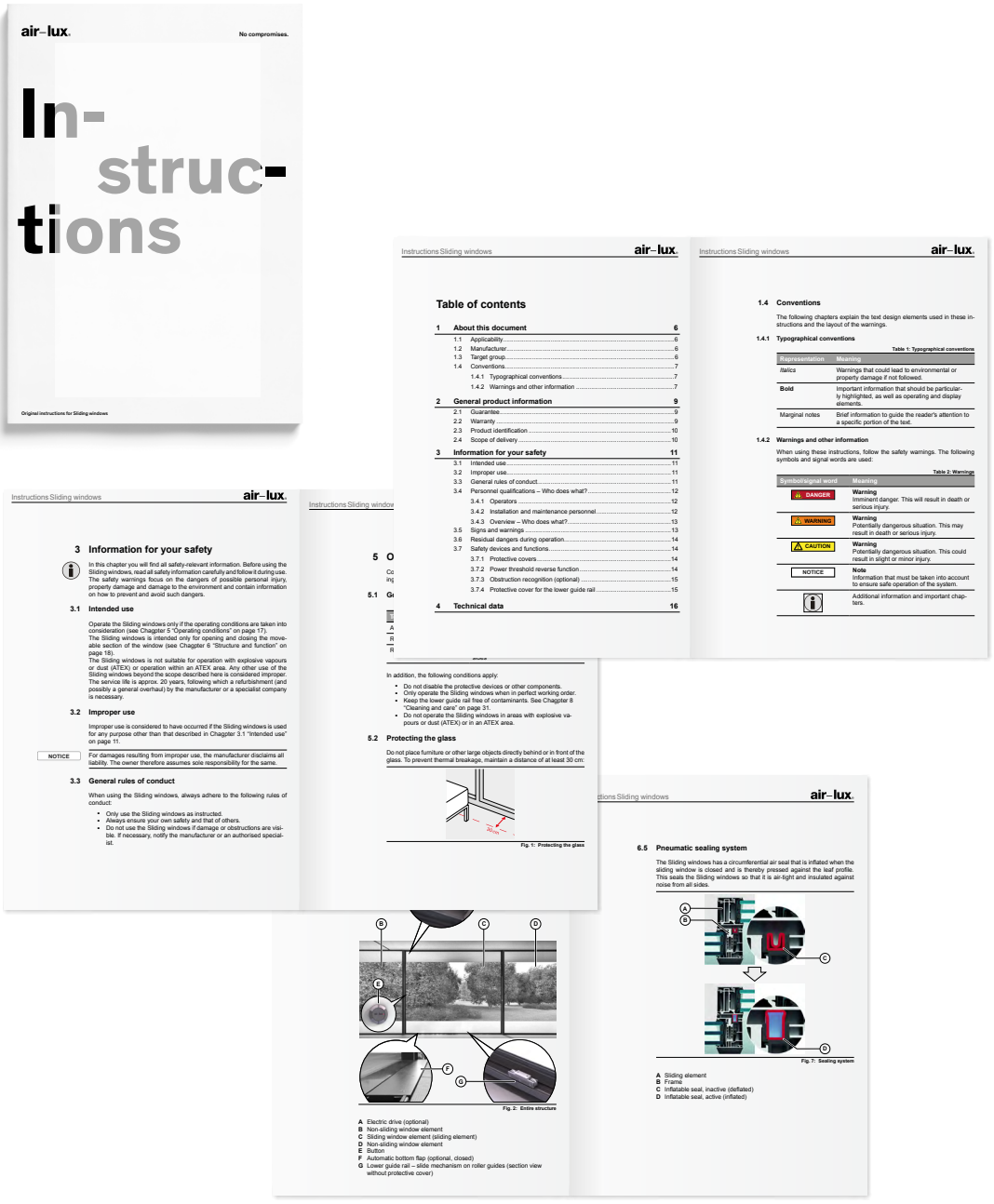
Operating manual

The operating manual contains all information on the proper use of the sliding window.



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Service and maintenance – good to know!

Any system or component with moving parts should be serviced regularly. This also applies to windows. Careful maintenance, care and inspection not only ensure proper function and smooth operation, but also ensure that all safety components are and remain safe. These are the key recommendations by the VFF (German Association of Windows and Façades) for maintenance, care and inspection:

1. Obligation of the customer
The customer or building owner is responsible for the necessary maintenance/care and inspection and any maintenance measures.

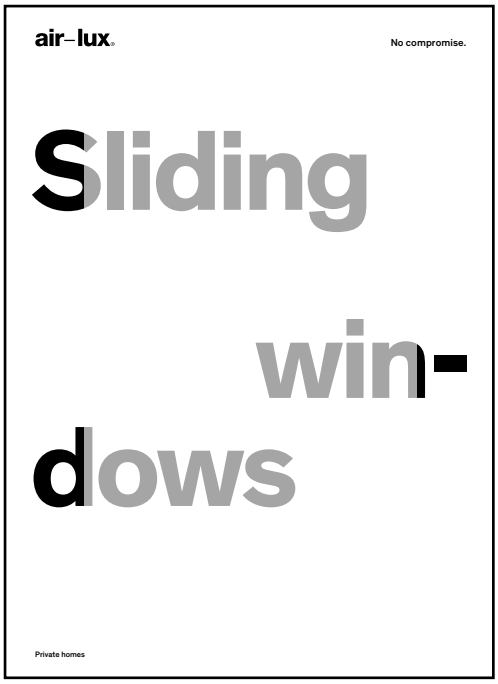
2. Service contract
The customer may entrust the execution of the maintenance and inspection to air-lux in the form of an air-lux service contract.

3. Cleaning
Regular, professional cleaning in accordance with the operating instructions maintains the service life and functionality of the air-lux system. Cleaning is not considered part of maintenance, but rather it is the responsibility of the customer/building owner.

4. Maintenance
All components – including surfaces, gaskets, closures, fittings and construction connection joints – must be checked regularly for damage and deformation. If necessary, fastening screws should be tightened and defective or deformed parts replaced.

5. Product documentation
The following documents are provided for carrying out maintenance work:
- Service checklist
- Maintenance/care instructions
- Complete operating instructions
- Summary operating instructions

Brochures



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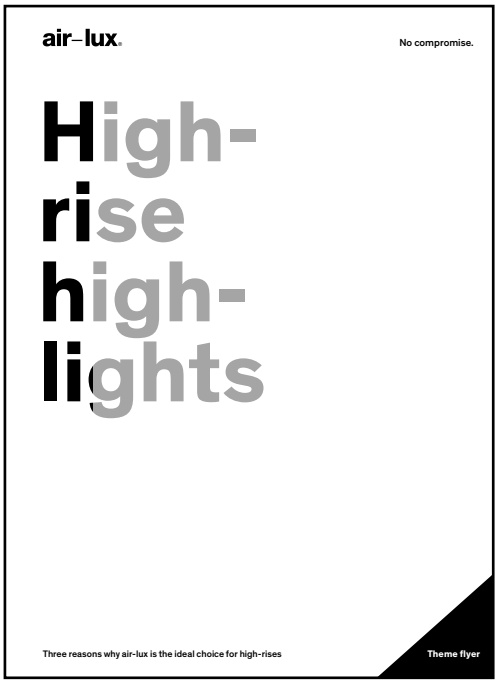

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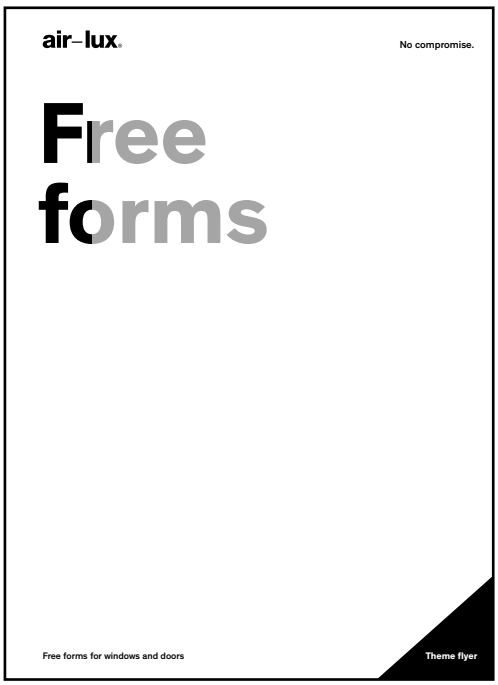

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