

GUTMANN



GUTMANN HORIZON Architectural Catalogue

Edition 1.0 / 5 · 2019

Technical drawings: **Horizon R & D**

For digital drawings, please contact us

at info@horizonminimalframes.de

or visit www.horizonminimalframes.de

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INTRODUCTION

2

A completely new system has been elaborated, based on an 80-year experience in aluminum profiles, meeting the highest standards in elegance, comfort and performance.

The system offers excellent **Uw values** with double and triple glazing which meet the demands of the most critical environments.

All sliding typologies are available including **single, double, and triple track systems** as well as **corner-free** solutions that open your vision to 360 degrees.

The **high capacity stainless steel rollers and tracks** allow smooth sliding action and extreme ease of movement with large glass areas.

Concealed **electric drives and locks** can be used to increase operating comfort and to increase the security level of the opening.

The aluminium windows can be **fully integrated into the wall, ceiling and floor**, which results in a completely invisible frame and increased vision to the outside environment.

The high-quality multi-locking point system developed by HORIZON offers the best possible **burglar resistance** in accordance with European standards.

A new evolution has been created in the concept of drainage, increasing the speed of draining away water.

SOL

SOL is our standard minimal frames system incorporating all the main features of the HORIZON system in a double-glazed setup.



LUNA

LUNA is an advanced minimal frames system able to deliver higher insulation performance and bigger sizes through thicker triple glazing.



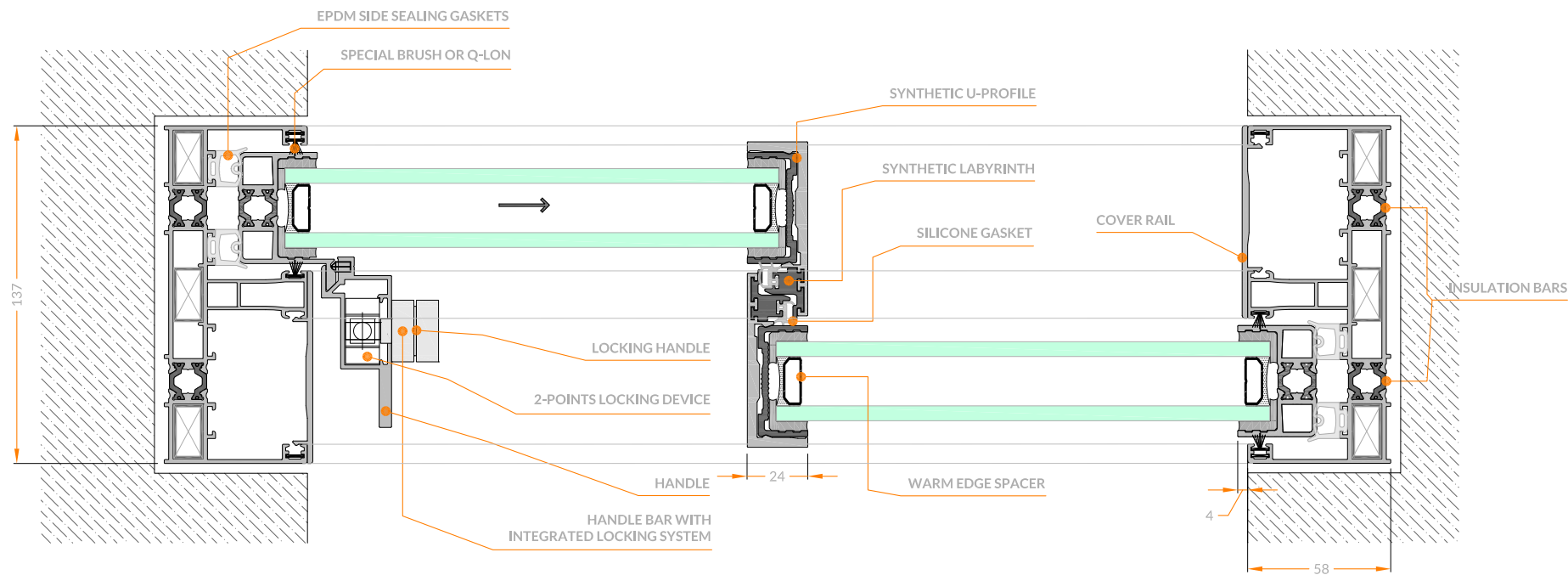
	SOL	LUNA	
Facing width	24 30 mm	24 30 mm	
Installation flush to the floor	yes	yes	
Installation flush to the ceiling	yes	yes	
Max. leaf height	4.5 m	6.5 m	
Max. leaf width	3m	3m	
Max. leaf weight	500 kg	1000 kg	
Max. sliding leaf area	12 m²	16 m²	
Max. fix leaf dimension	18 m²	21 m²	
Motorization	yes	yes	
“Invisible” railing	yes	yes	
Glass thickness	30 - 36 mm	49 - 54 mm	

· THE HORIZON CERTIFICATES ·

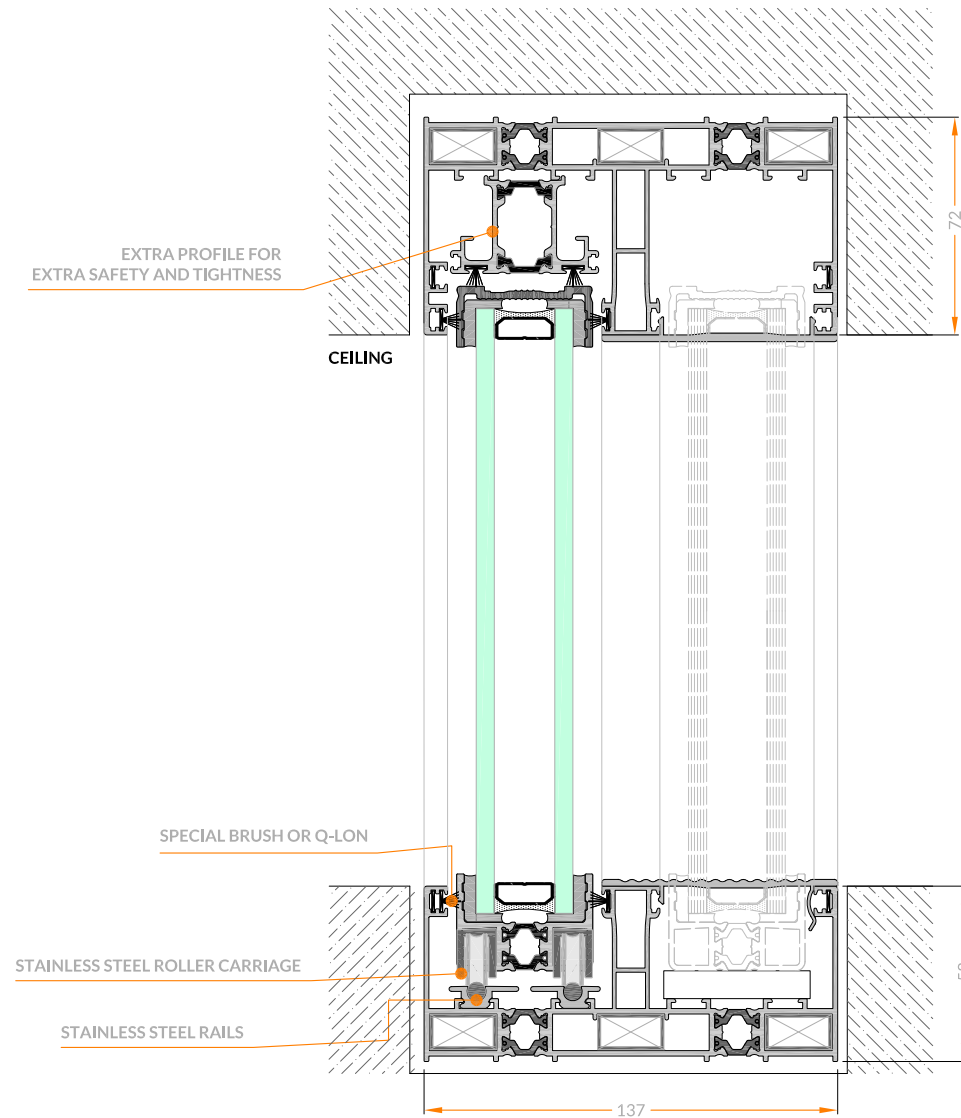
Uw values (depending on glass type & dimension)		From 0.7 to 1.7 W/m²K
Air permeability		EN 12207 : Class 4
Resistance to rain penetration		EN 12208 : Class 7A
Resistance to wind loads		EN 12210 : Class C5
Sound insulation		up to 42 dB DIN EN ISO 140-3:2005
Resistance to burglary		ENV 1627 WK-2/RC-2 (under testing)
Accessibility		DIN 18040-2 (under testing)

SOL • TYPICAL SECTIONS

4.1



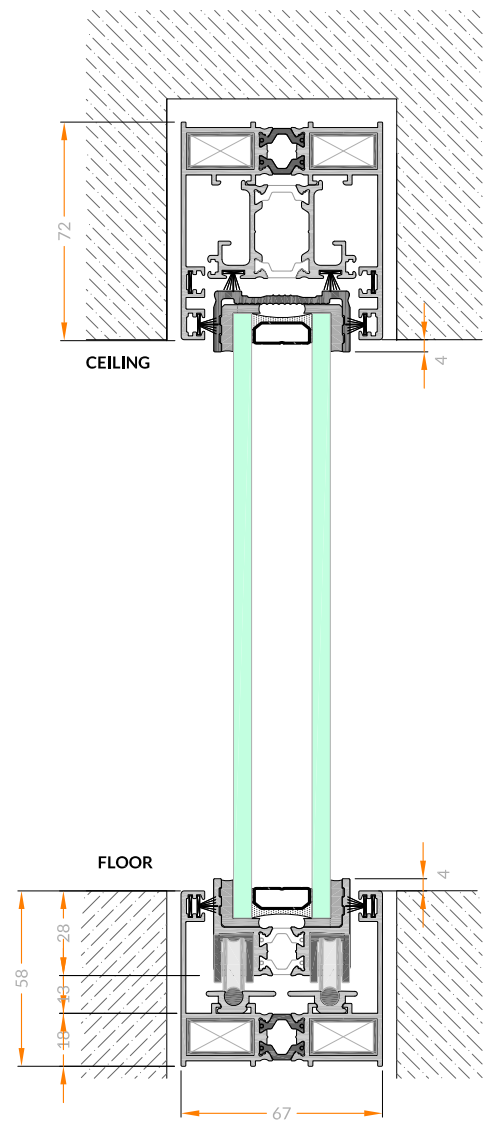
HORIZONTAL SECTION



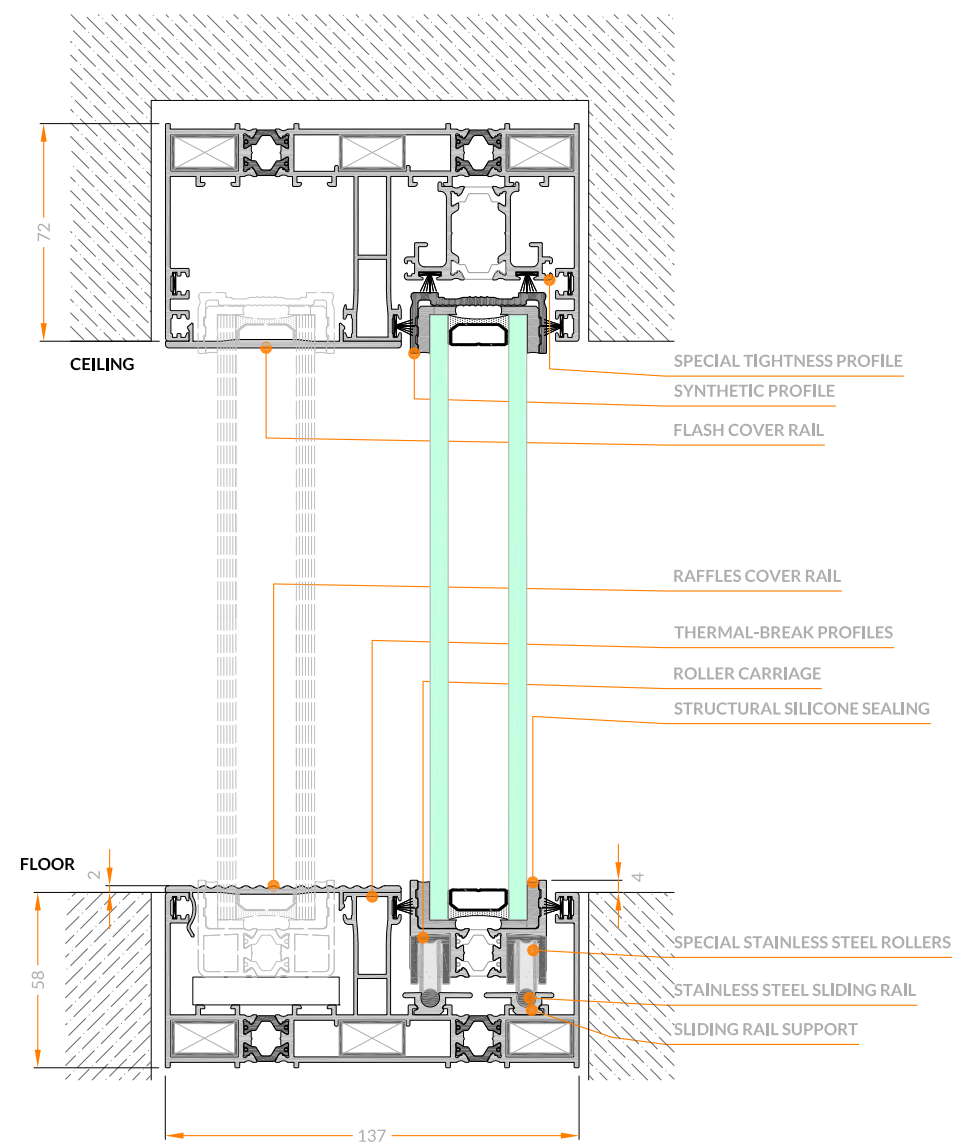
VERTICAL SECTION

SOL • MULTI-TRACK FRAMES

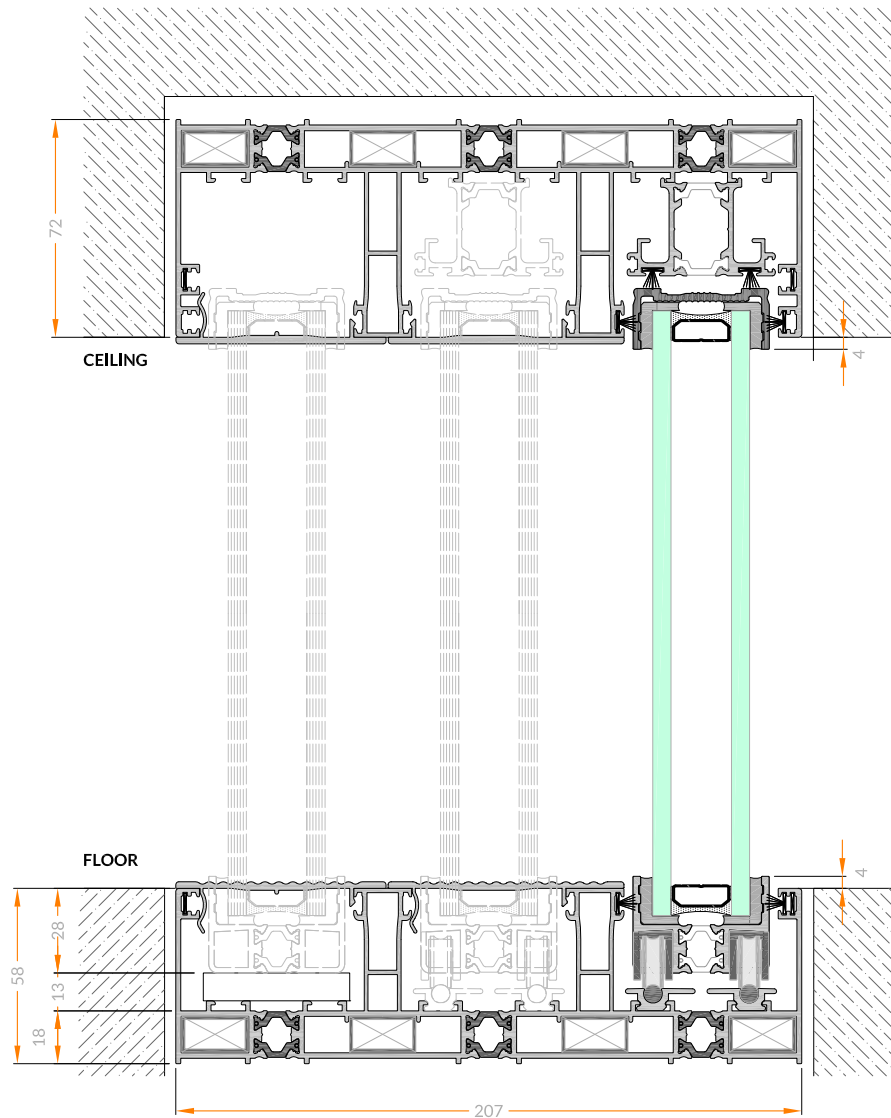
4.2



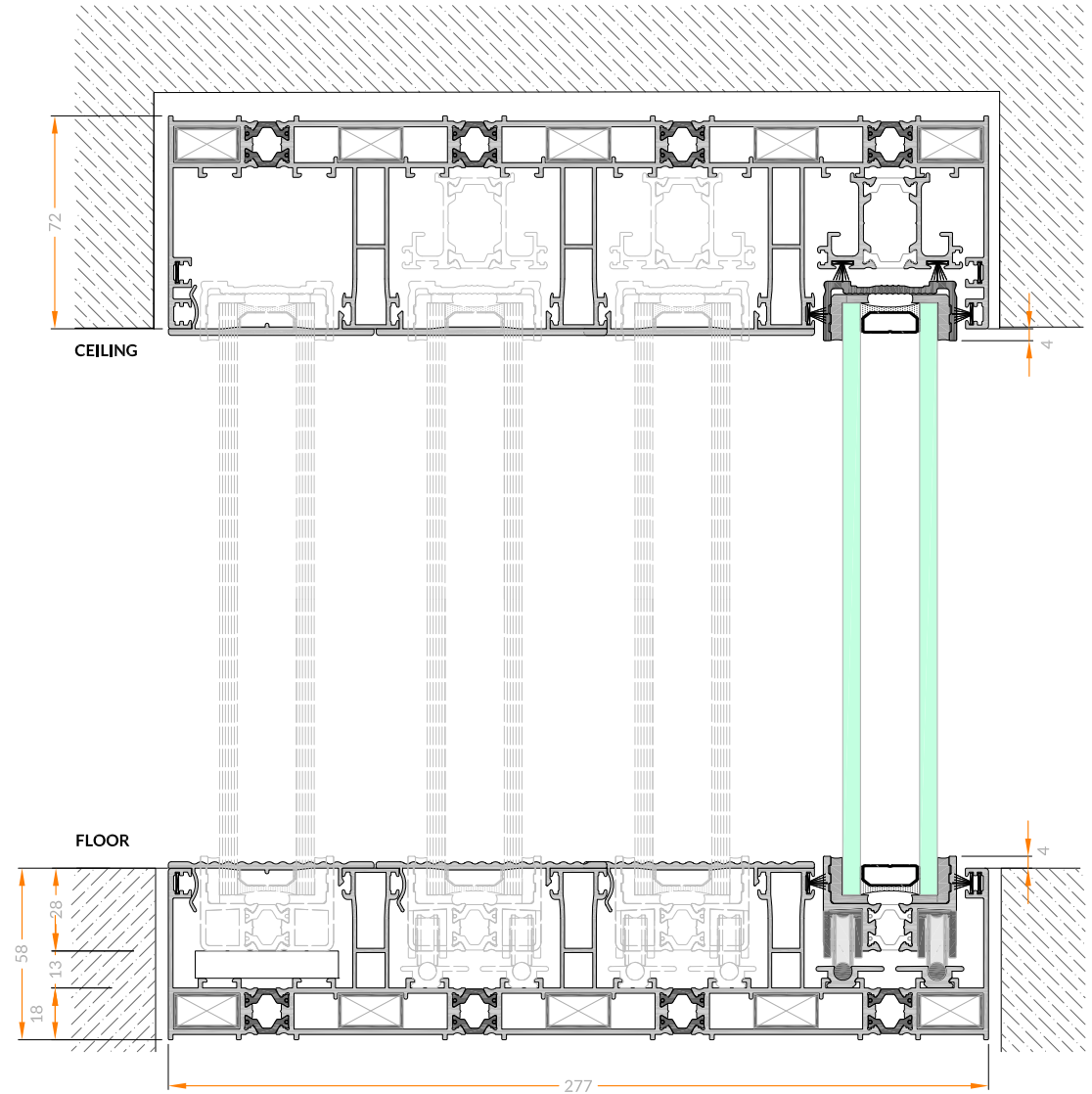
SINGLE TRACK FRAME • SLIDING • FIX



DOUBLE TRACK FRAME • SLIDING • FIX



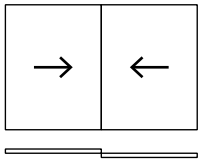
TRIPLE TRACK FRAME · S · S · F



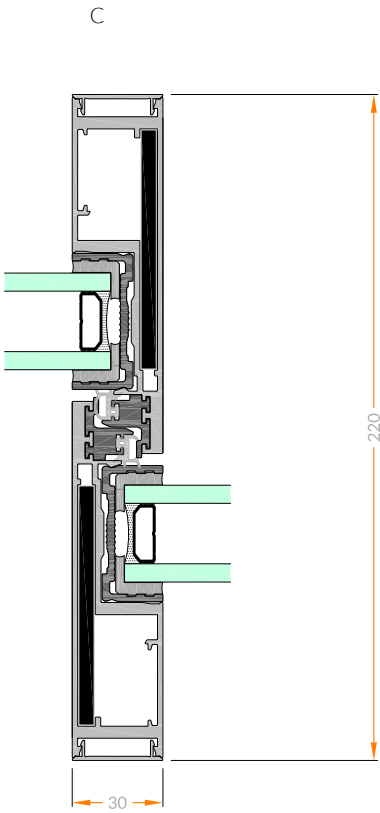
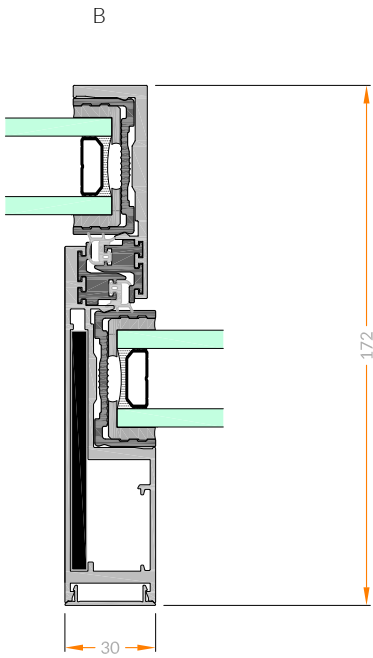
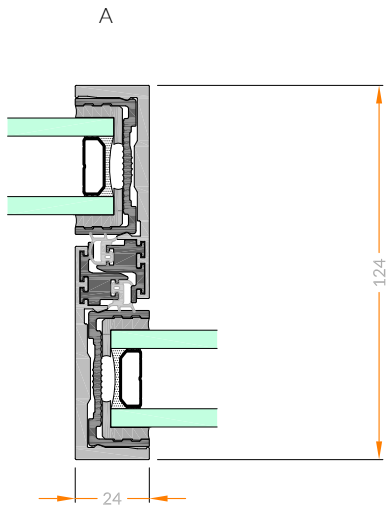
QUADRUPLE TRACK FRAME · S · S · S · F

SOL • LABYRINTH PROFILES

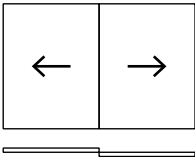
4.3



Standard
sliding frames
(different track)



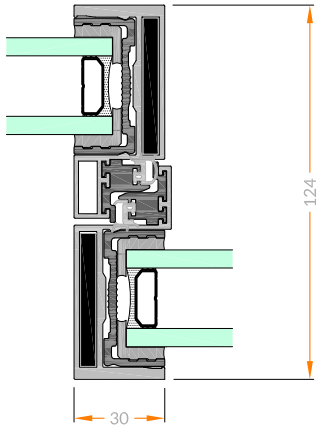
Steel reinforcement
when statically required



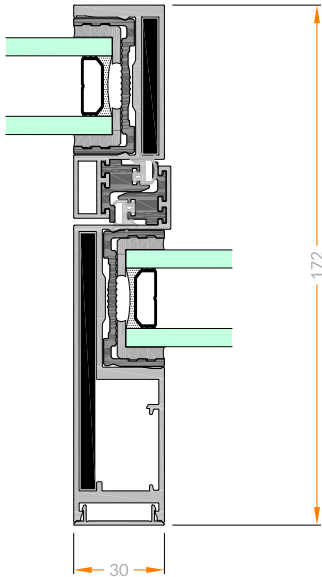
Sliding away
from each other
(different track)

4.3

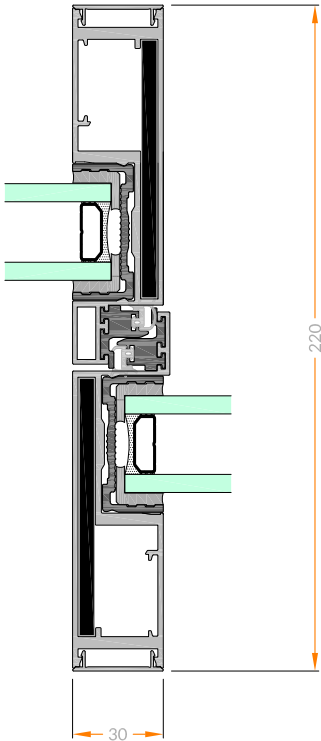
E



D



F

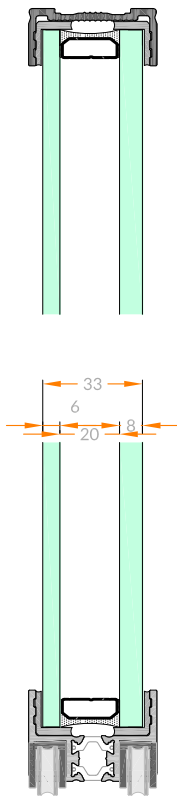


Steel reinforcement
when statically required

SOL • GLASS COMBINATIONS (from 30mm - max 36mm)

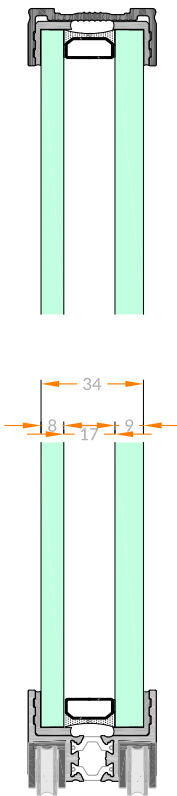
4.4

Double Glass



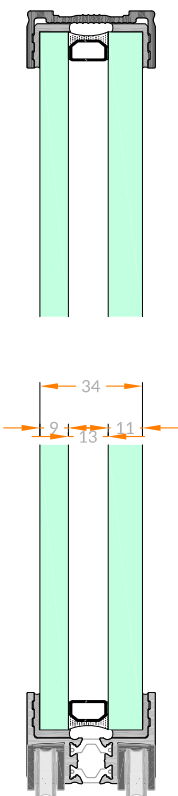
6 · 21 · 44.1
D = 35mm

Double Glass



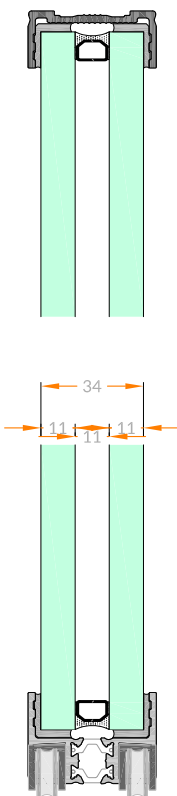
44.1 · 18 · 55.1
D = 36mm

Double Glass



10 · 14 · 66.1
D = 36mm

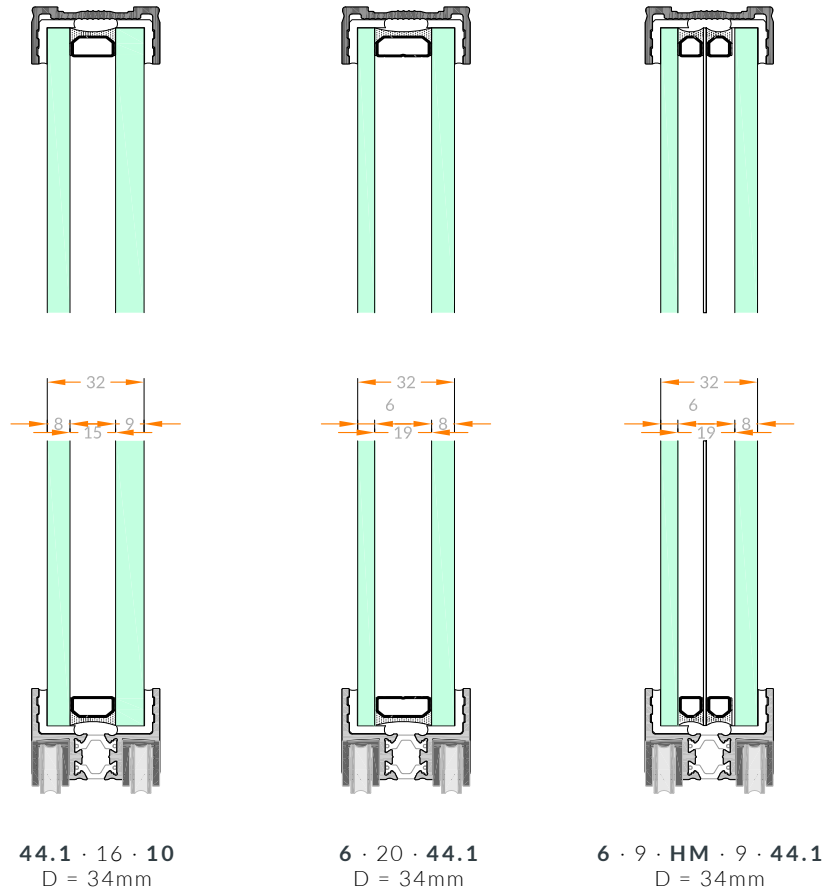
Double Glass



66.1 · 12 · 66.1
D = 36mm

HEAT MIRROR GLASS

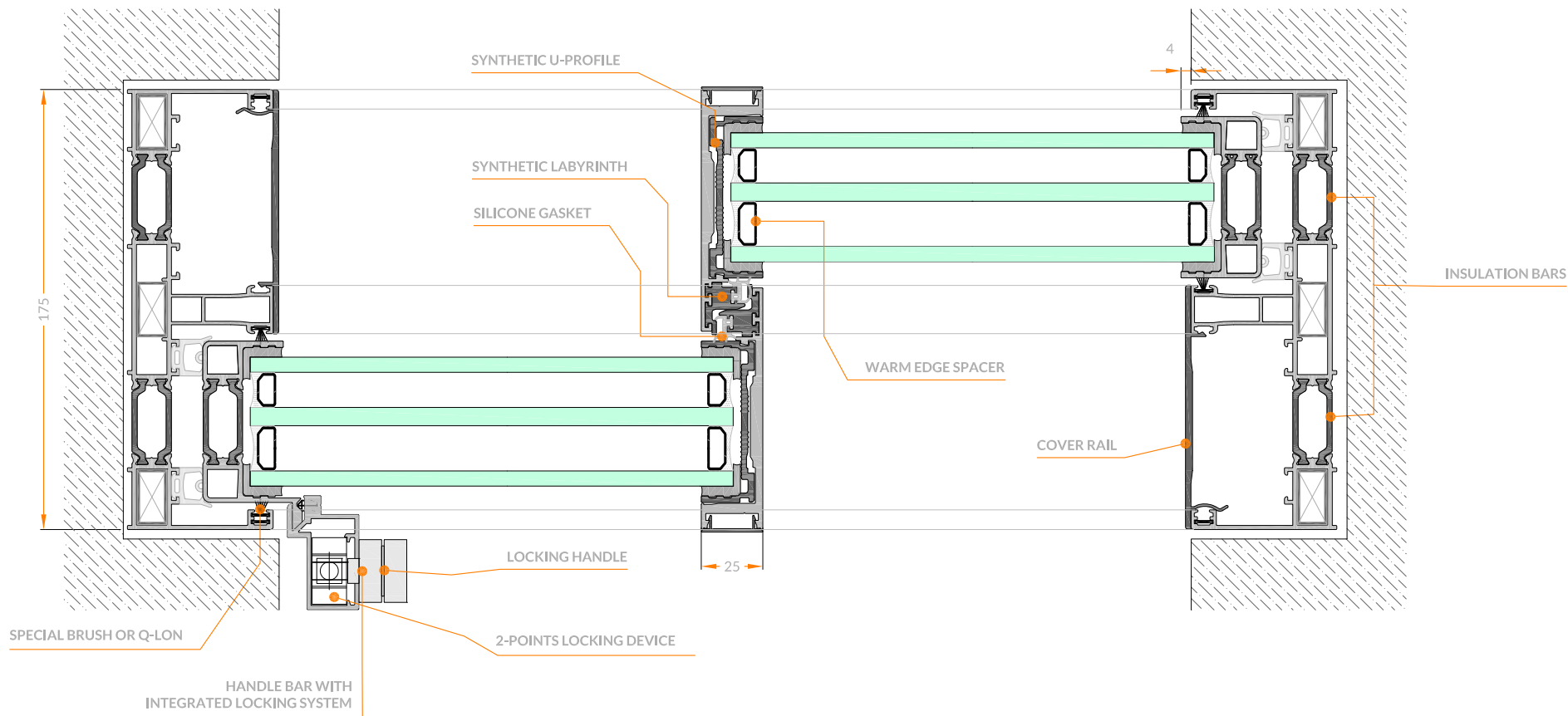
4.4



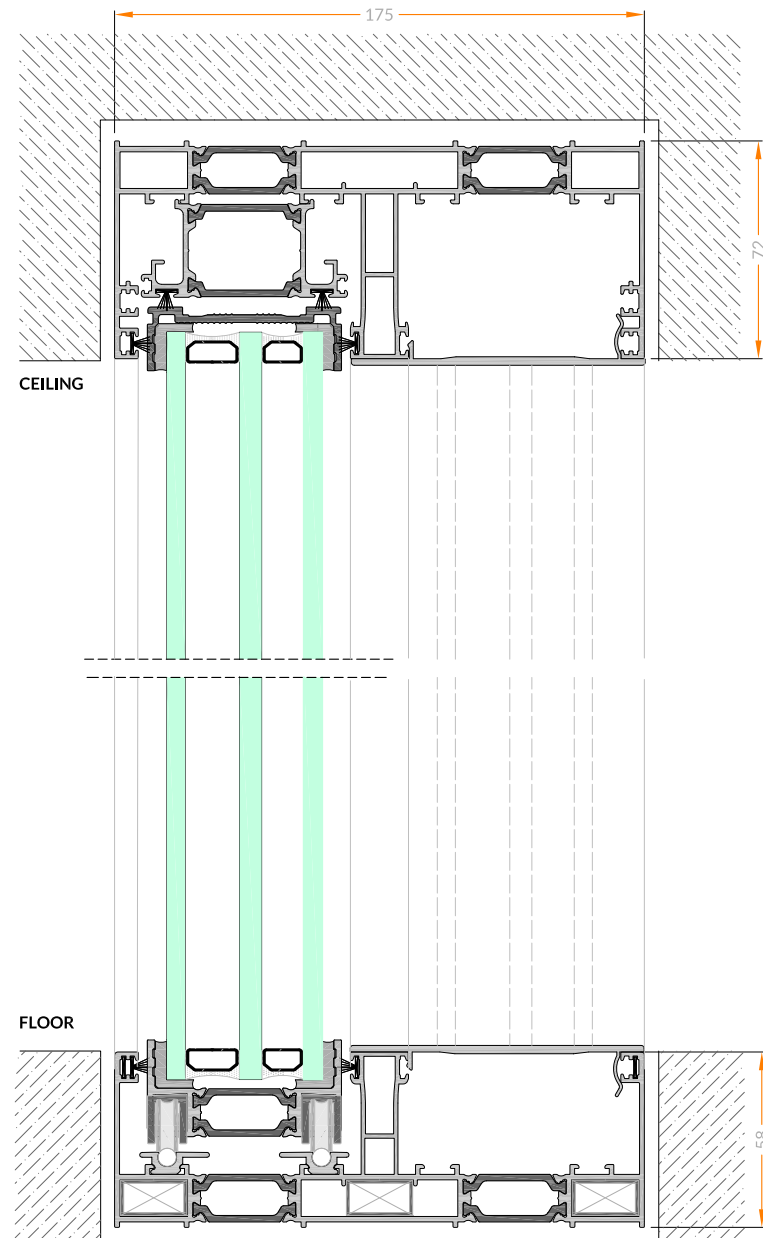
VERTICAL SECTIONS

LUNA • TYPICAL SECTIONS

5.1



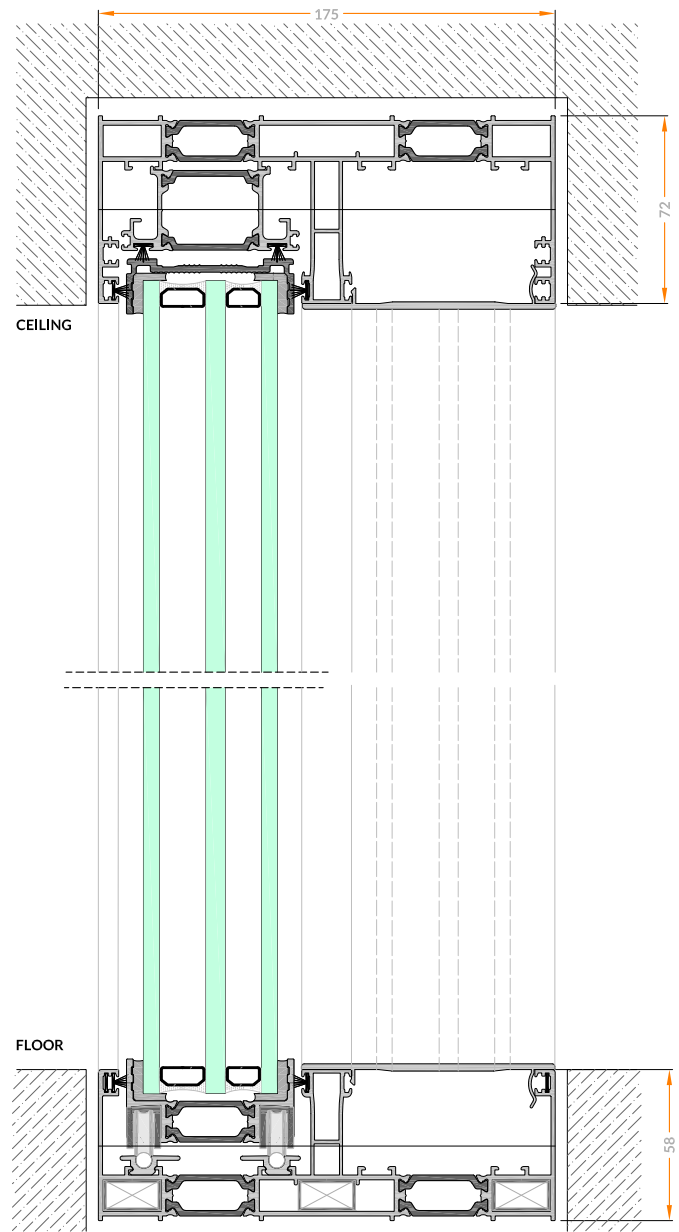
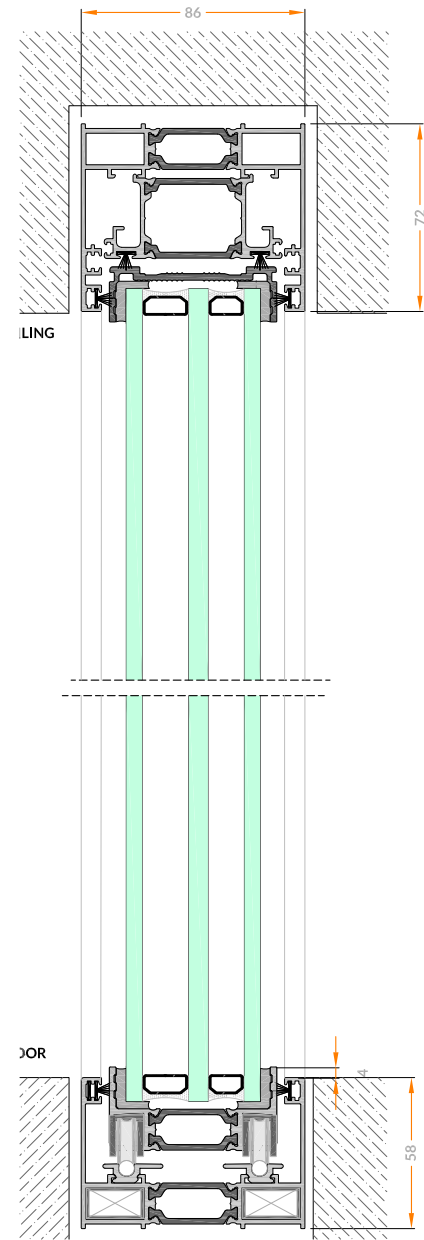
HORIZONTAL SECTION



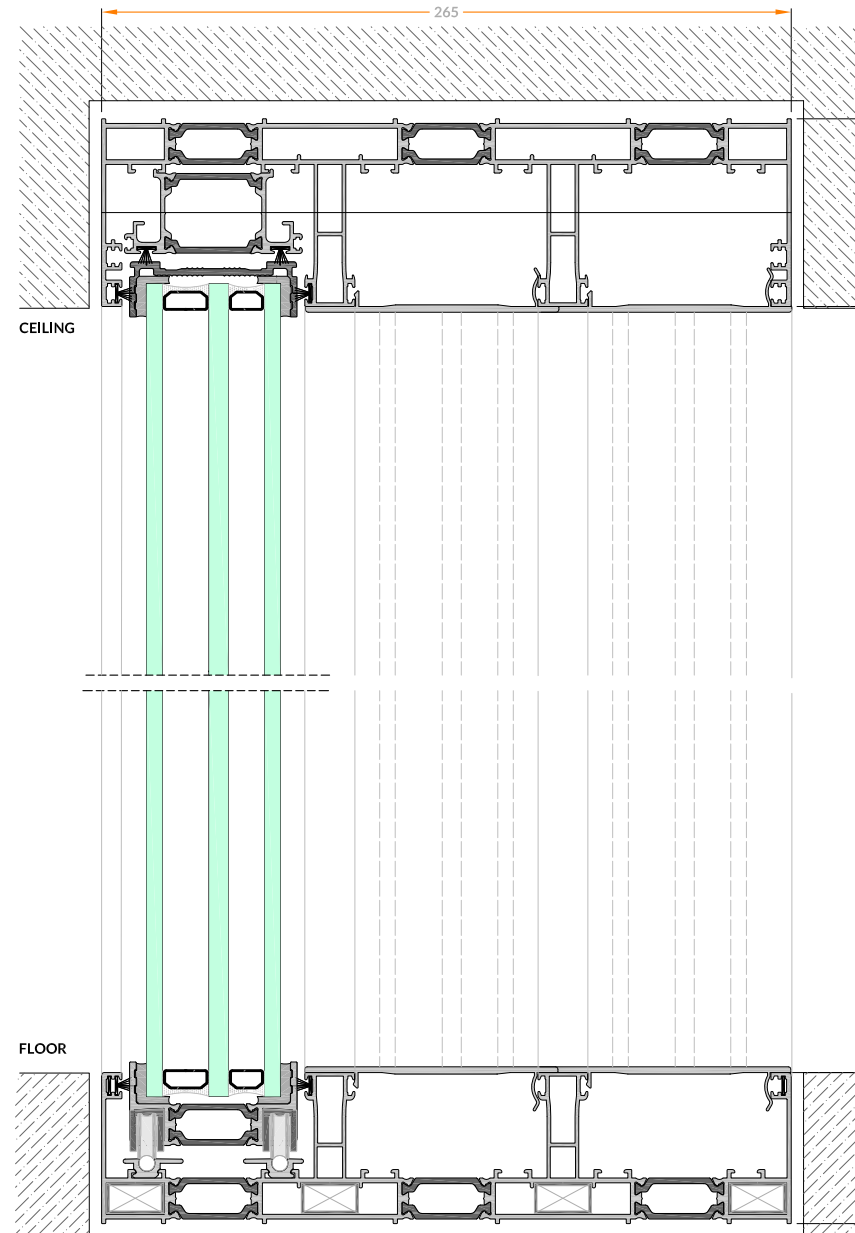
VERTICAL SECTION

LUNA • MULTITRACK FRAMES

5.2



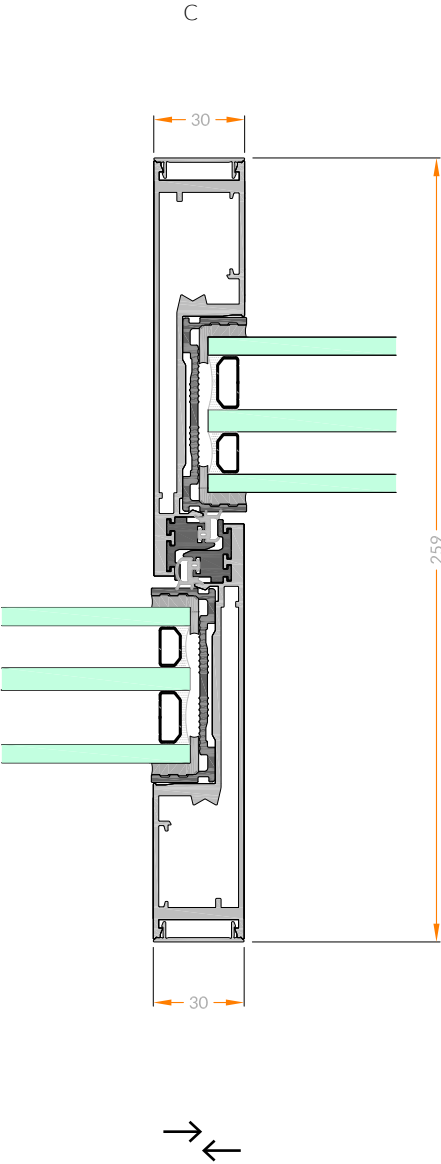
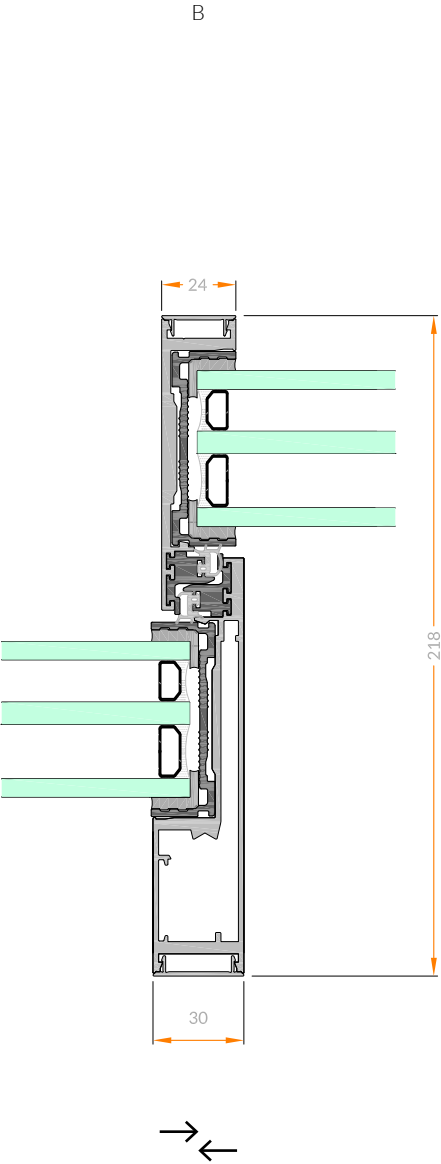
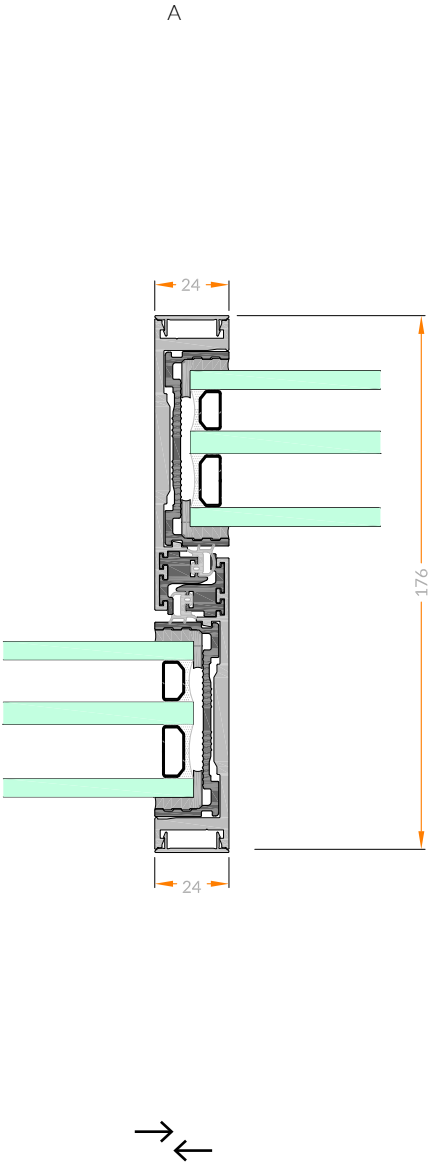
VERTICAL SECTIONS

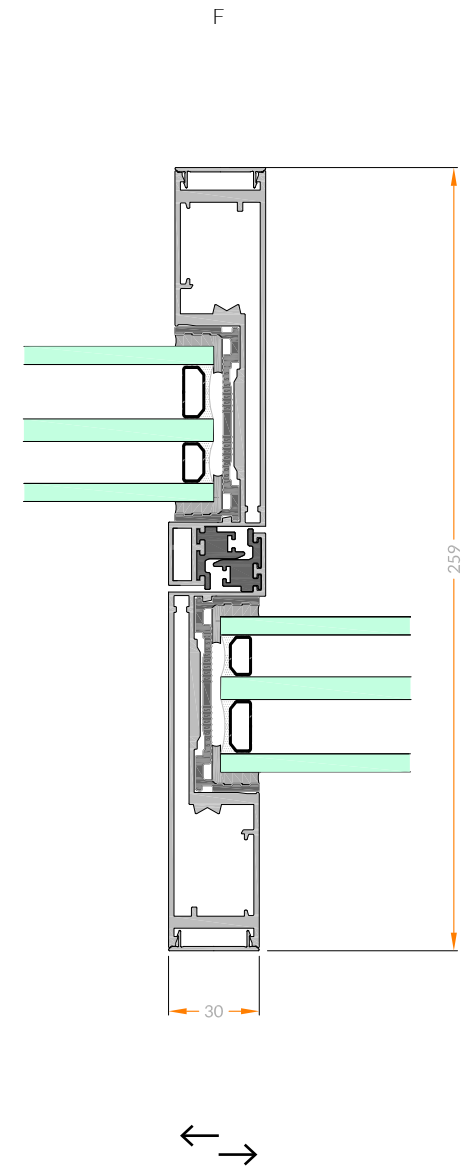
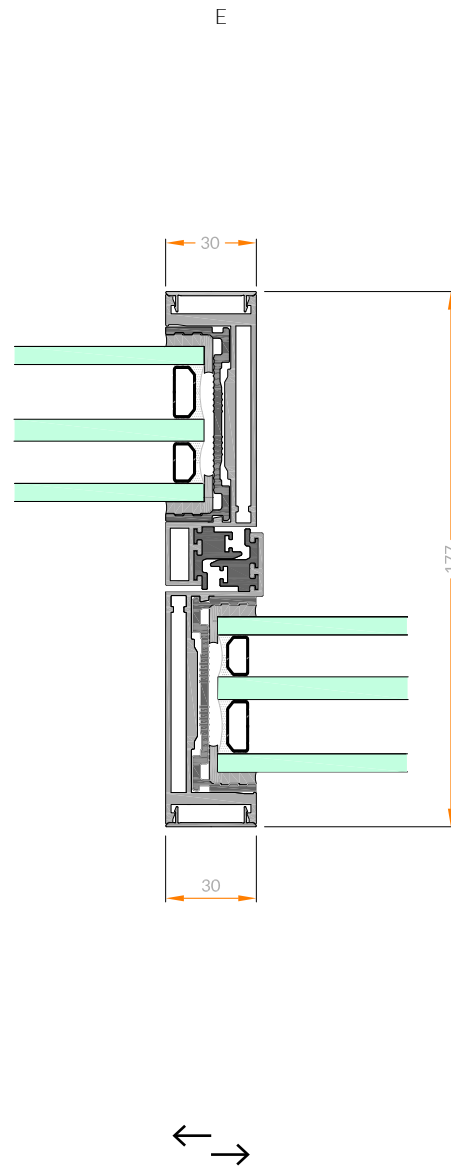
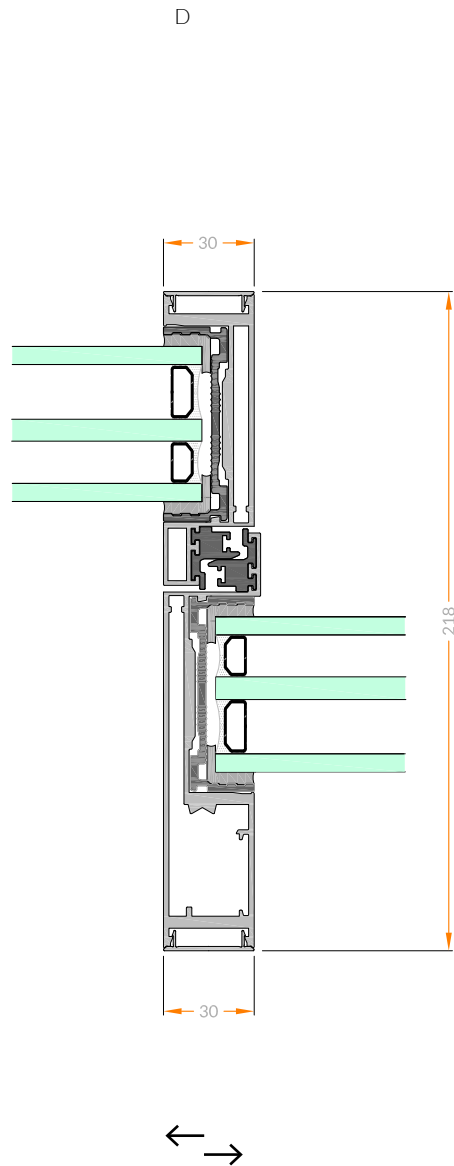


VERTICAL SECTION

LUNA • LABYRINTH PROFILES

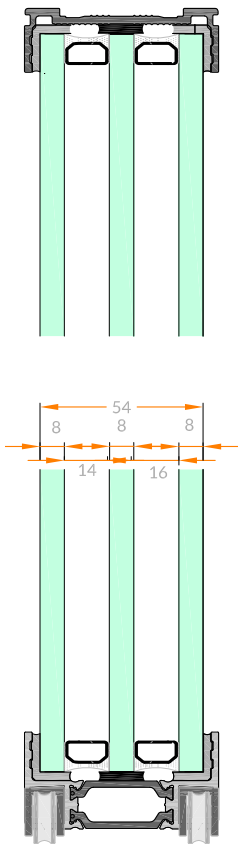
5.3



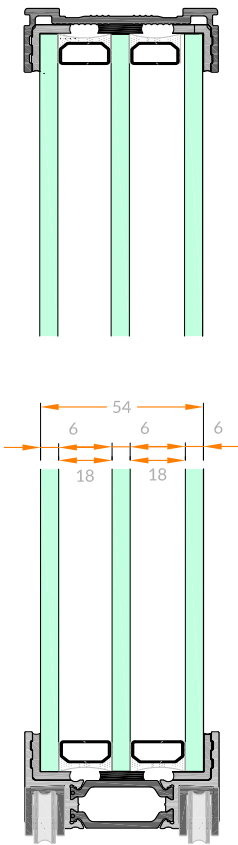


LUNA • GLASS COMBINATIONS (from 49mm - max 54mm)

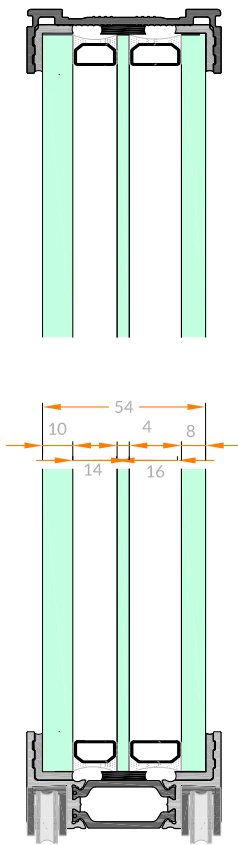
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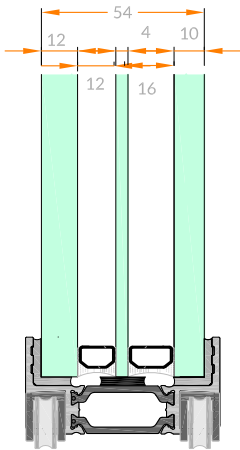
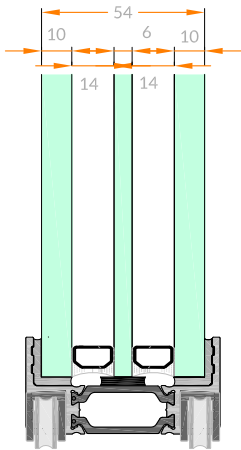
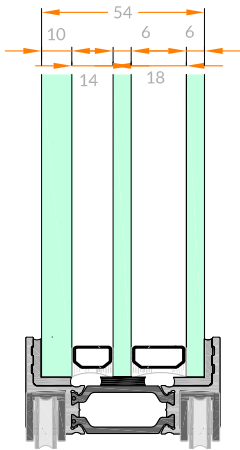
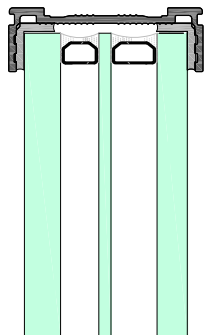
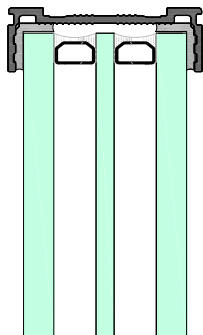
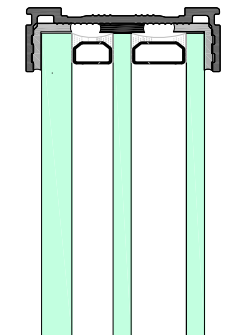
8 · 14 · 8 · 16 · 8
D = 54mm



6 · 18 · 6 · 18 · 6
D = 54mm



10 · 14 · 4 · 14 · 8
D = 54mm



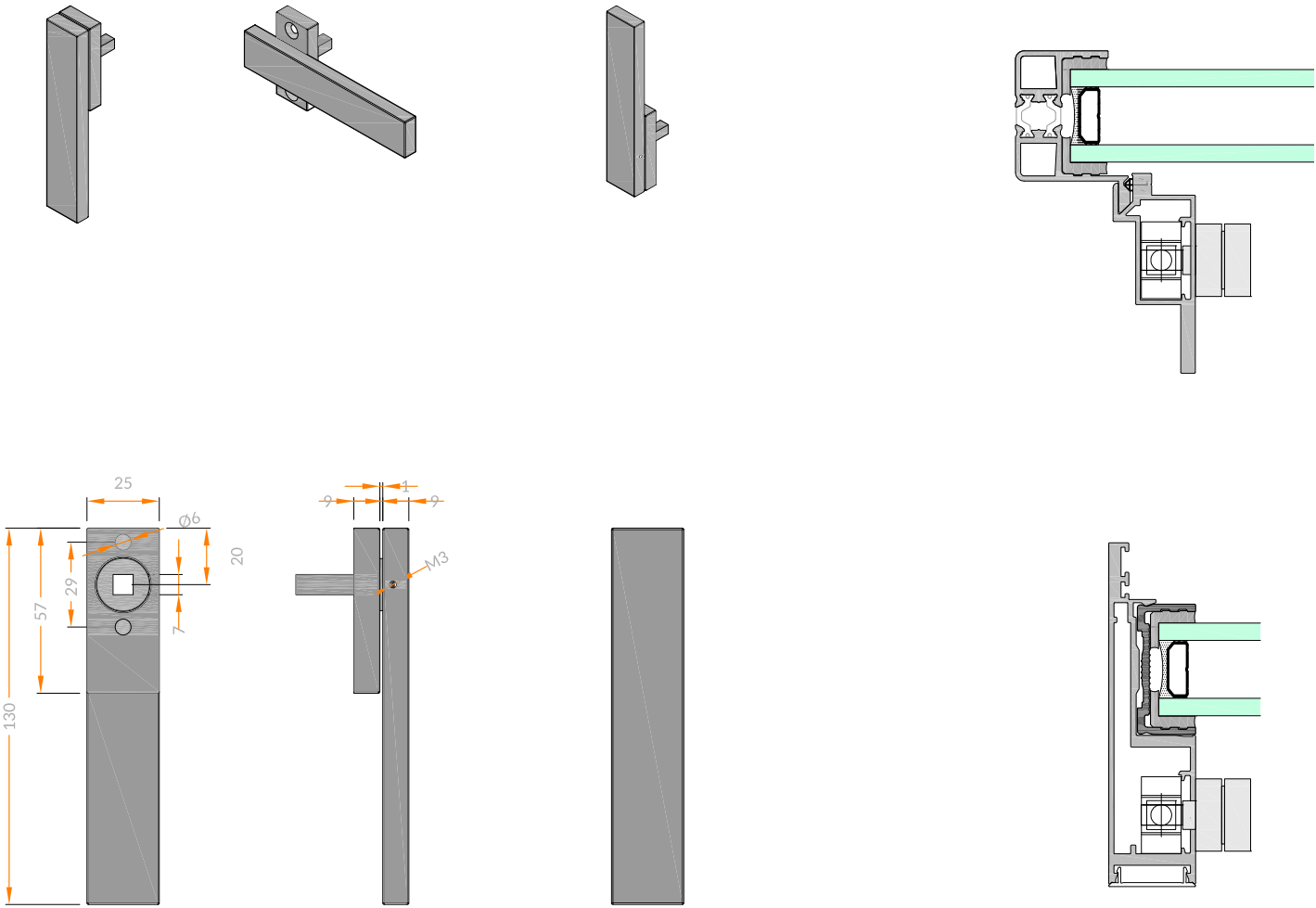
10 · 14 · 6 · 18 · 6
D = 54mm

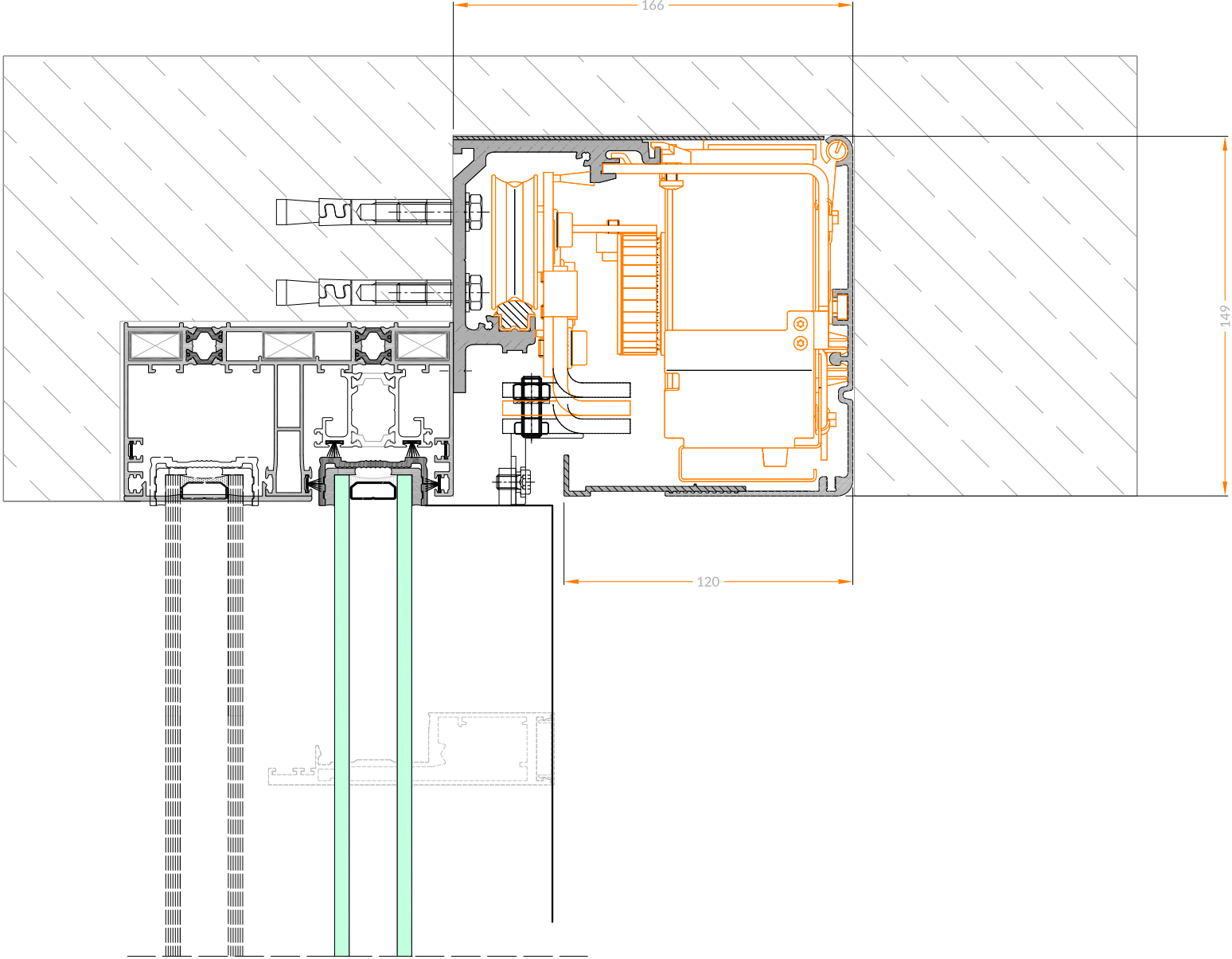
10 · 14 · 6 · 14 · 10
D = 54mm

12 · 12 · 4 · 16 · 10
D = 54mm

HANDLE

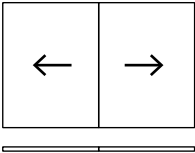
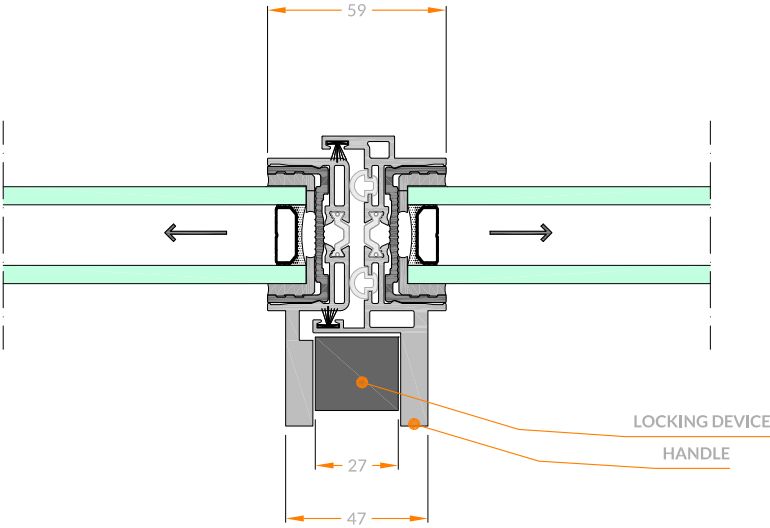
6



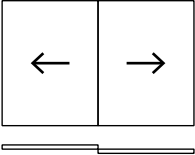
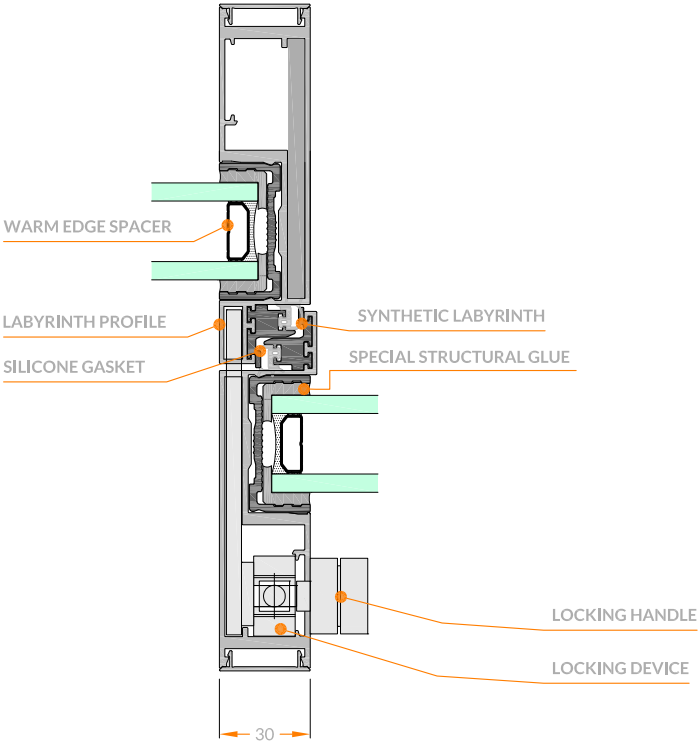


LOCKING DEVICES

8.1

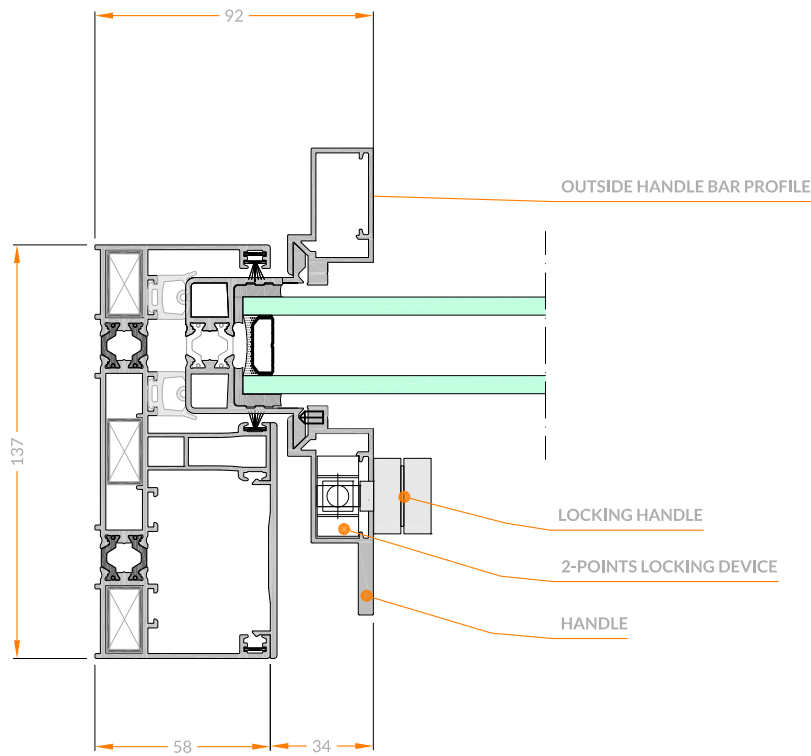


Sliding away from each other (same track)

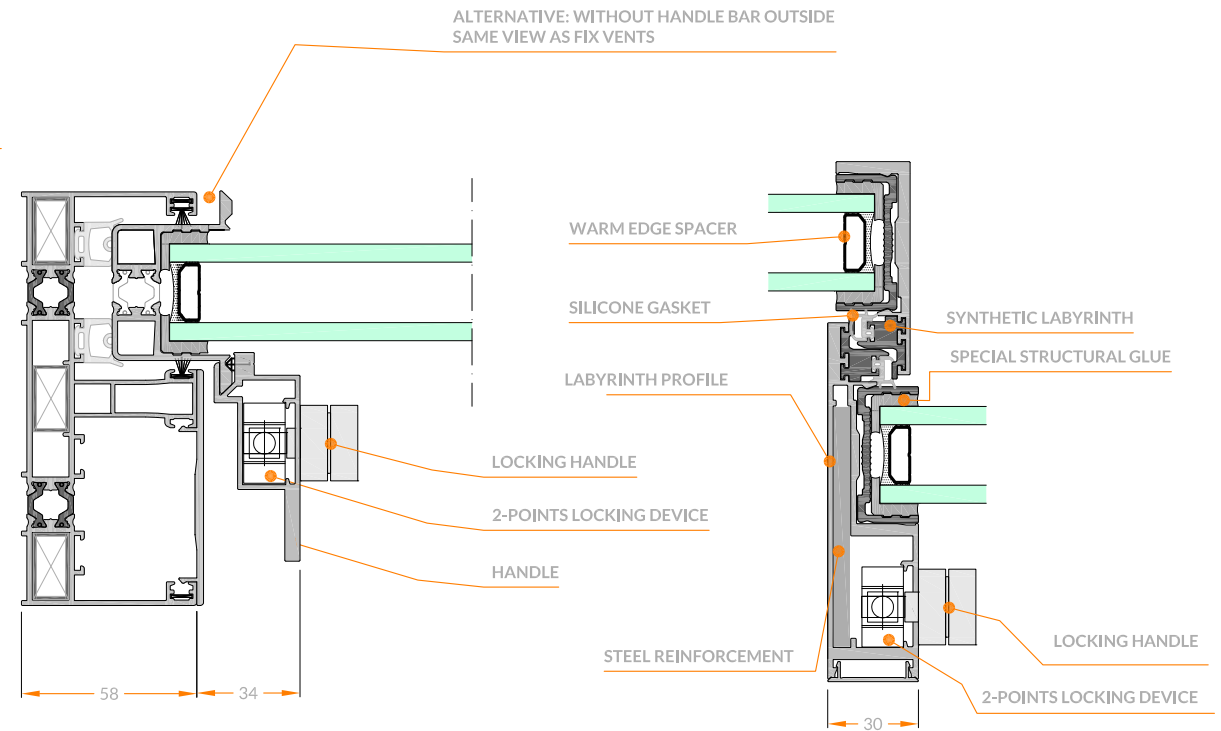


Sliding away from each other (different track)

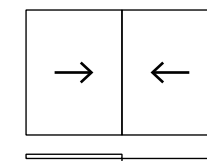
LOCKING DEVICES



Side handle
Inside & outside



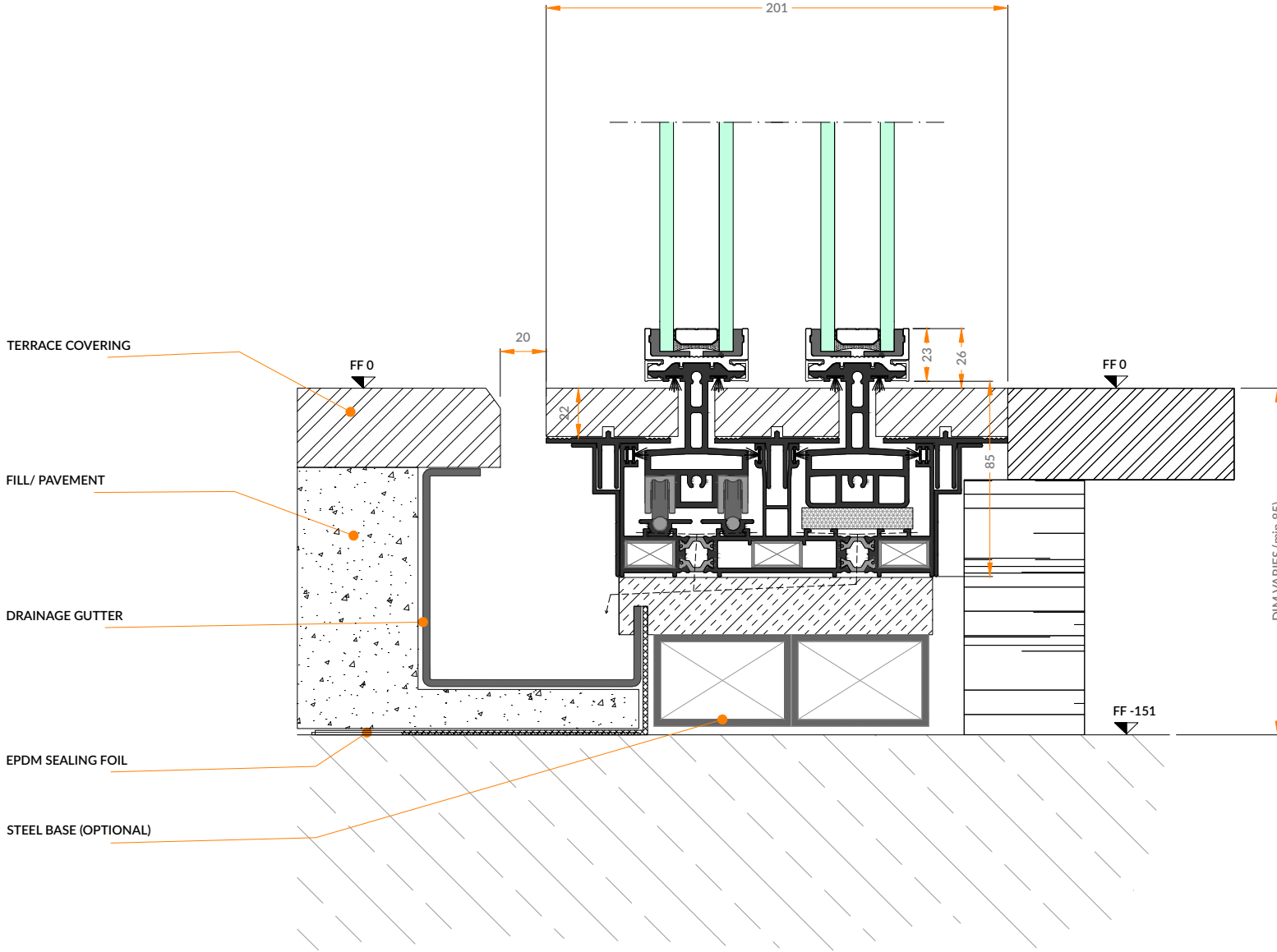
Side handle
Inside only



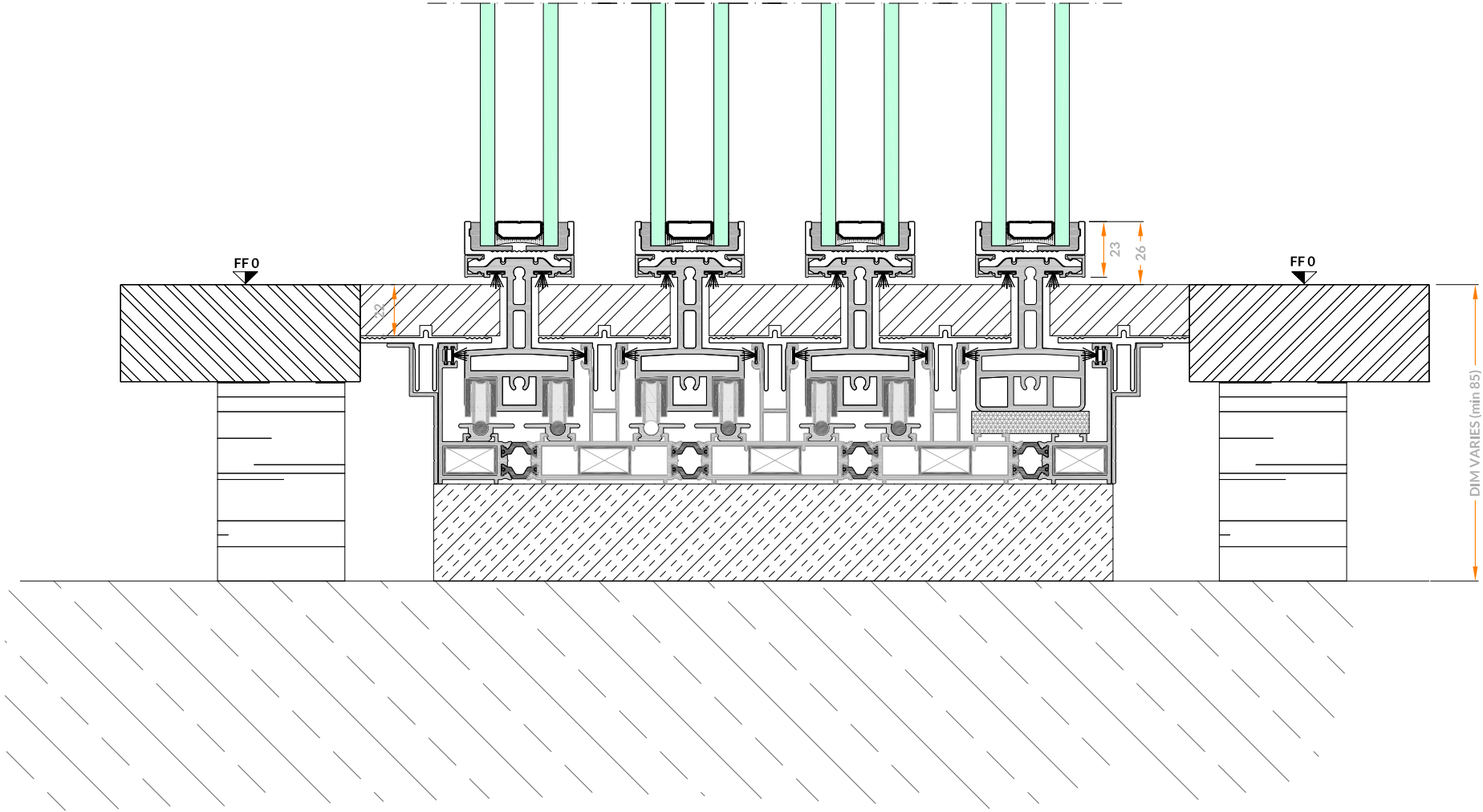
Successive
sliding frames
(different track)

SOL • INVISIBLE BASE

9.1



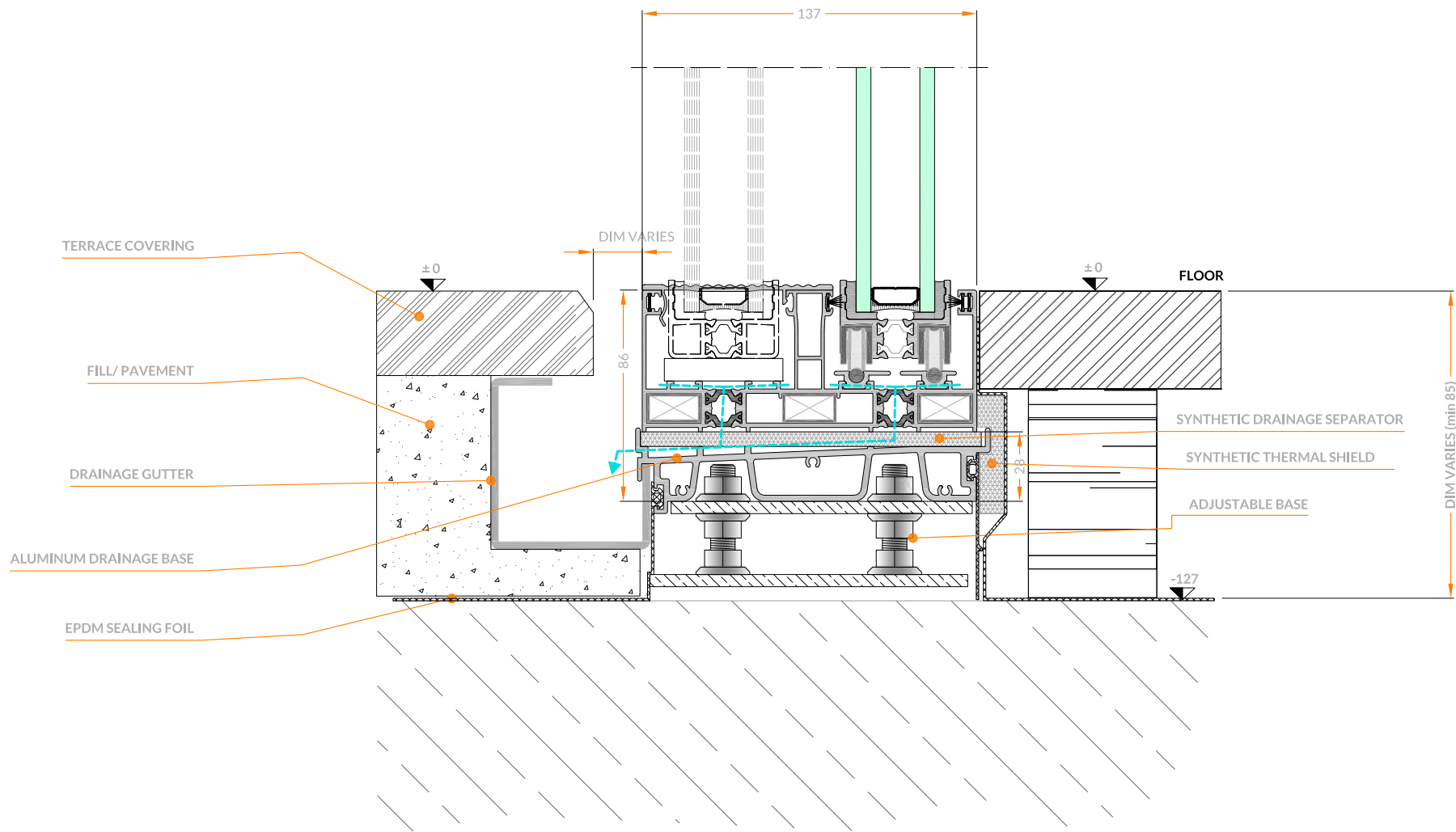
SYNTHETIC BASE WITH SUB-FRAME



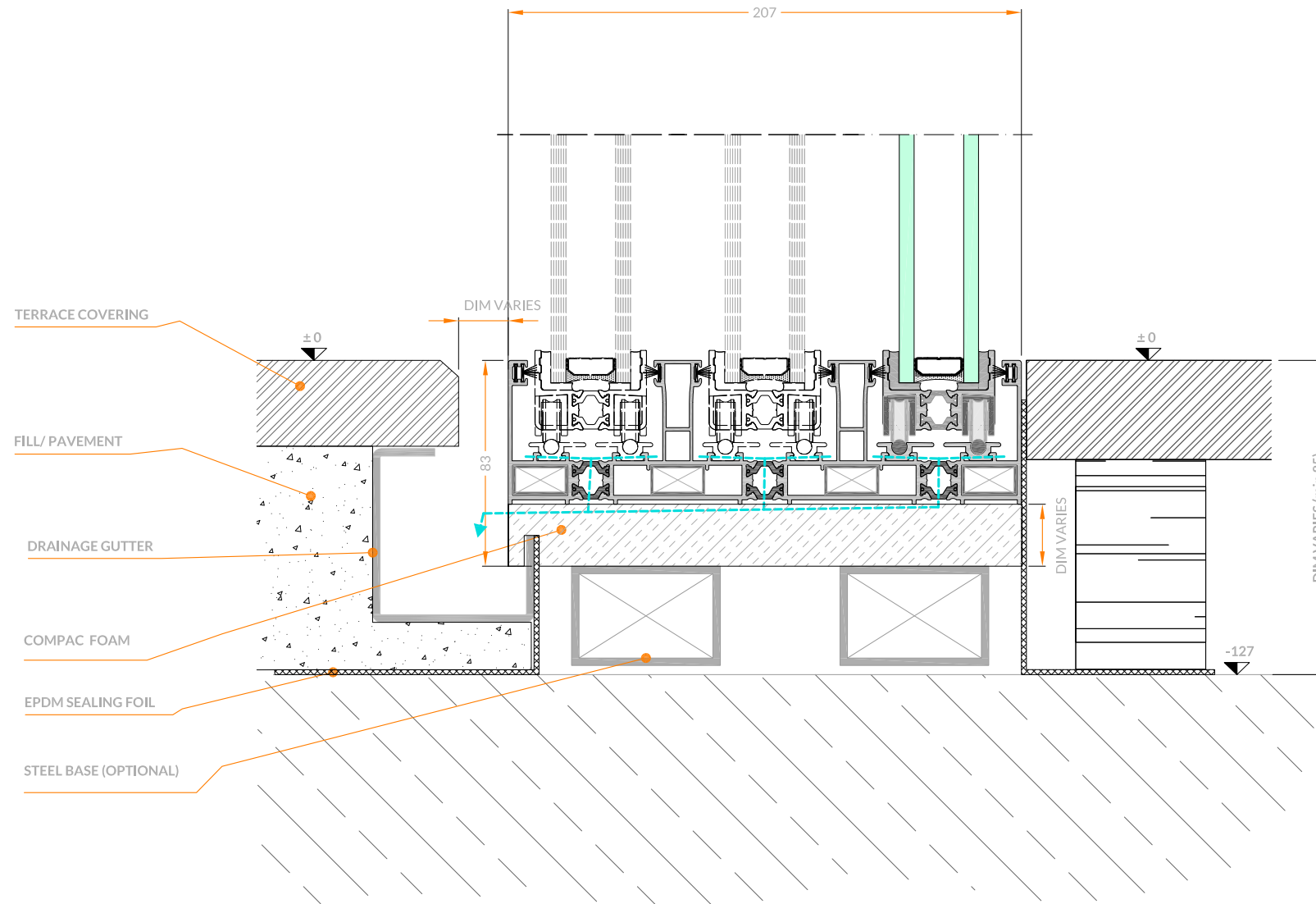
SYNTHETIC BASE WITH SUB-FRAME

BASE SECTIONS

9.3



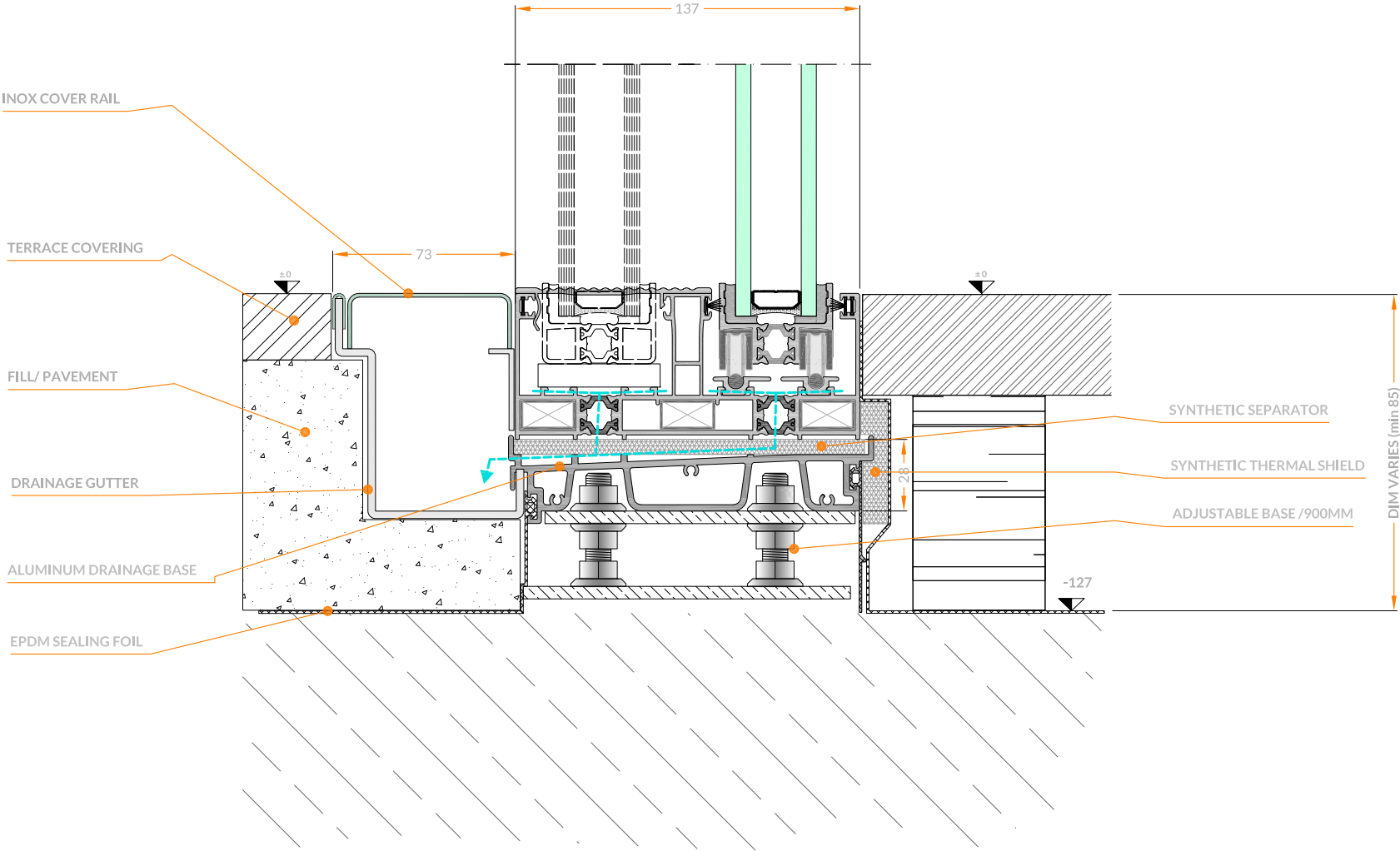
ALUMINUM BASE WITH ADJUSTABLE SUPPORT



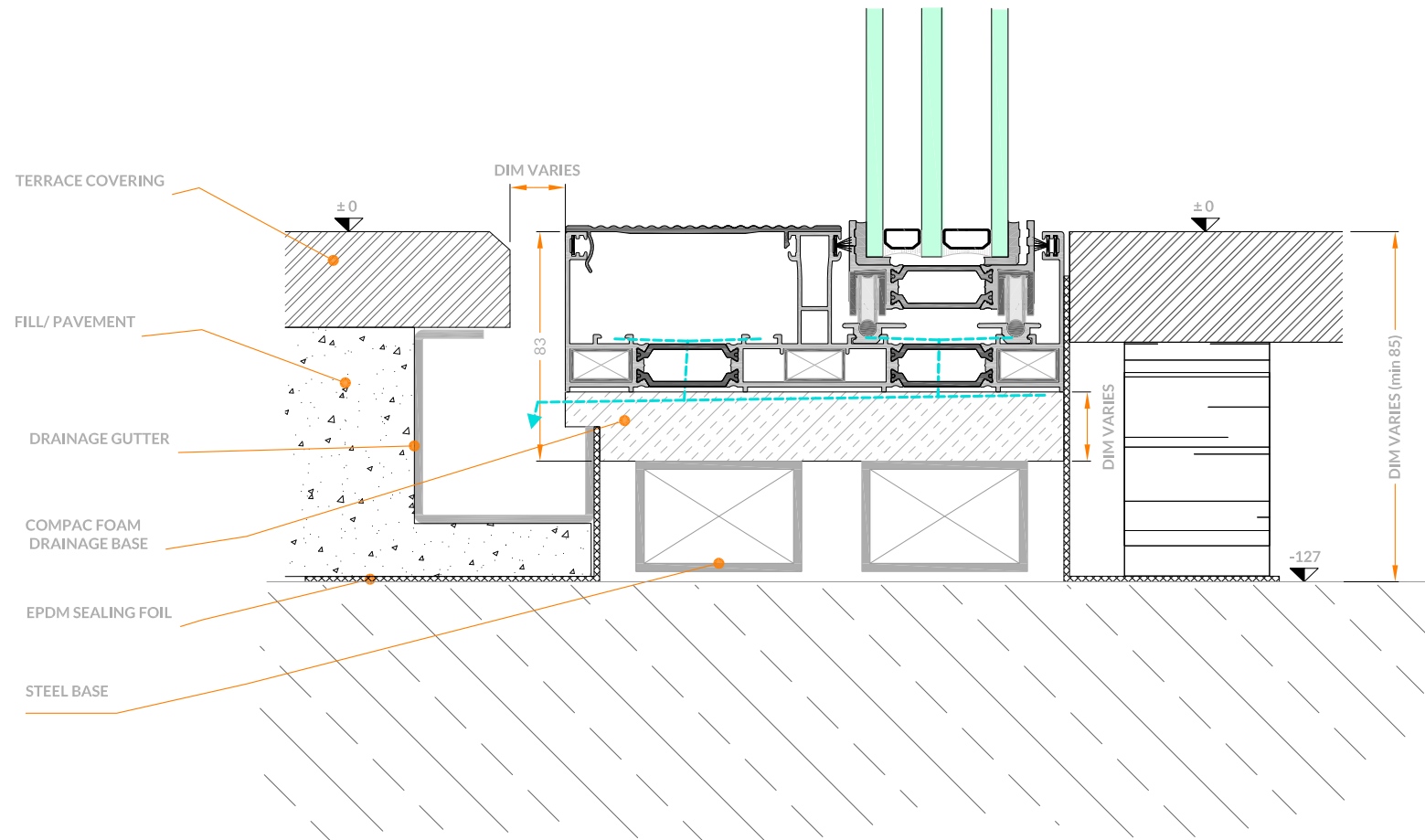
SYNTHETIC BASE WITH SUB-FRAME

BASE SECTIONS

9.5

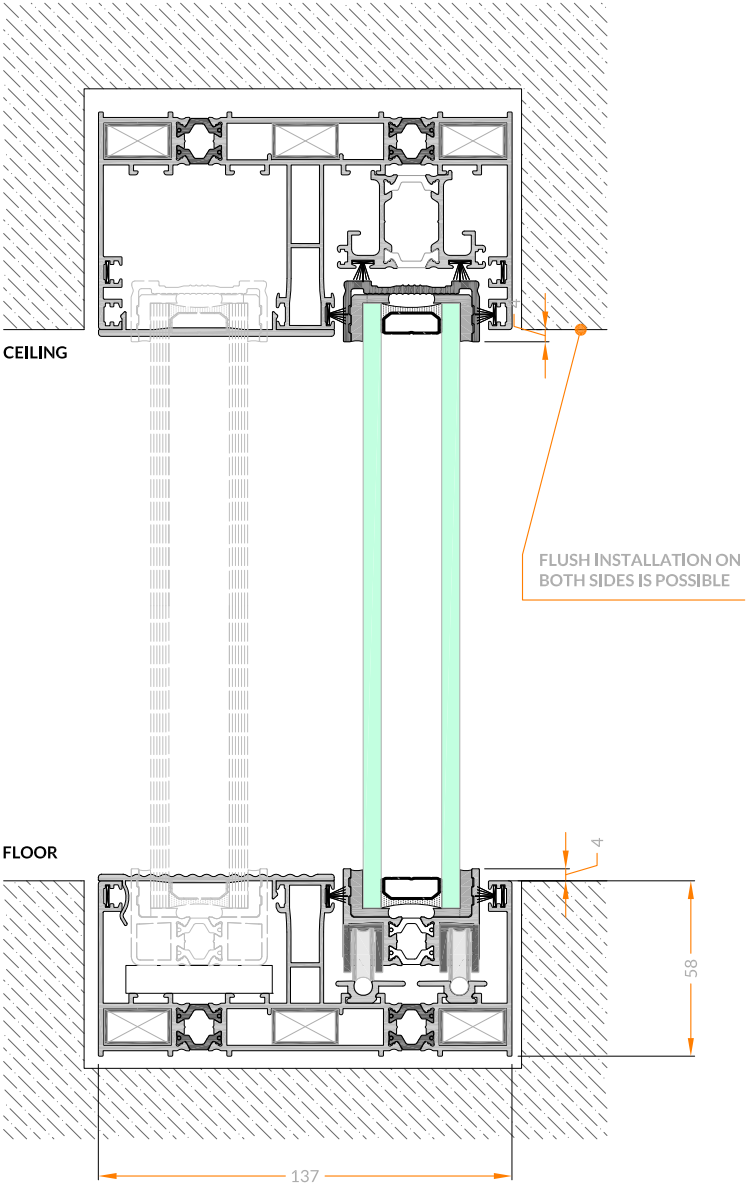


ALUMINUM BASE WITH ADJUSTABLE SUPPORT B

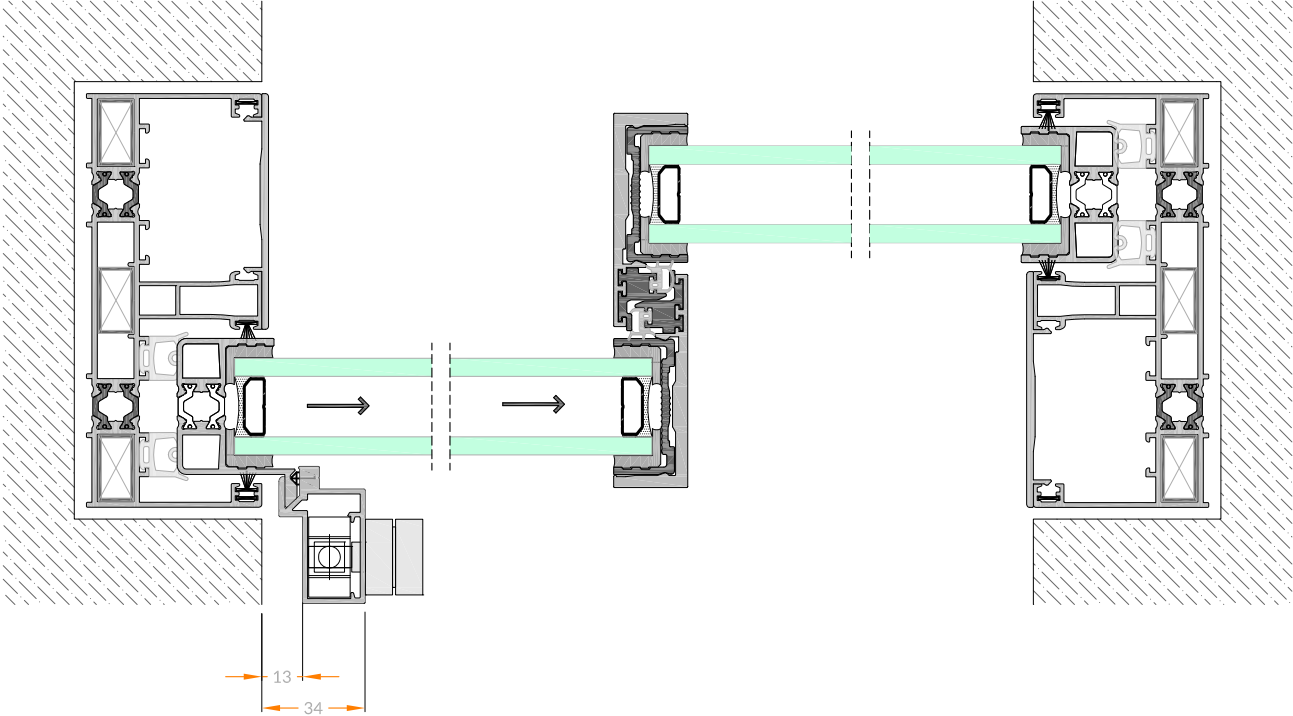


INSTALLATION MODES

10.1



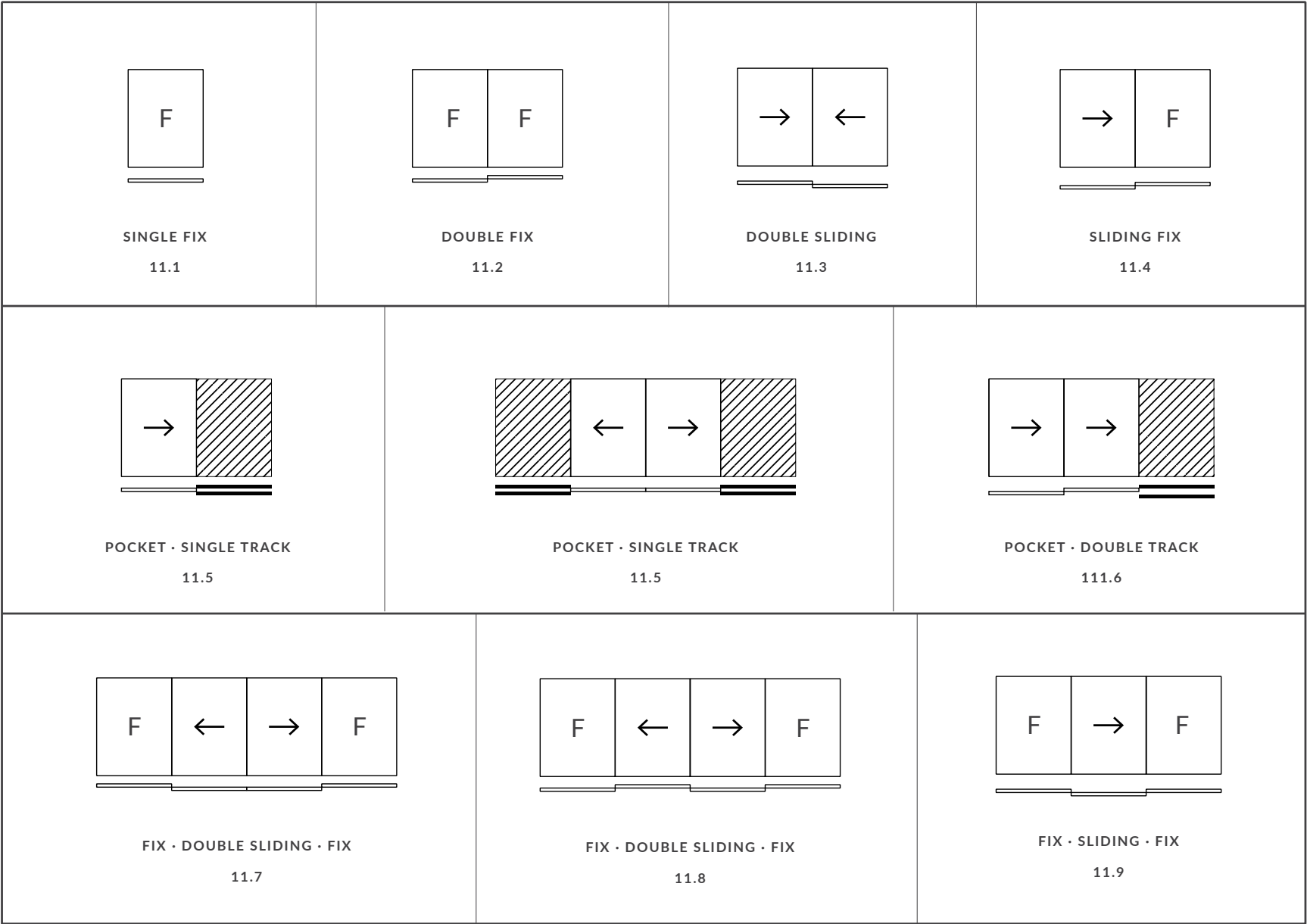
VERTICAL SECTION

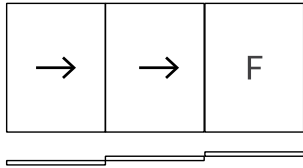
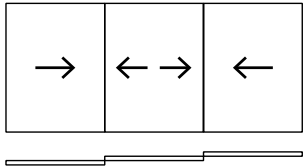
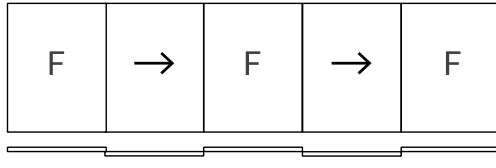
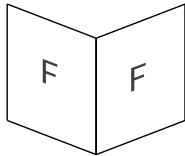
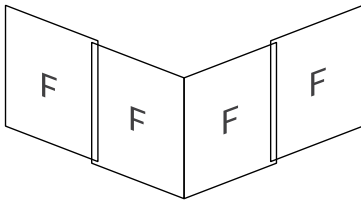
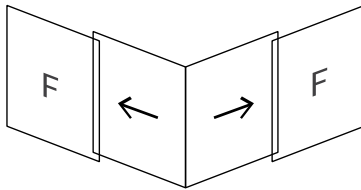
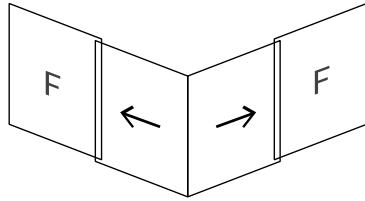


HORIZONTAL SECTION

MAIN FRAME SOLUTIONS

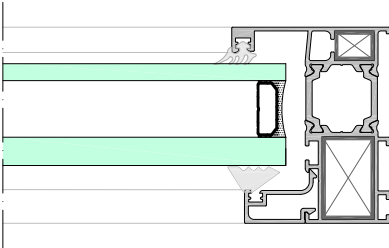
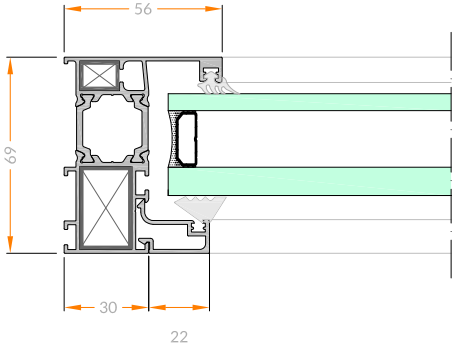
11



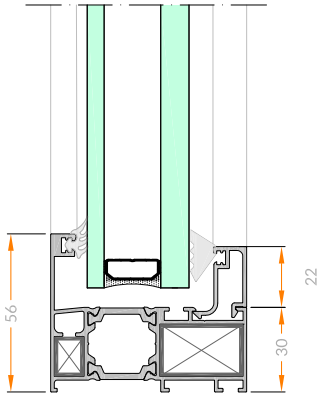
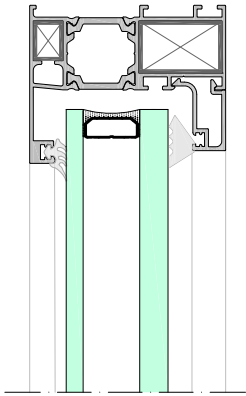
 DOUBLE SLIDING · FIX 11.10	 TRIPLE SLIDING 11.11	 FIX · SLIDING · FIX · SLIDING · FIX 11.12	
 FIXED CORNER 11.13	 TWO TRACK FIXED CORNER 11.14	 OPEN CORNER (IN) 11.15	 OPEN CORNER (OUT) 11.16

FIX FRAME

11.1

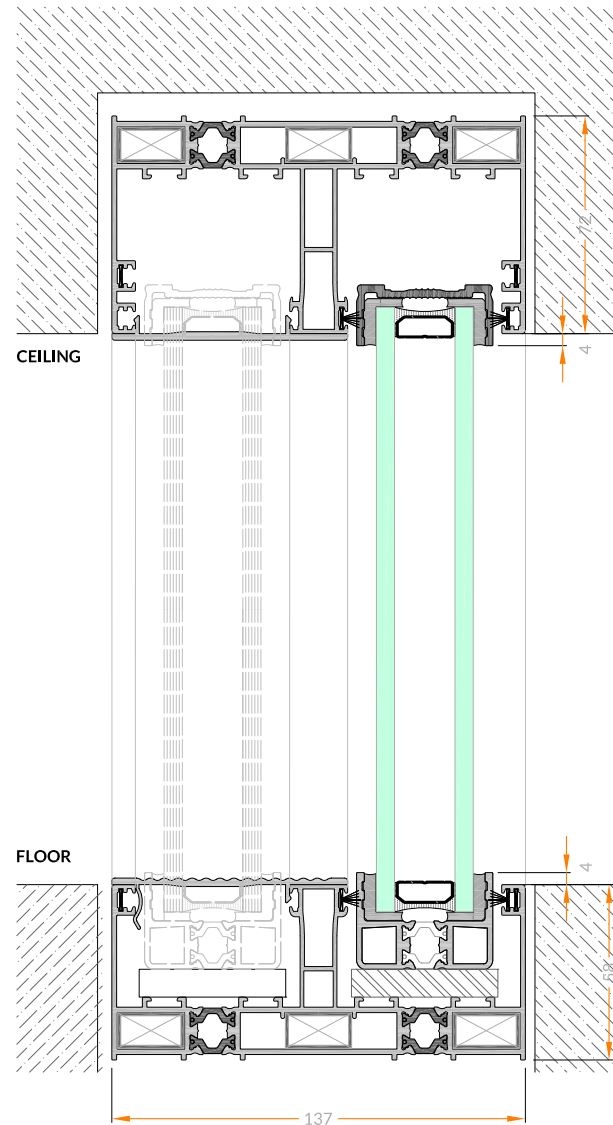


HORIZONTAL SECTION

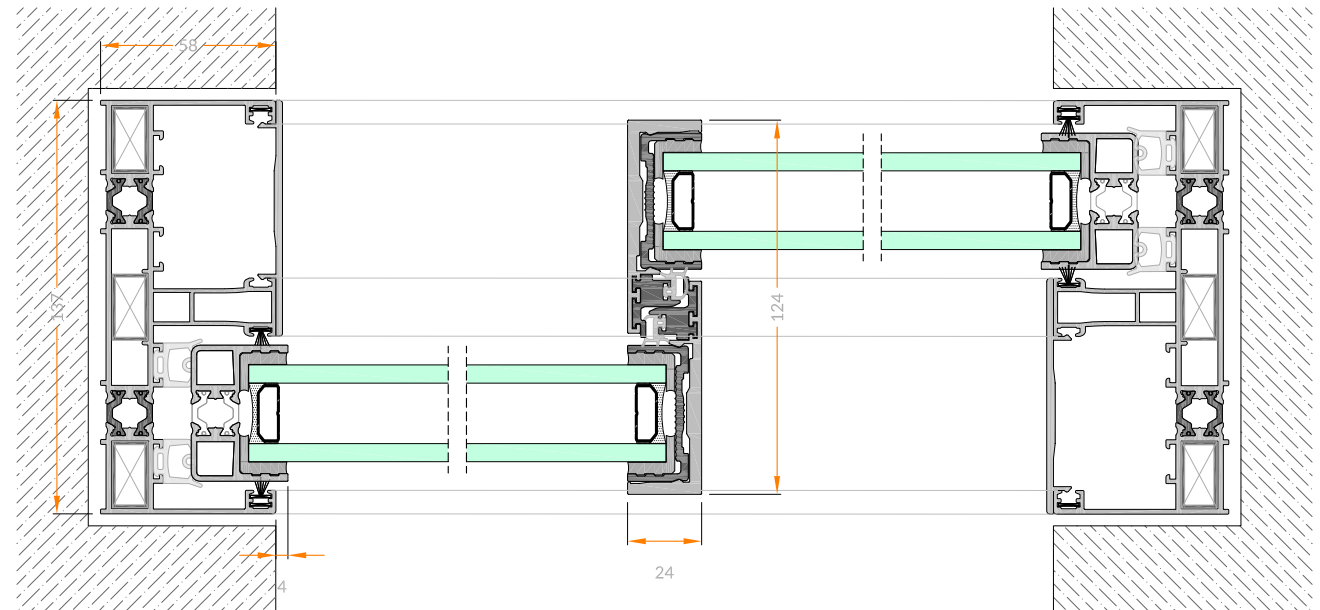


VERTICAL SECTION

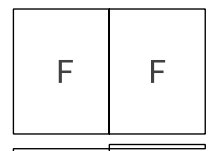
DOUBLE FIX FRAME



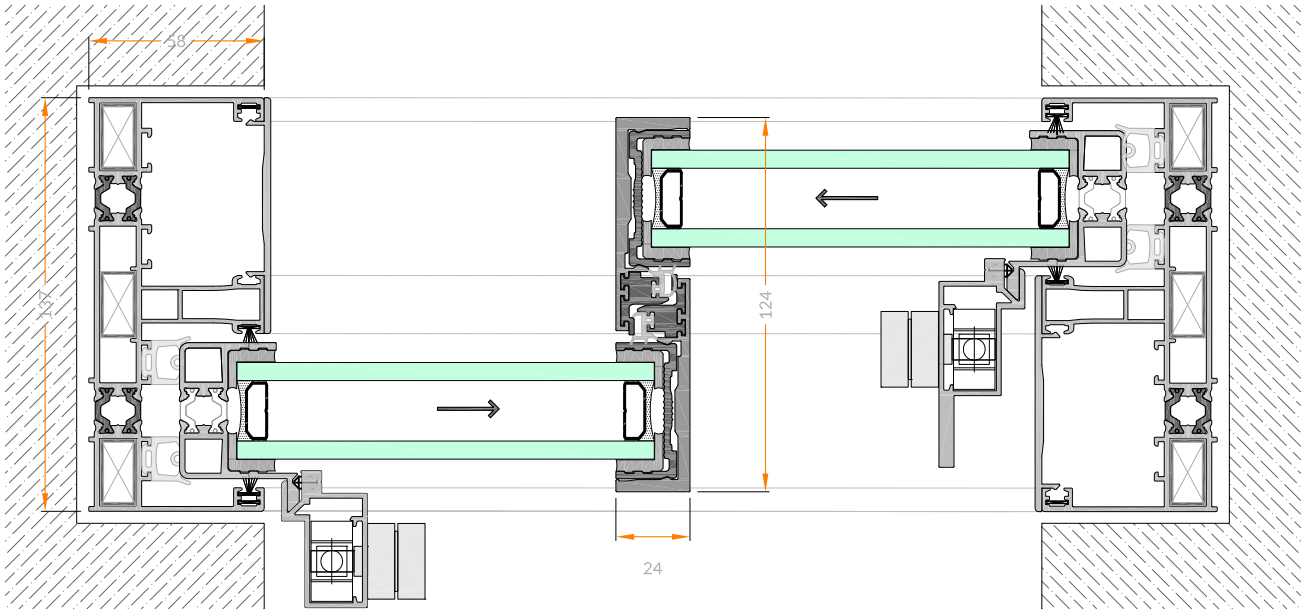
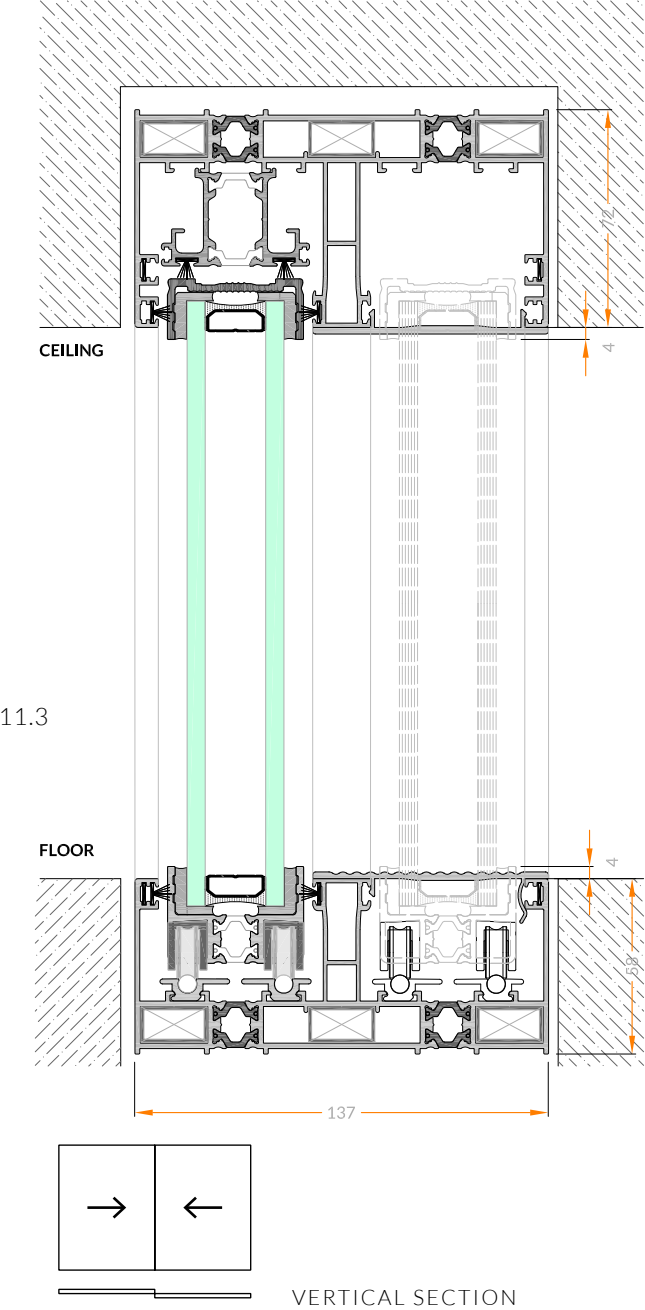
VERTICAL SECTION

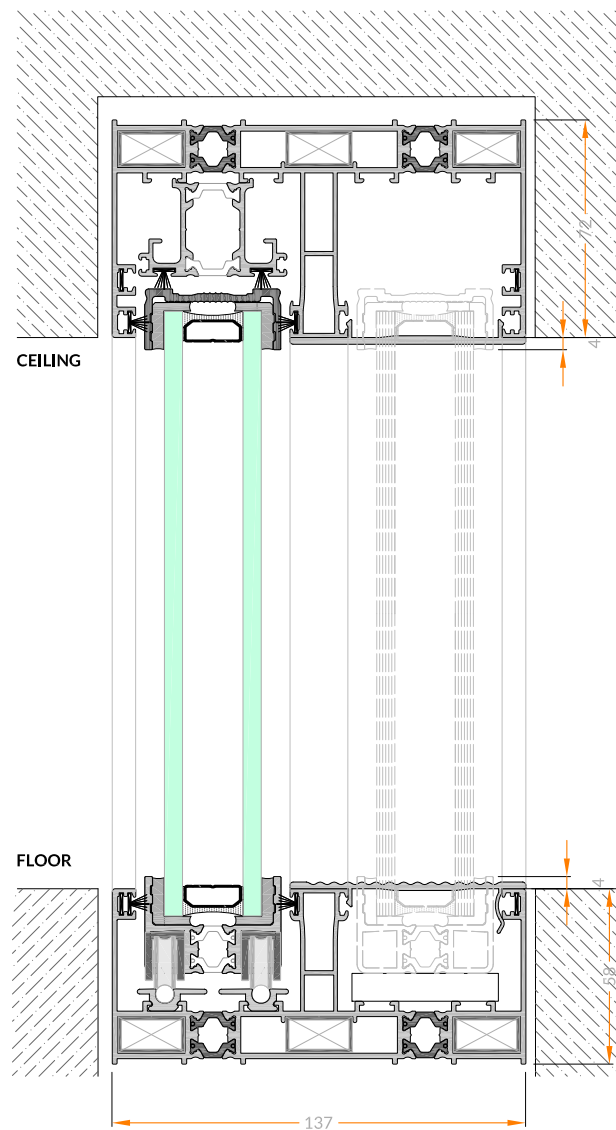


HORIZONTAL SECTION

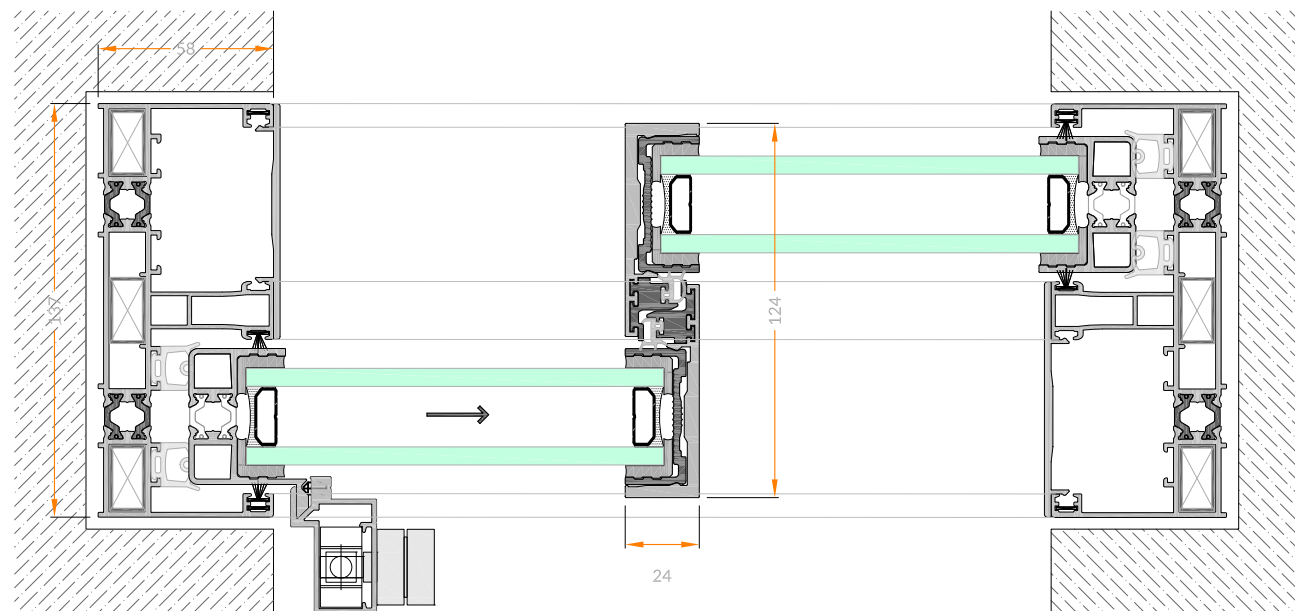


DOUBLE SLIDING FRAME

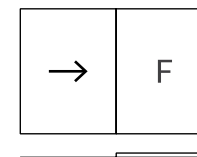




VERTICAL SECTION

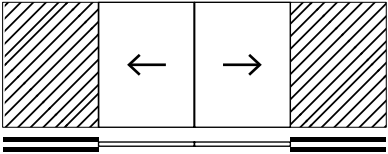
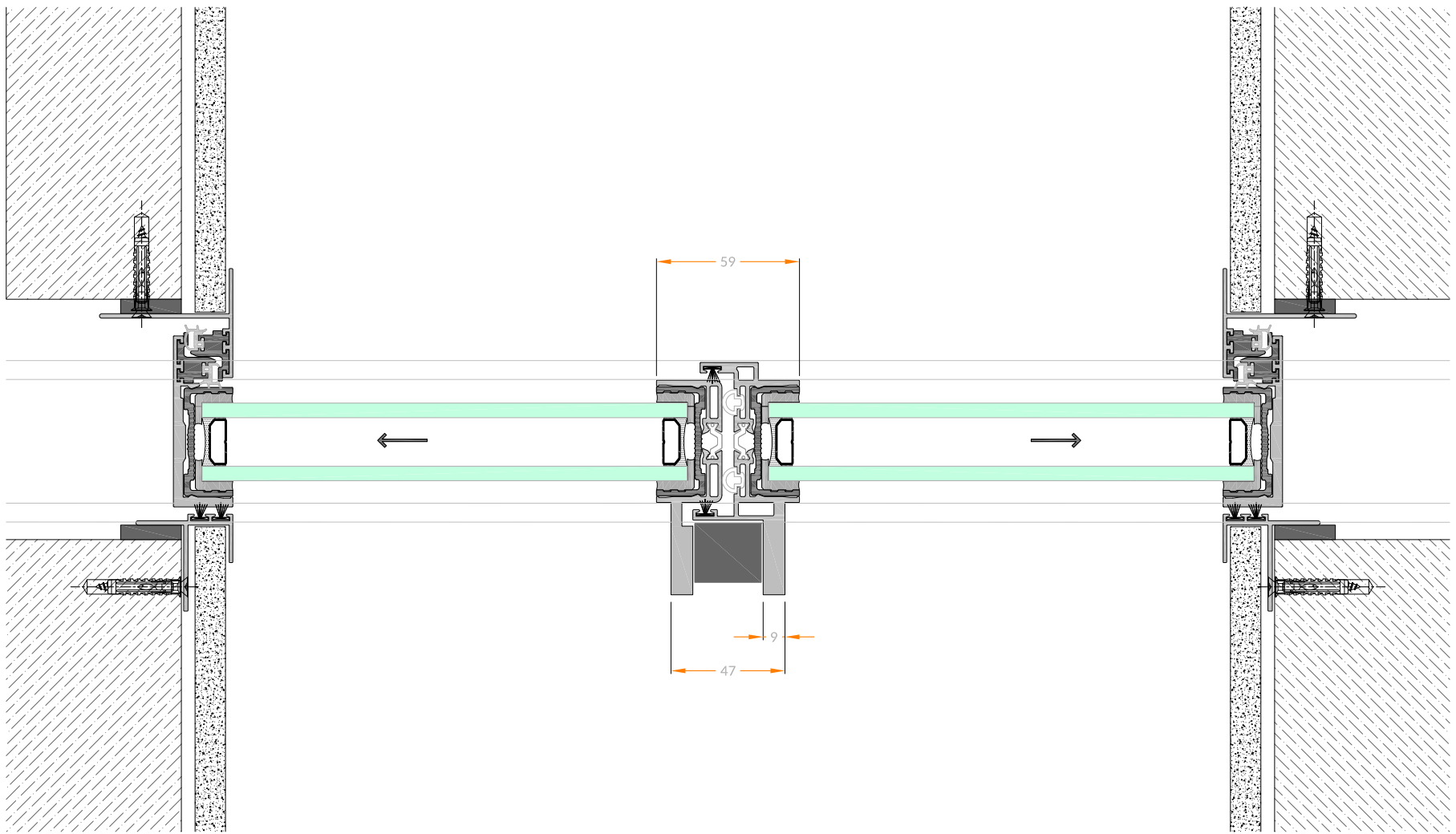


HORIZONTAL SECTION



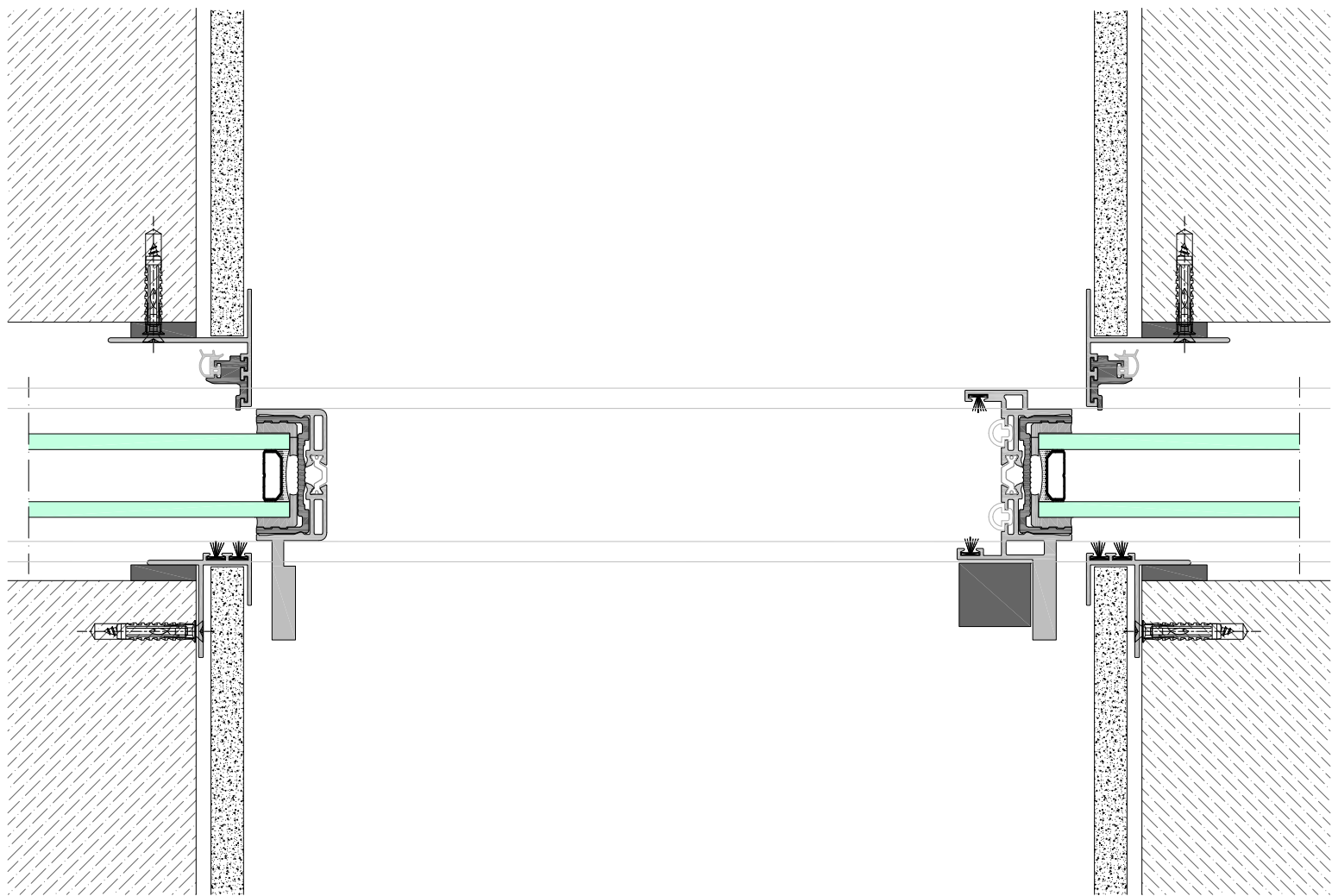
POCKET WINDOWS · SINGLE TRACK

11.5

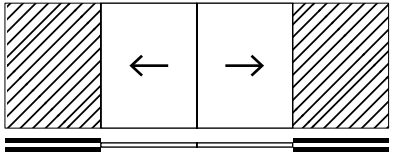


HORIZONTAL SECTION · CLOSED

POCKET WINDOWS · SINGLE TRACK

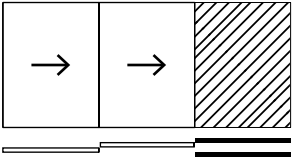
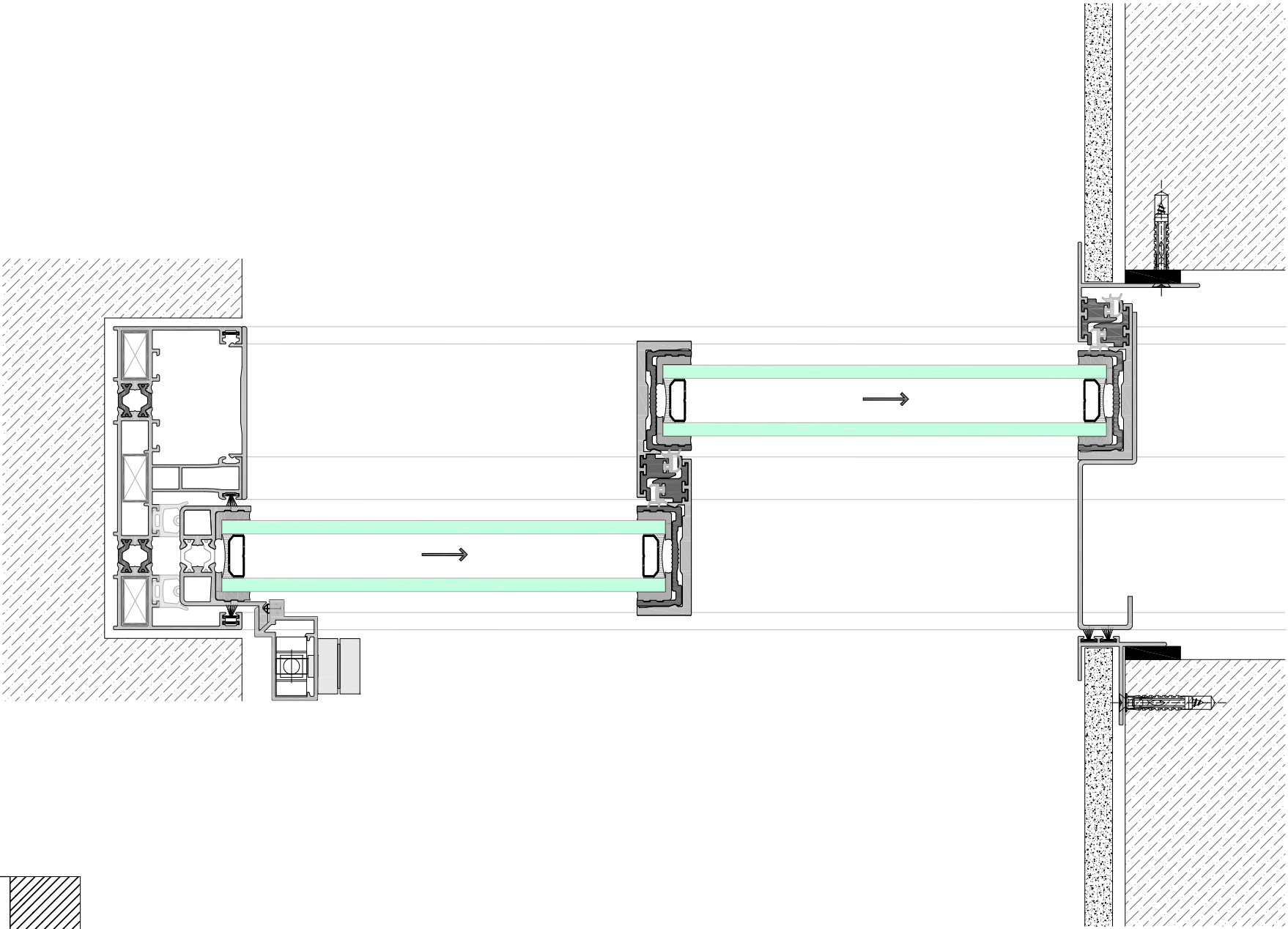


HORIZONTAL SECTION · OPEN



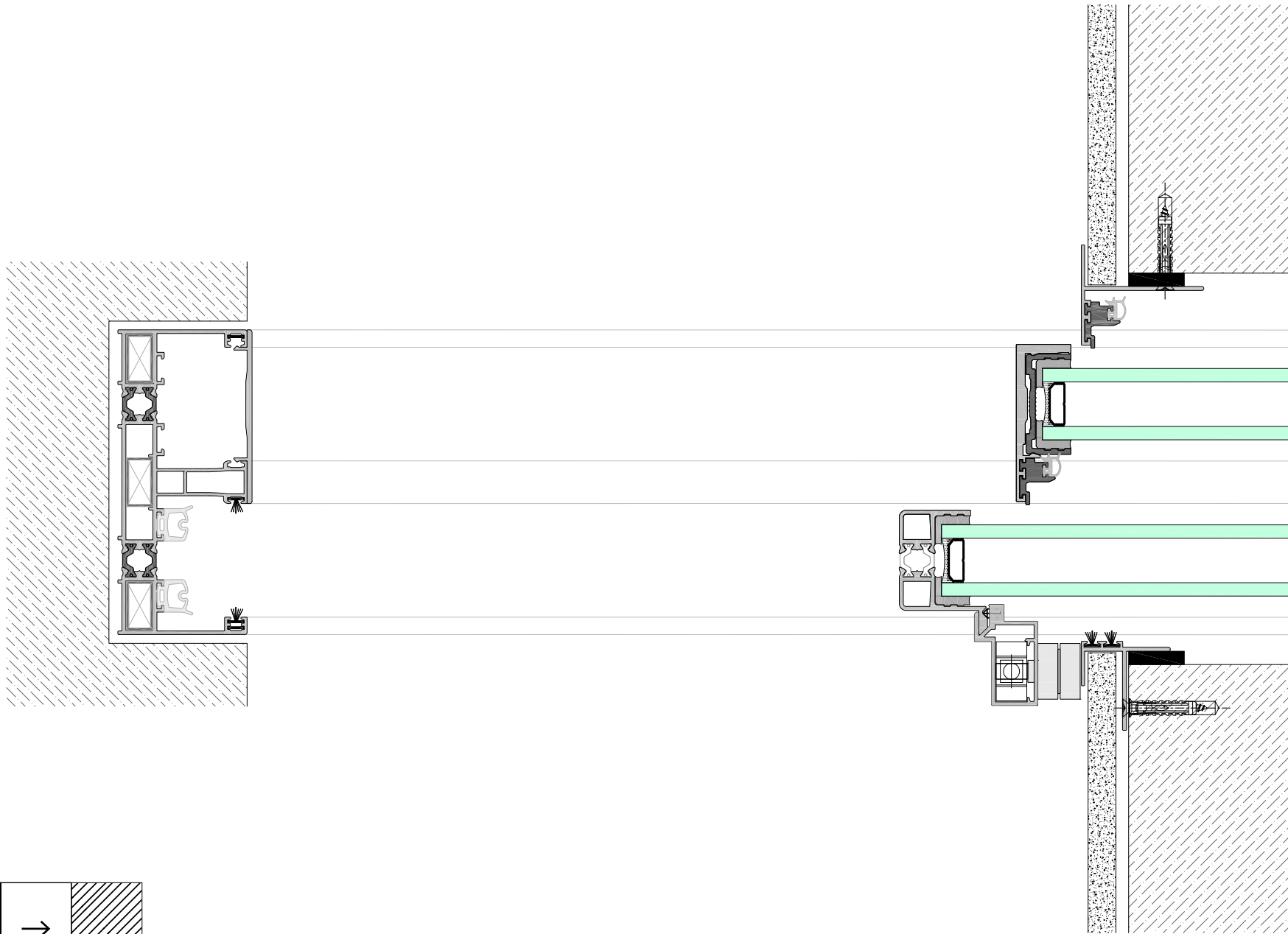
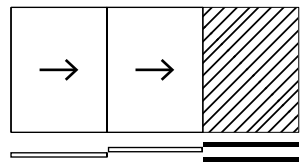
POCKET WINDOWS · DOUBLE TRACK

11.6



HORIZONTAL SECTION · OPEN

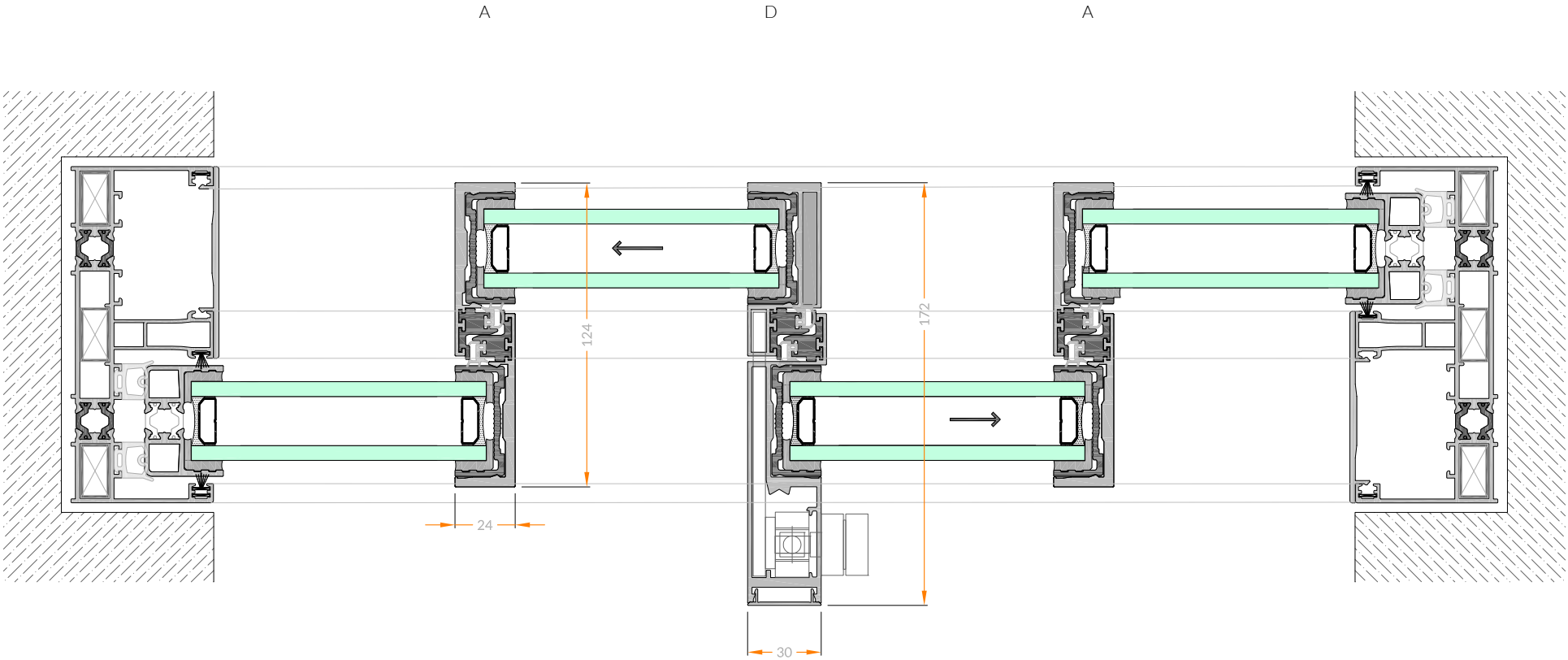
POCKET WINDOWS · DOUBLE TRACK



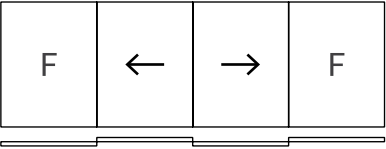
HORIZONTAL SECTION · CLOSED

11.6

FIX · DOUBLE SLIDING · FIX (ALTERNATE)

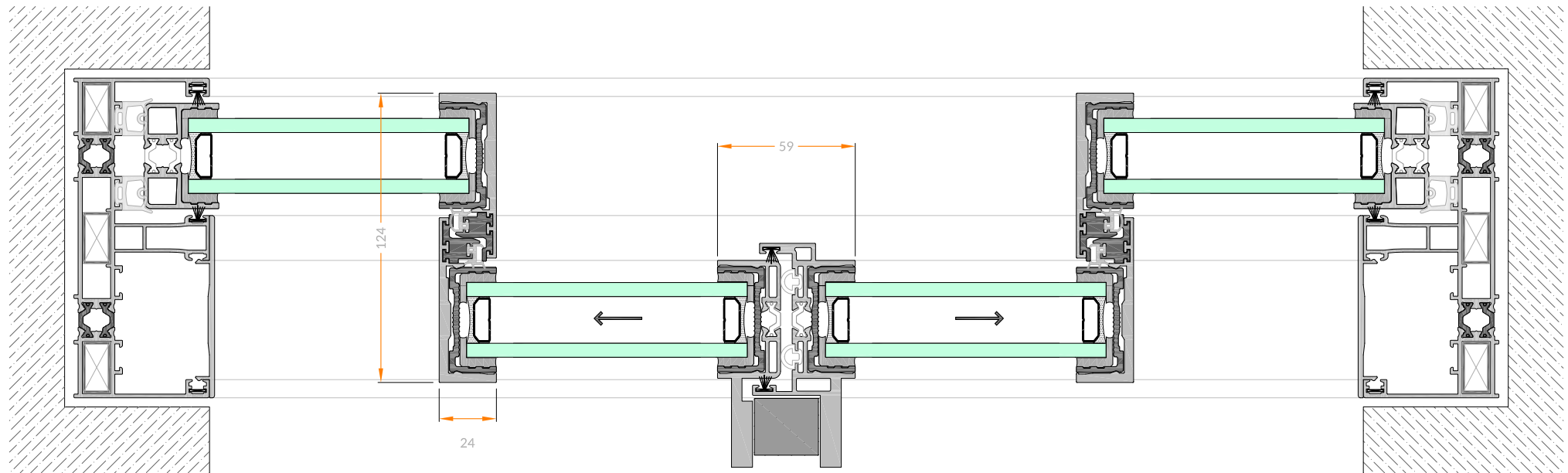


11.7



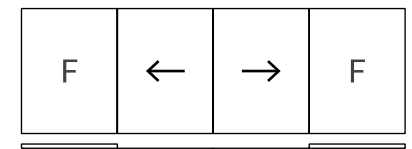
4-POINT LOCKING DEVICE UNDER DEVELOPMENT

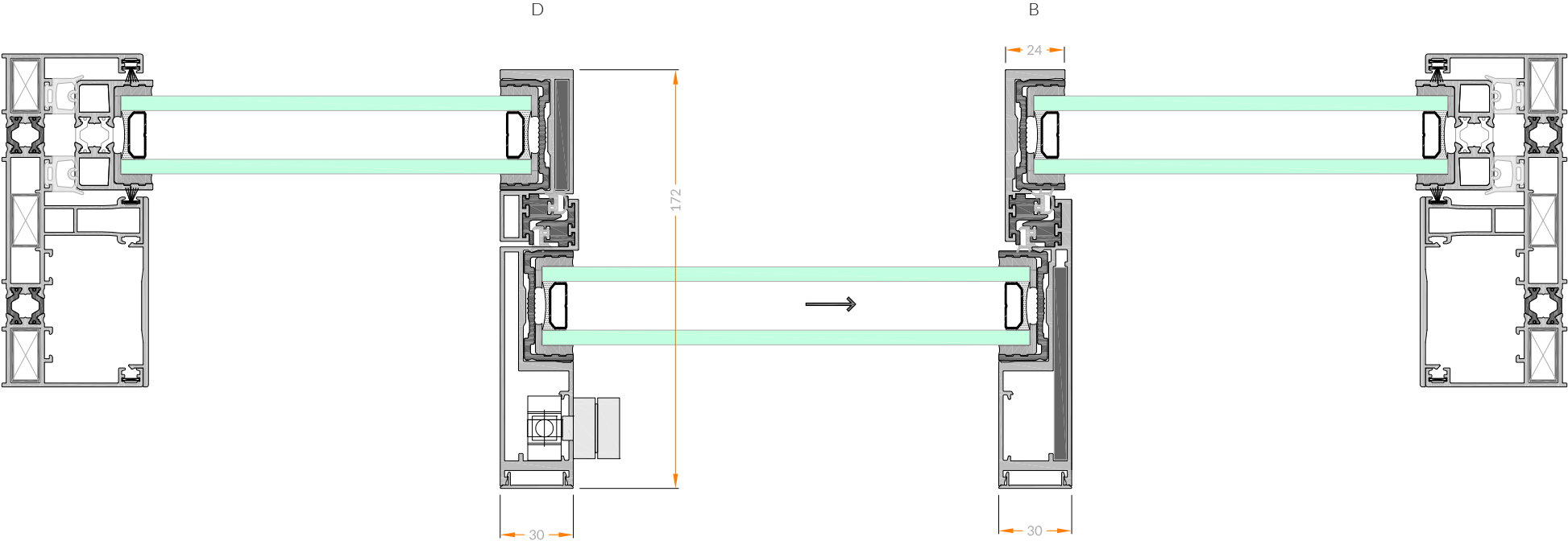
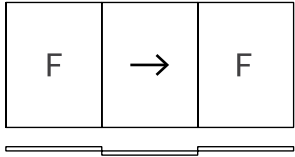
FIX · DOUBLE SLIDING IN THE SAME TRUCK · FIX



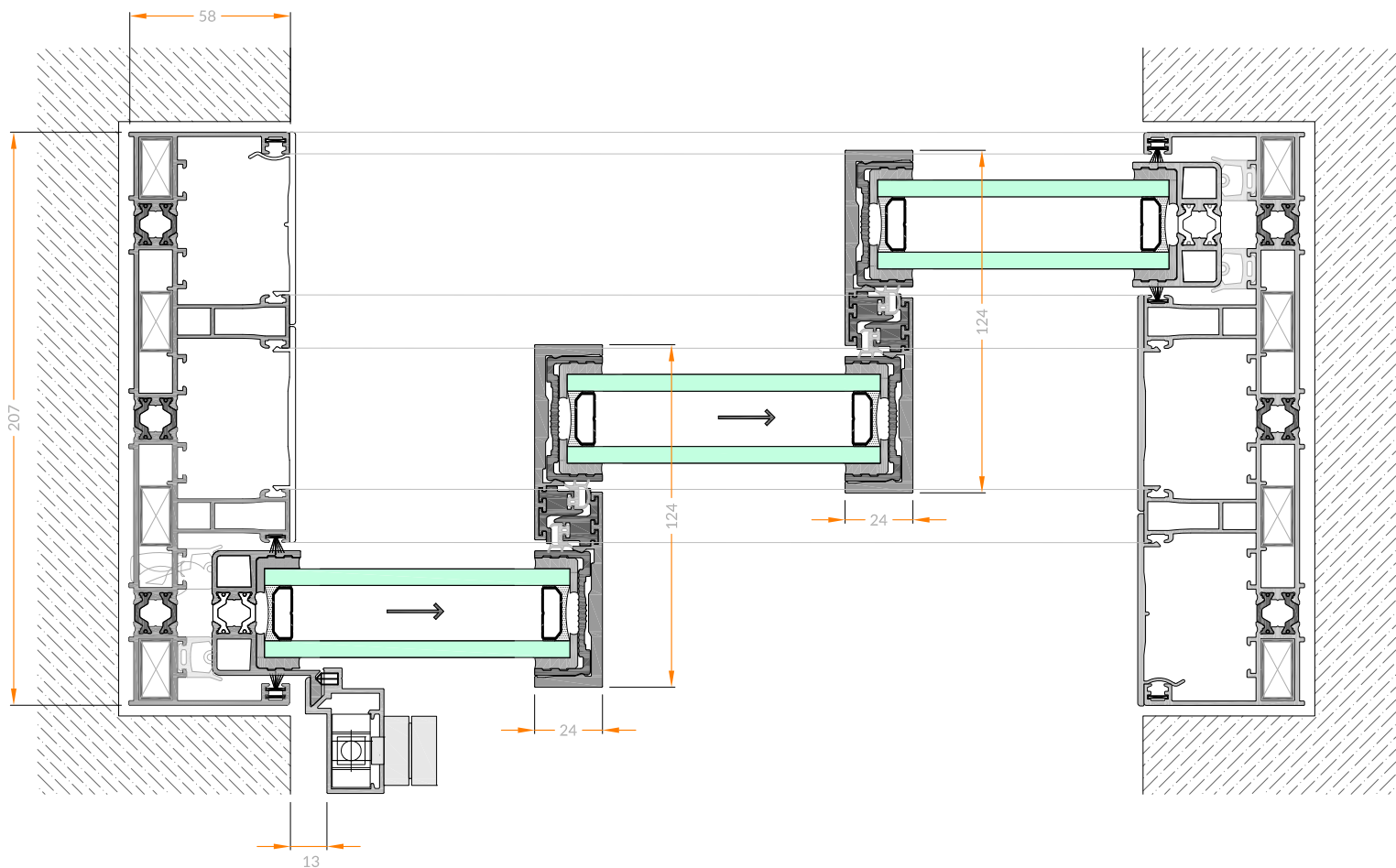
11.8

HORIZONTAL SECTION

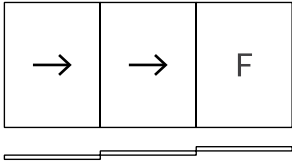




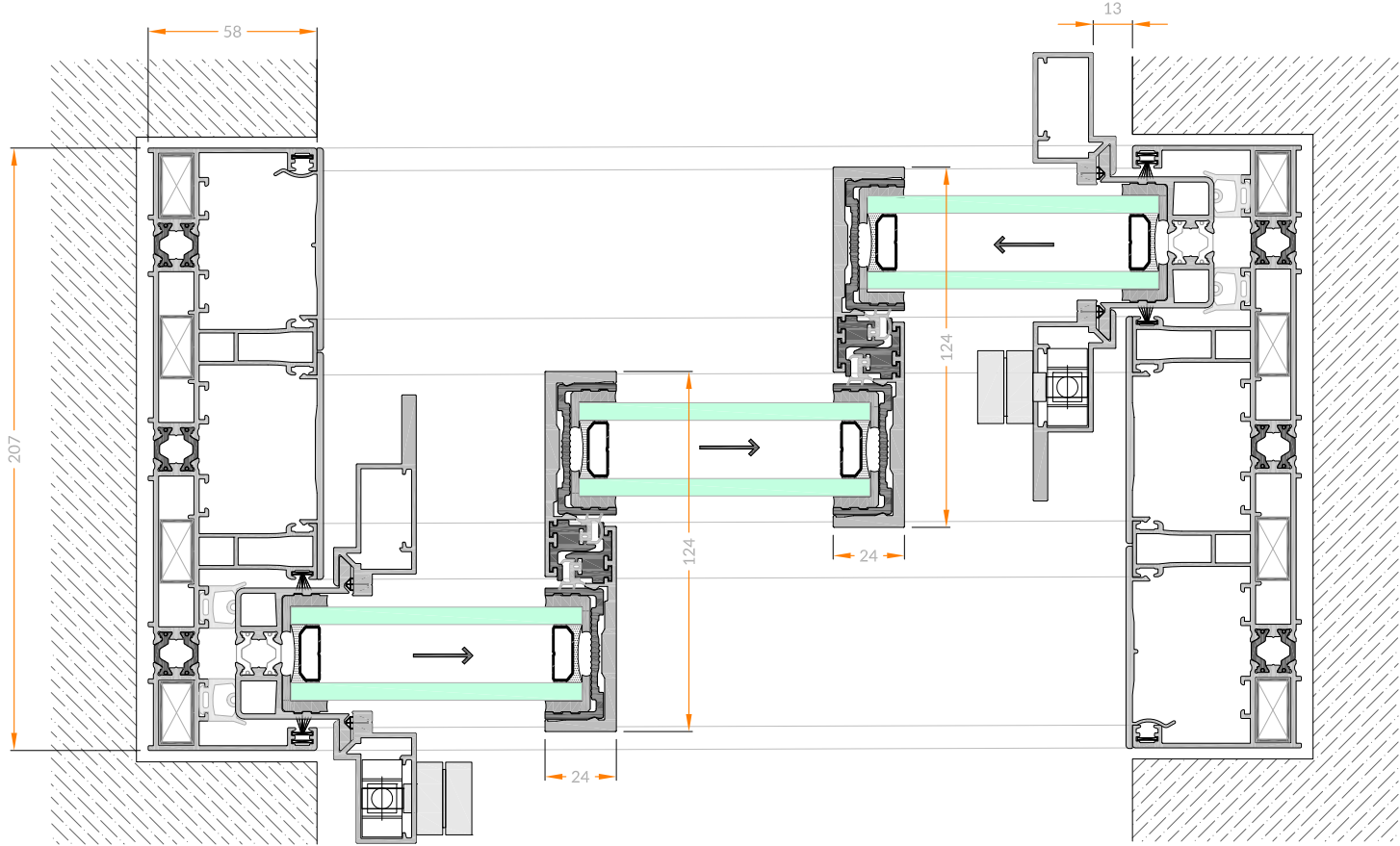
HORIZONTAL SECTION



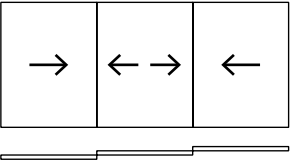
HORIZONTAL SECTION



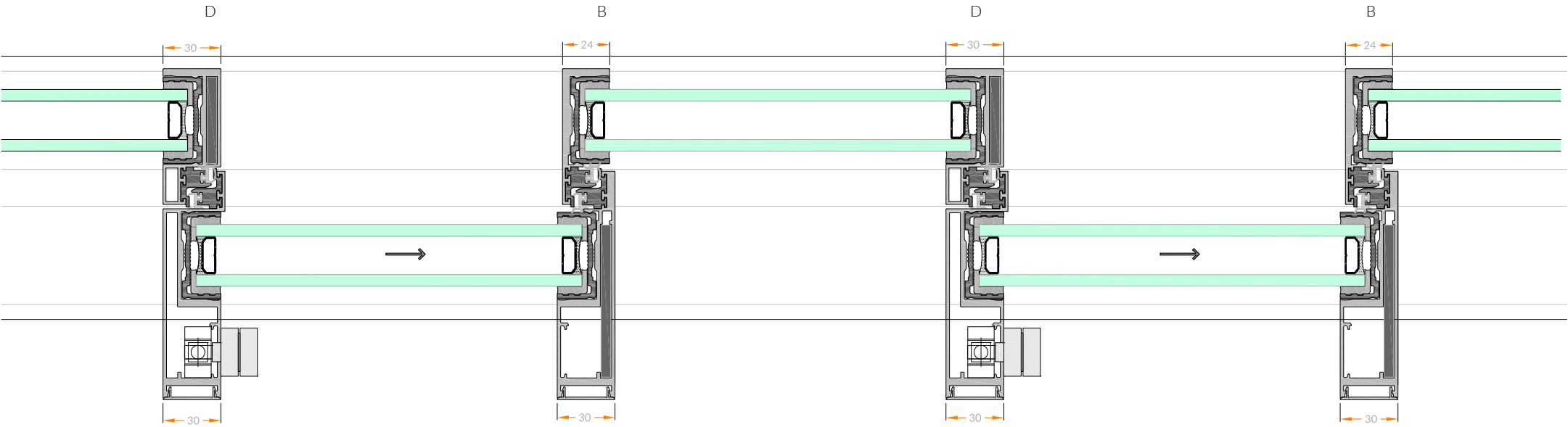
TRIPLE SLIDING



11.11



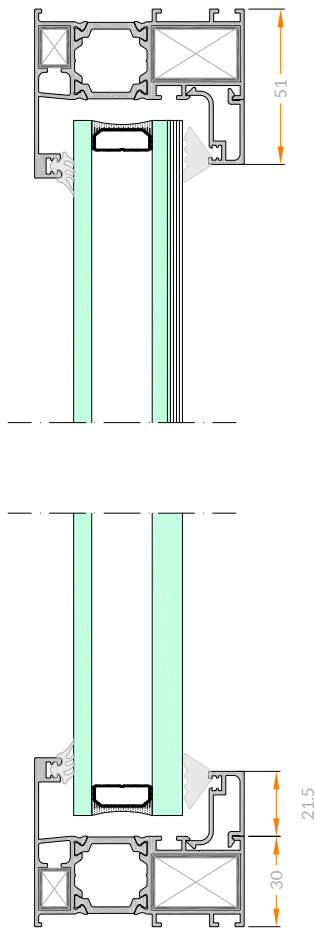
HORIZONTAL SECTION



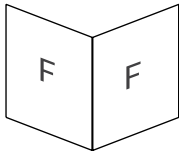
HORIZONTAL SECTION



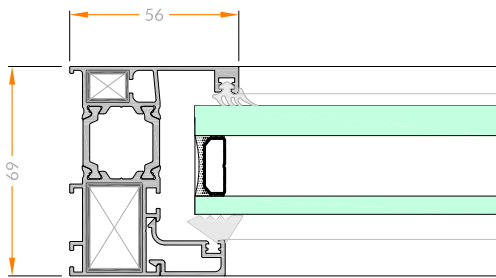
SINGLE CORNER FRAME



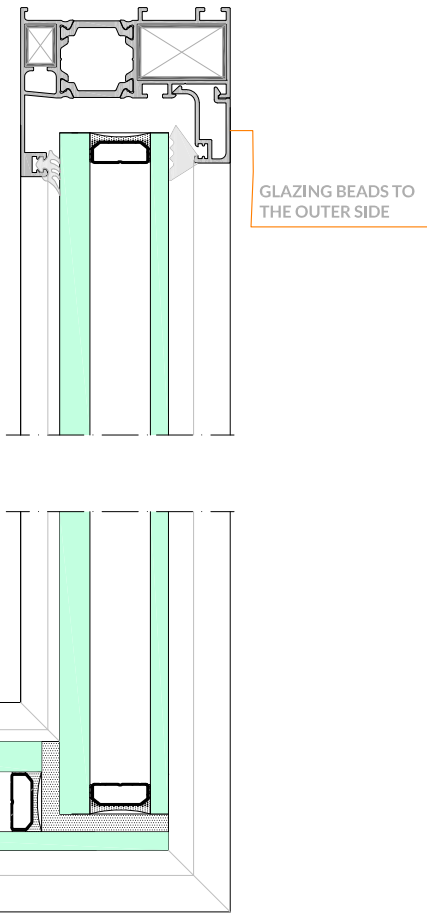
11.13



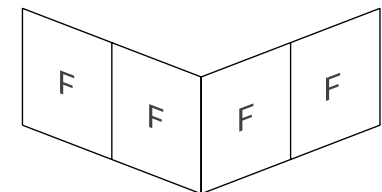
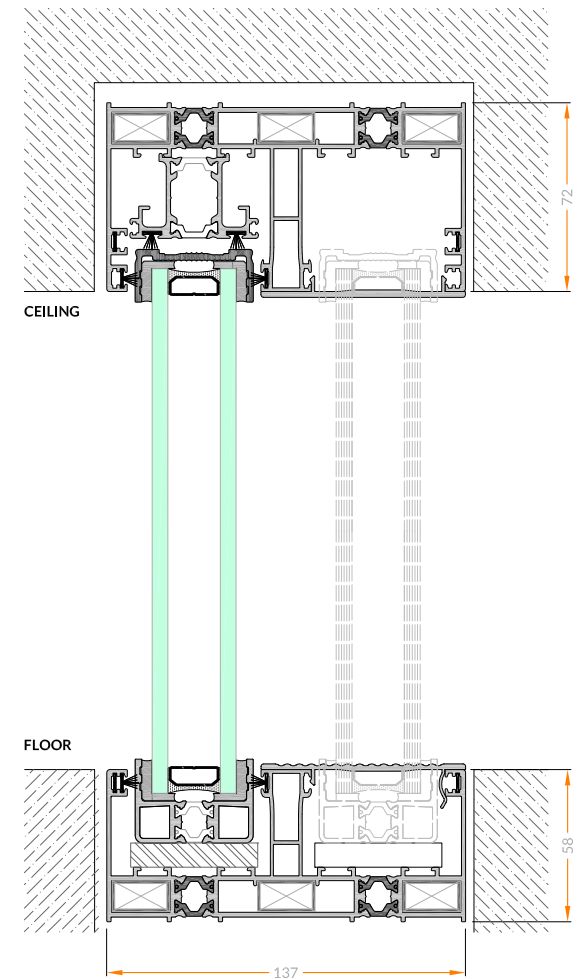
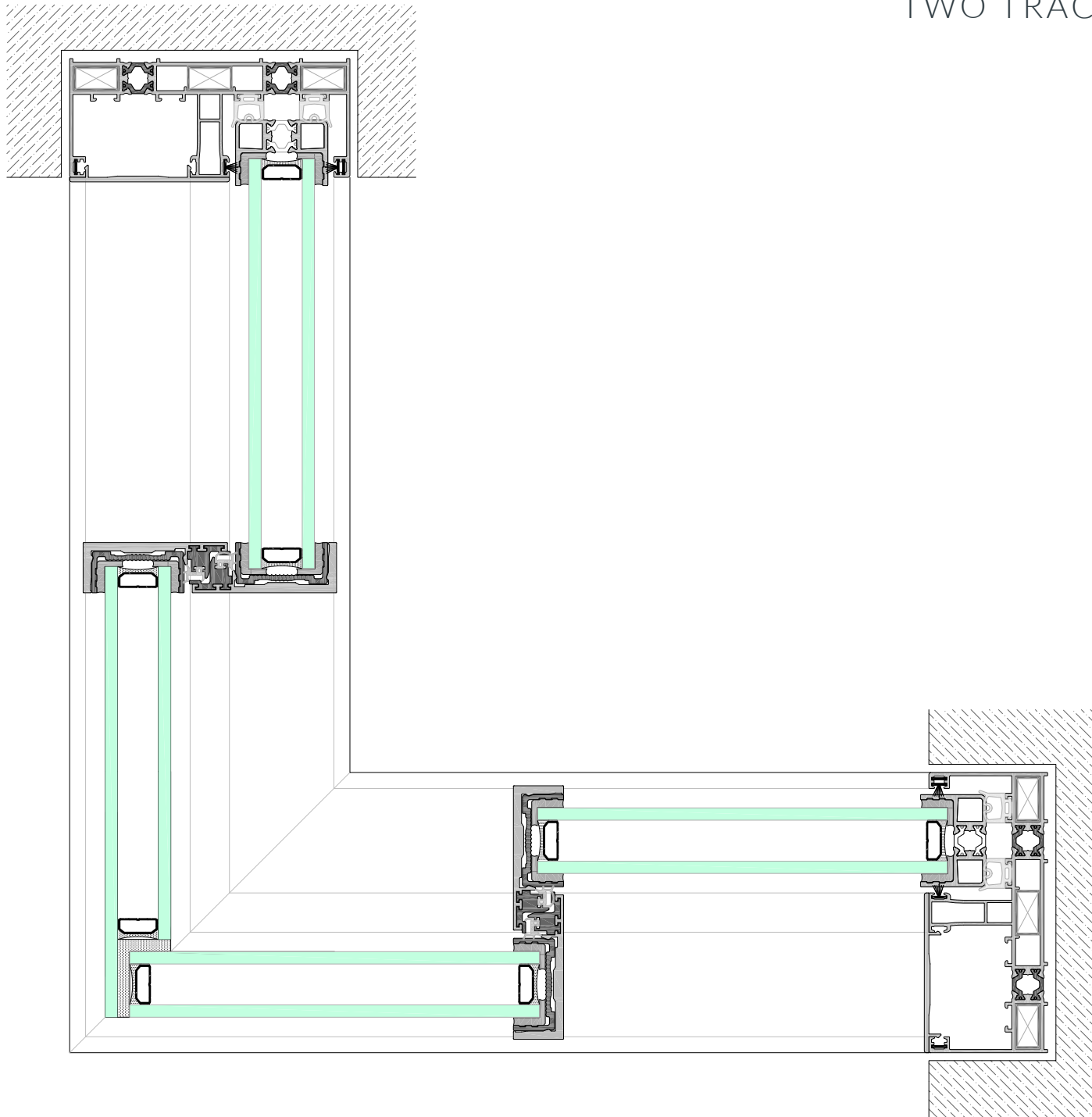
VERTICAL SECTION



HORIZONTAL SECTION

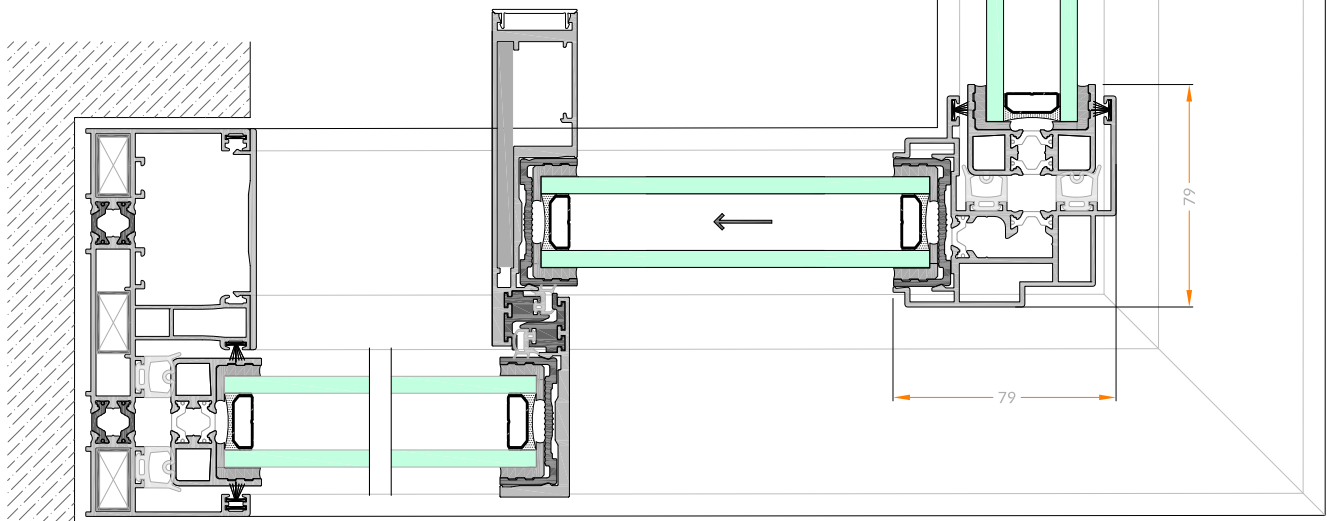
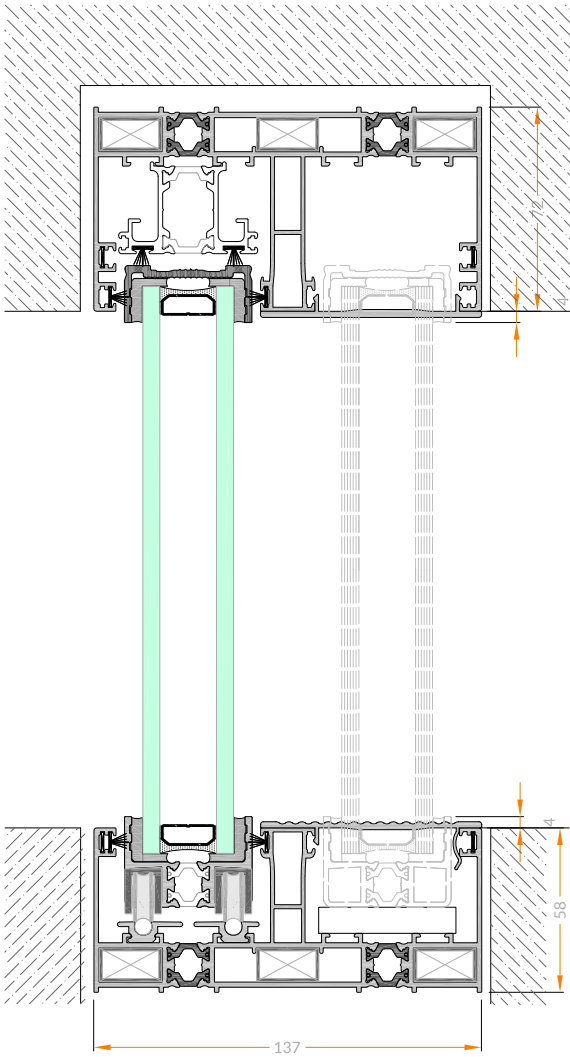


TWO TRACK CLOSED CORNER FRAMES

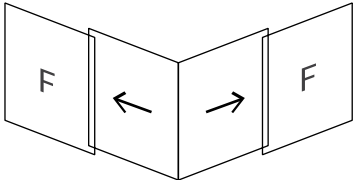


11.14

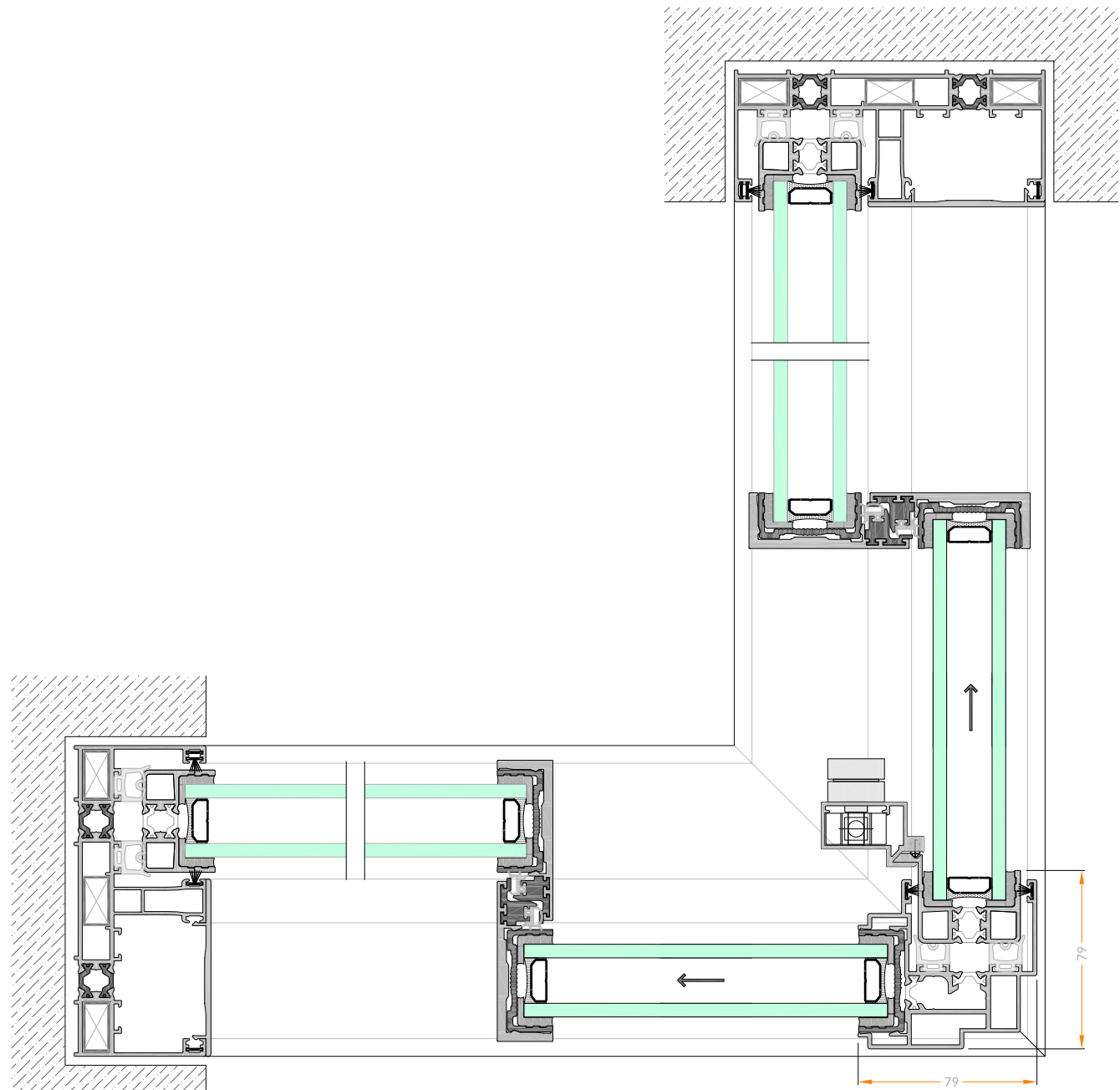
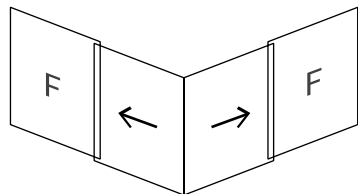
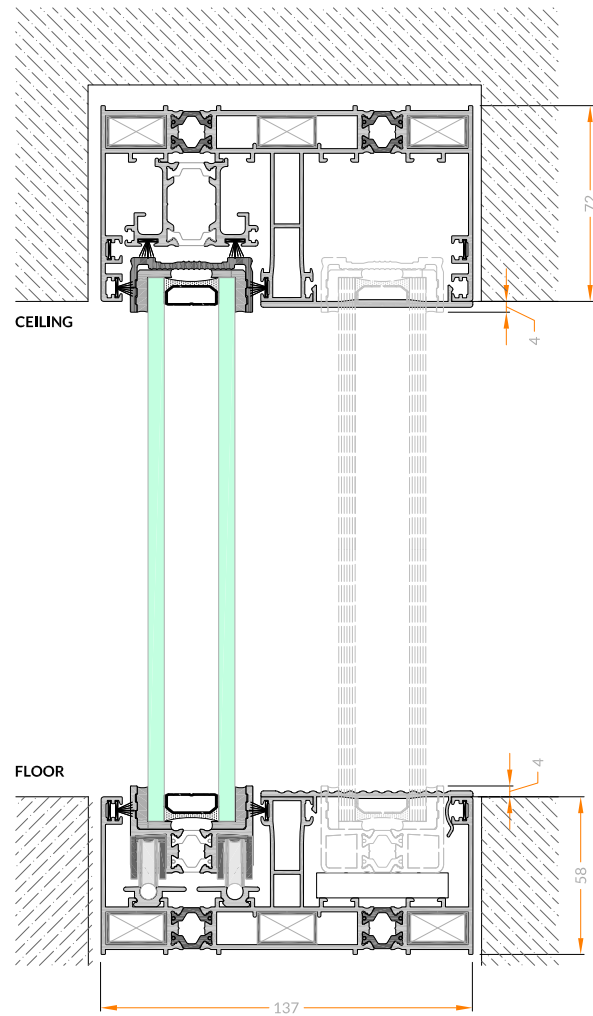
TWO TRACK OPEN CORNER FRAMES (SLIDING INSIDE)



11.15

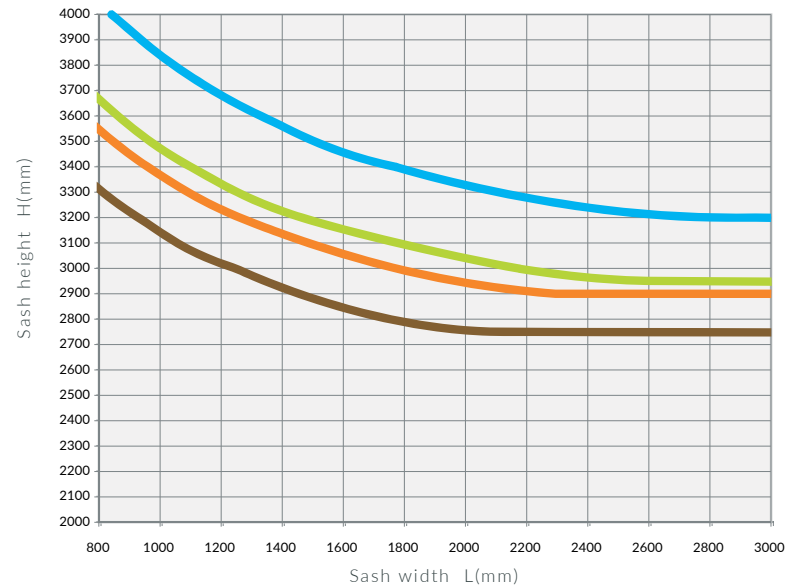
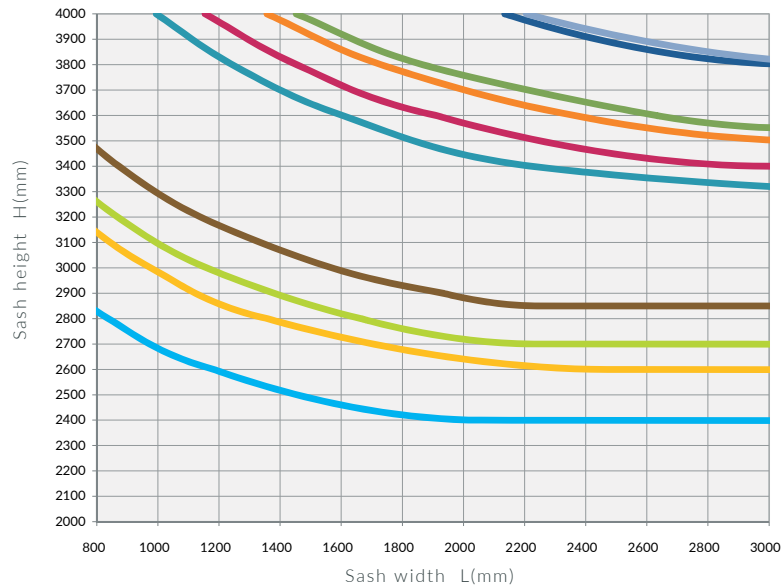


TWO TRACK OPEN CORNER FRAMES *(SLIDING OUTSIDE)*

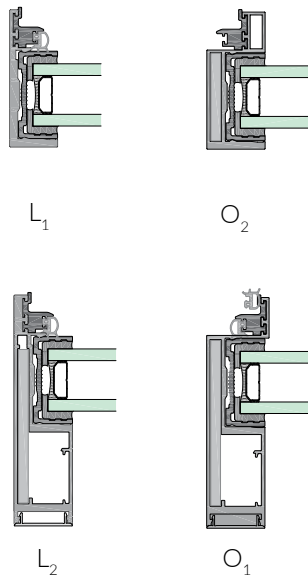


WIND LOAD DIAGRAMS

0.5
kN/m²



SOL



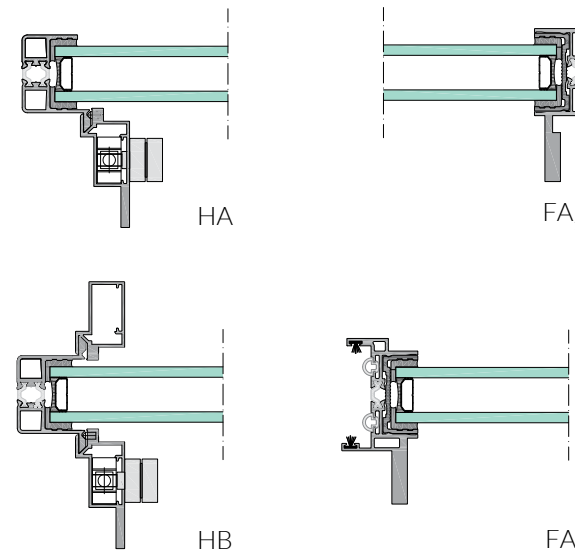
- O₁ + Steel reinf. —————
- L₂ + Steel reinf. —————
- L₂ —————
- O₁ —————
- L₂ + Alum. reinf. —————
- O₂ —————
- O₂ + Steel reinf. —————
- O₂ + Alum. reinf. —————
- O₁ + Alum. reinf. —————
- L₁ —————

HA

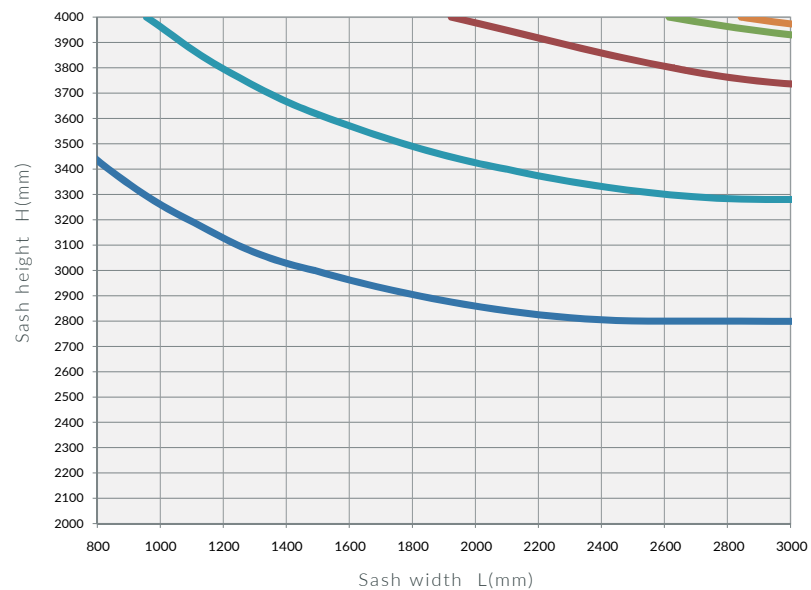
FA₁

HB

FA₂

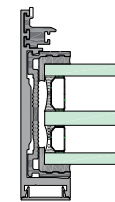


103
Km/h

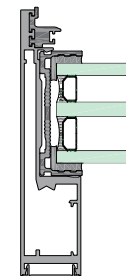


LUNA

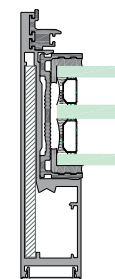
- D
- C
- B + Steel reinf.
- B + Alum. reinf.
- B
- A



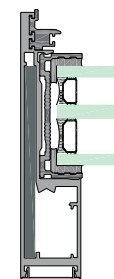
A



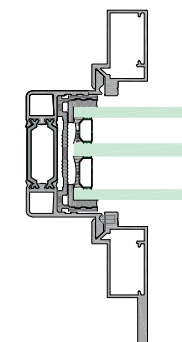
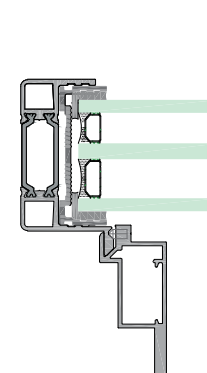
B



B + Alum. reinf.

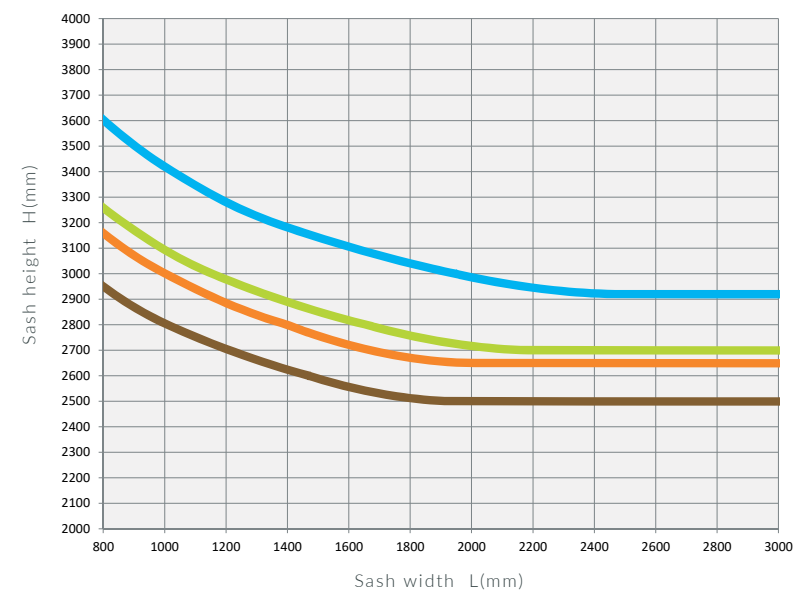
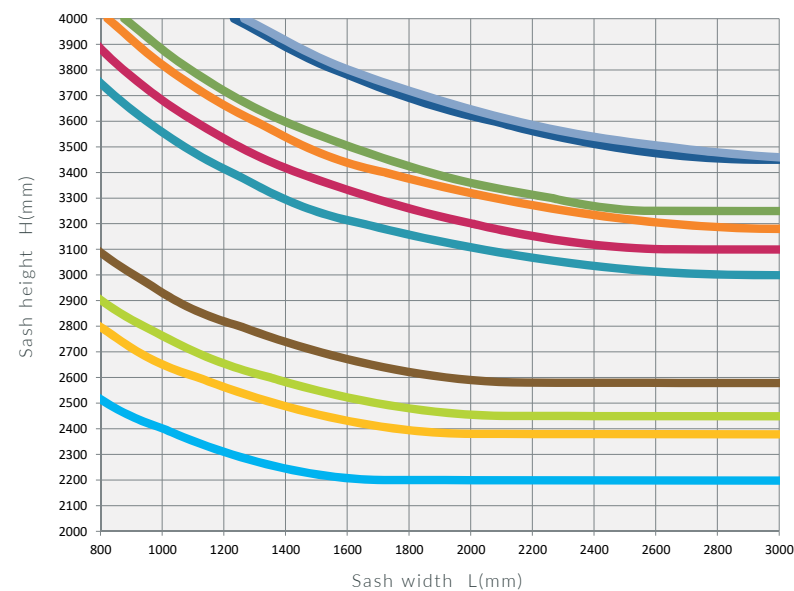


B + Steel reinf.

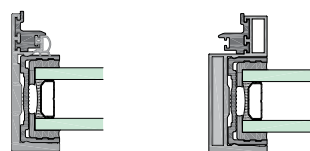


WIND LOAD DIAGRAMS

0.8
kN/m²

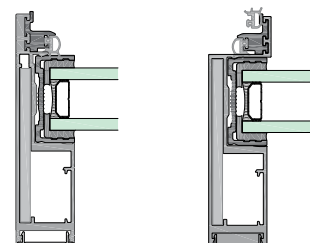


SOL



L₁

O₂



L₂

O₁

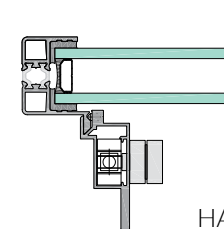
- O₁ + Steel reinf. —————
- L₂ + Steel reinf. —————
- L₂ —————
- O₁ —————
- L₂ + Alum. reinf. —————
- O₂ —————
- O₂ + Steel reinf. —————
- O₂ + Alum. reinf. —————
- O₁ + Alum. reinf. —————
- L₁ —————

HA

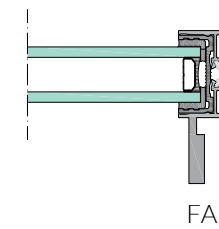
FA₁

HB

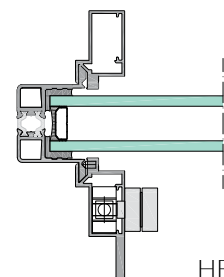
FA₂



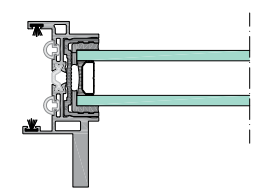
HA



FA₁

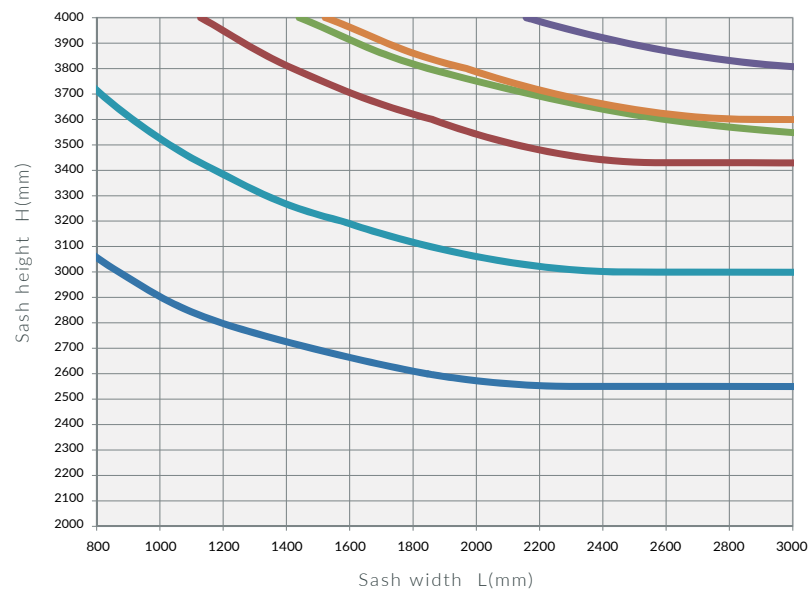


HB



FA₂

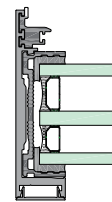
130
Km/h



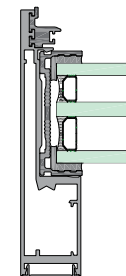
LUNA

- D
- C
- B + Steel reinf.
- B + Alum. reinf.
- B
- A

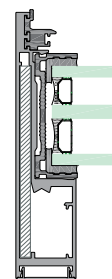
WIND LOAD DIAGRAMS



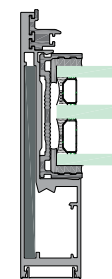
A



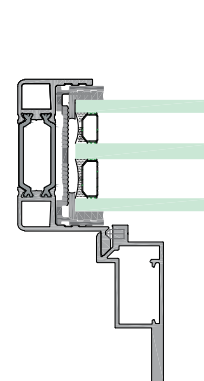
B



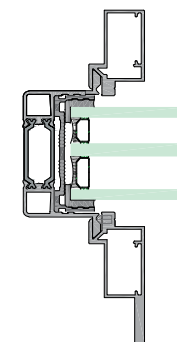
B + Alum. reinf.



B + Steel reinf.



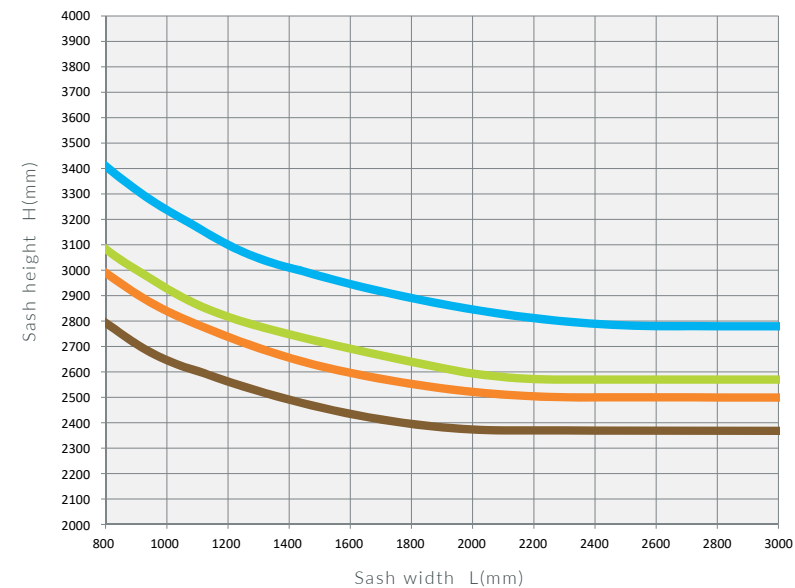
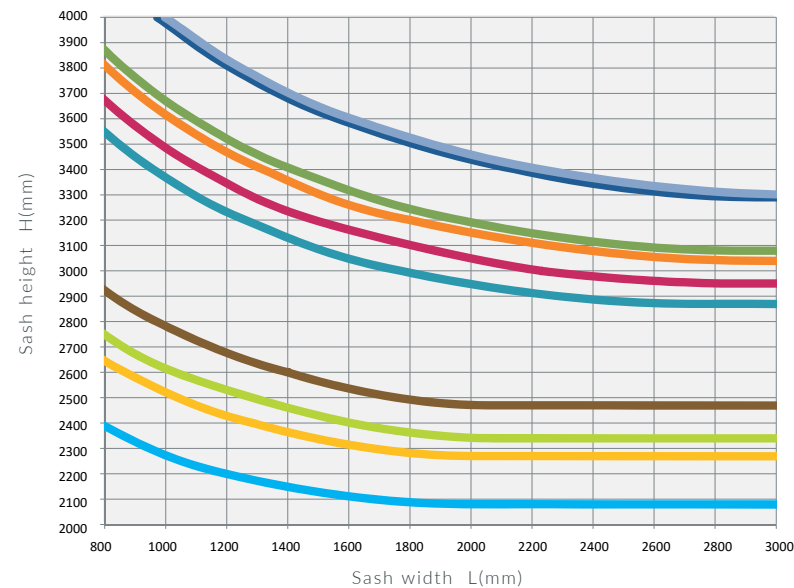
C



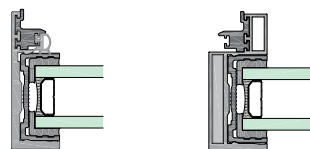
D

WIND LOAD DIAGRAMS

1.0
kN/m²

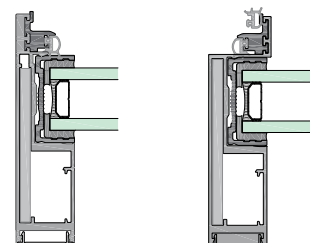


SOL



L₁

O₂



L₂

O₁

O₁ + Steel reinf.

L₂ + Steel reinf.

L₂

O₁

L₂ + Alum. reinf.

O₂

O₂ + Steel reinf.

O₂ + Alum. reinf.

O₁ + Alum. reinf.

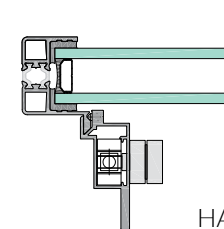
L₁

HA

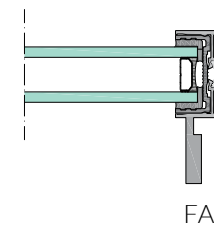
FA₁

HB

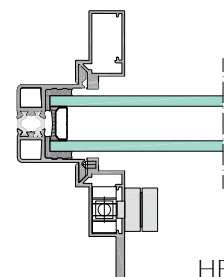
FA₂



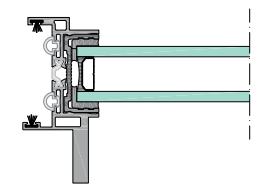
HA



FA₁

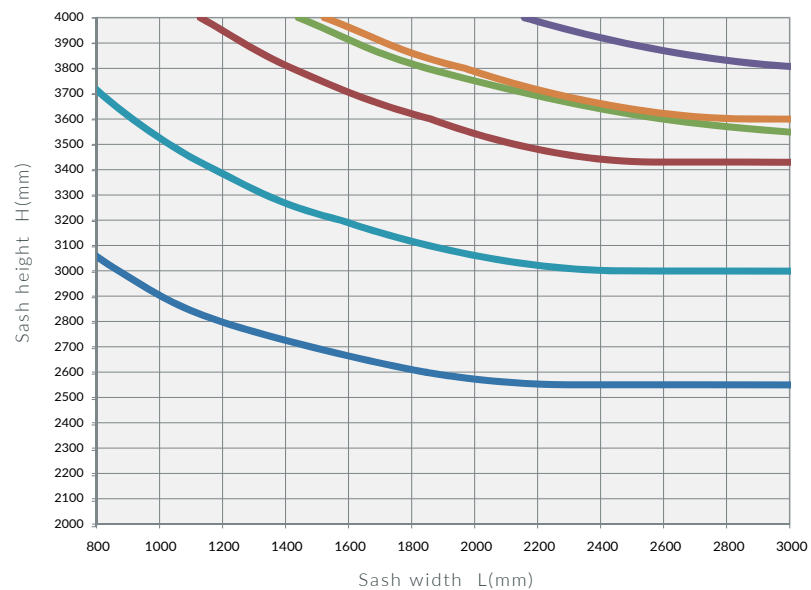


HB



FA₂

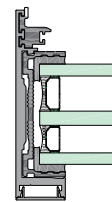
145
Km/h



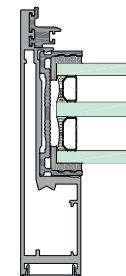
LUNA

- D
- C
- B + Steel reinf.
- B + Alum. reinf.
- B
- A

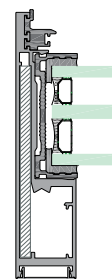
WIND LOAD DIAGRAMS



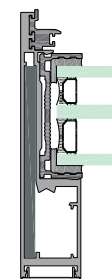
A



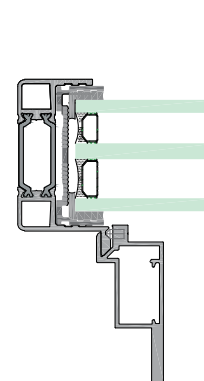
B



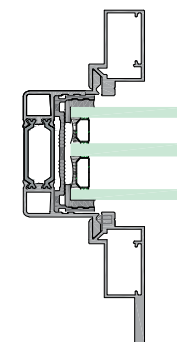
B + Alum. reinf.



B + Steel reinf.



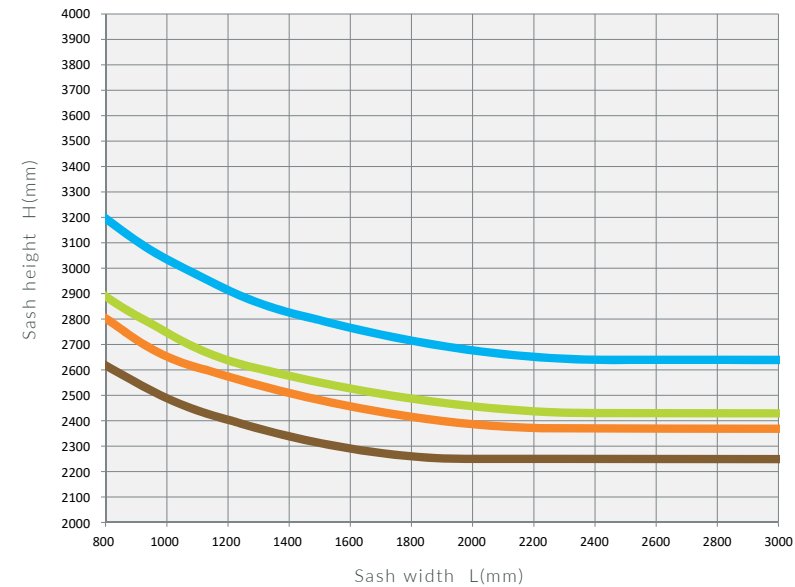
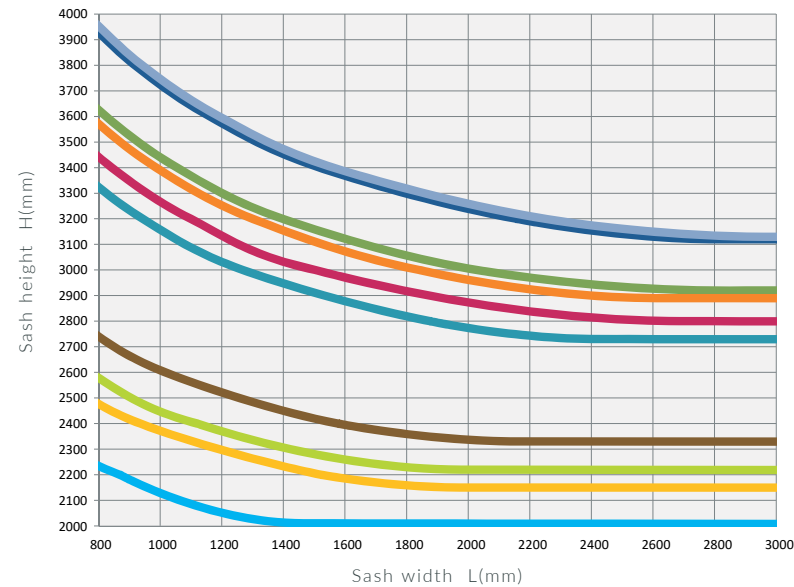
C



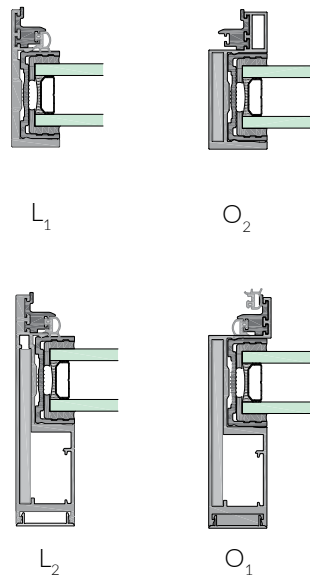
D

WIND LOAD DIAGRAMS

1.3
kN/m²



SOL



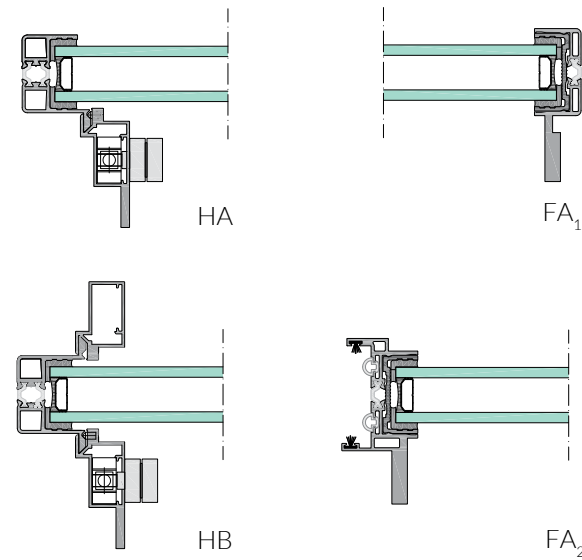
- O₁ + Steel reinf. —————
- L₂ + Steel reinf. —————
- L₂ —————
- O₁ —————
- L₂ + Alum. reinf. —————
- O₂ —————
- O₂ + Steel reinf. —————
- O₂ + Alum. reinf. —————
- O₁ + Alum. reinf. —————
- L₁ —————

HA

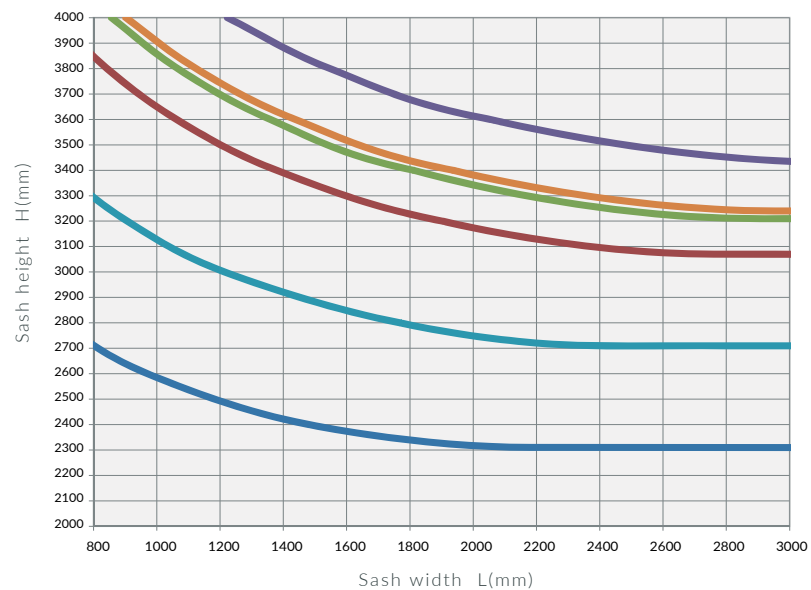
FA₁

HB

FA₂



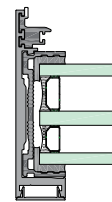
164
Km/h



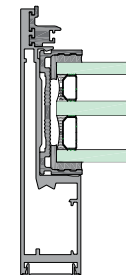
LUNA

- D
- C
- B + Steel reinf.
- B + Alum. reinf.
- B
- A

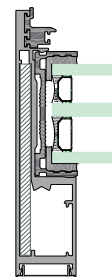
WIND LOAD DIAGRAMS



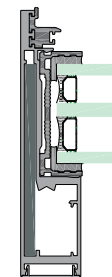
A



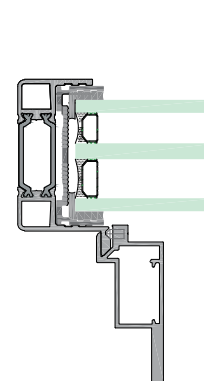
B



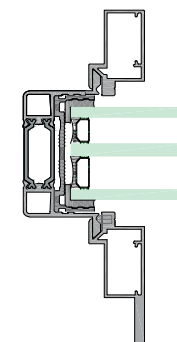
B + Alum. reinf.



B + Steel reinf.



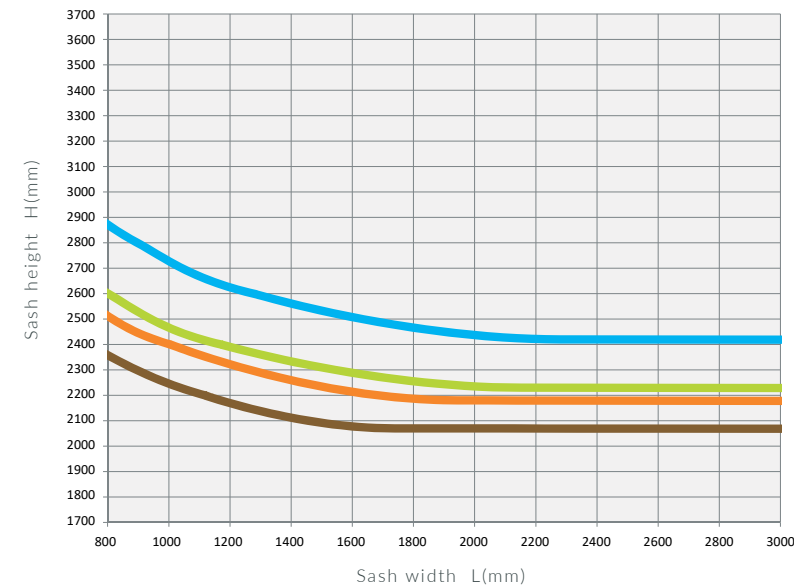
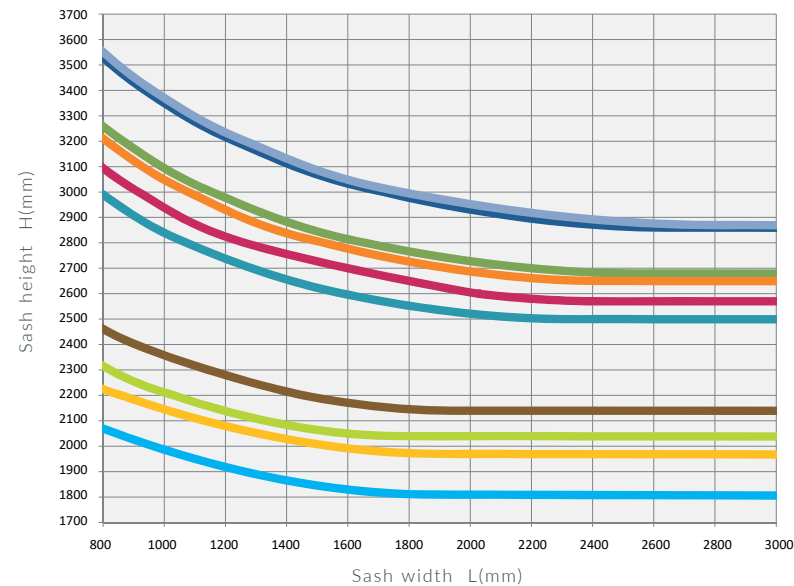
C



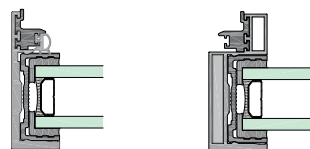
D

WIND LOAD DIAGRAMS

2.0
kN/m²

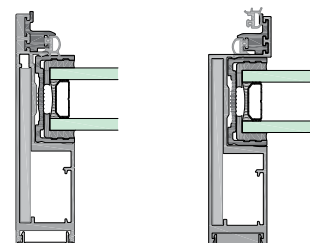


SOL



L₁

O₂



L₂

O₁

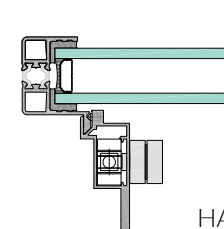
- O₁ + Steel reinf. —————
- L₂ + Steel reinf. —————
- L₂ —————
- O₁ —————
- L₂ + Alum. reinf. —————
- O₂ —————
- O₂ + Steel reinf. —————
- O₂ + Alum. reinf. —————
- O₁ + Alum. reinf. —————
- L₁ —————

HA

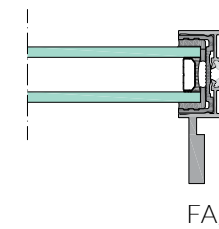
FA₁

HB

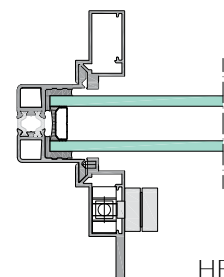
FA₂



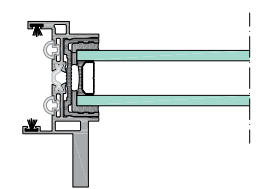
HA



FA₁

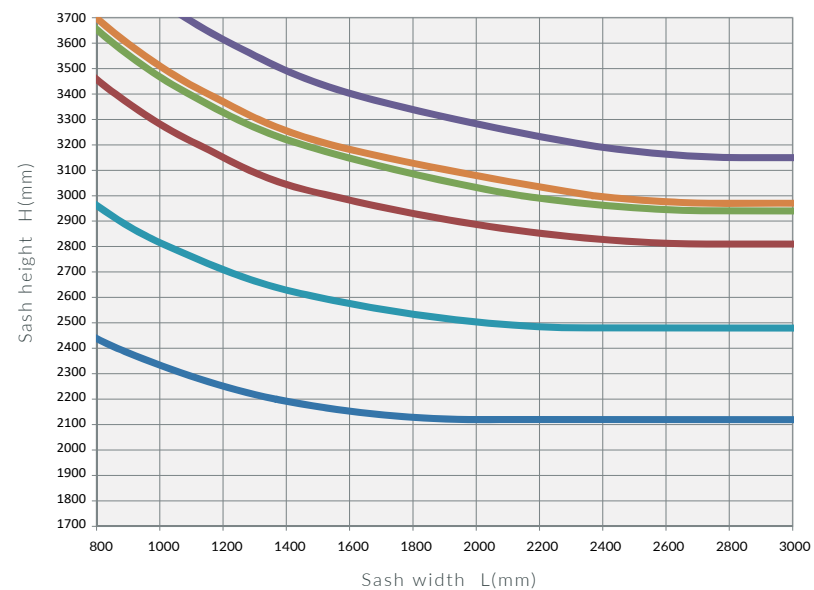


HB



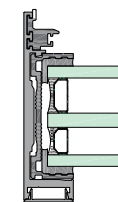
FA₂

200
Km/h

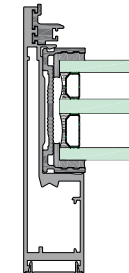


LUNA

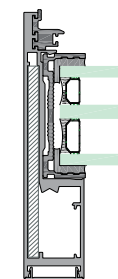
- D
- C
- B + Steel reinf.
- B + Alum. reinf.
- B
- A



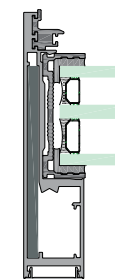
A



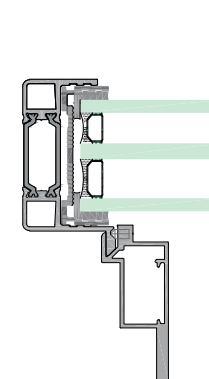
B



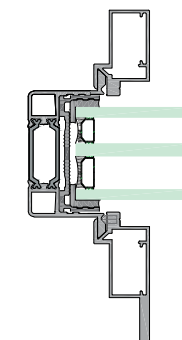
B + Alum. reinf.



B + Steel reinf.

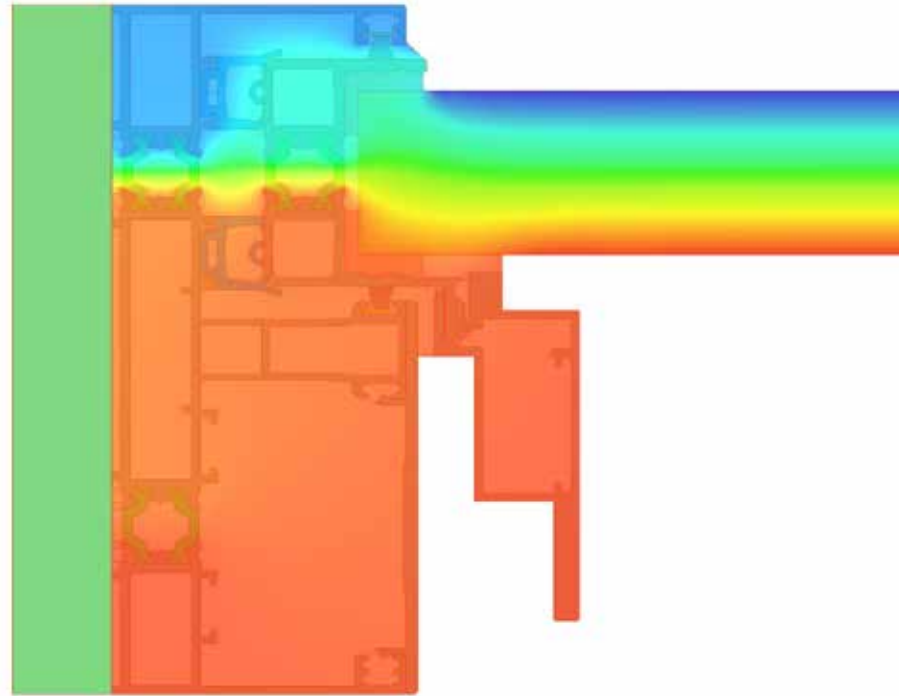


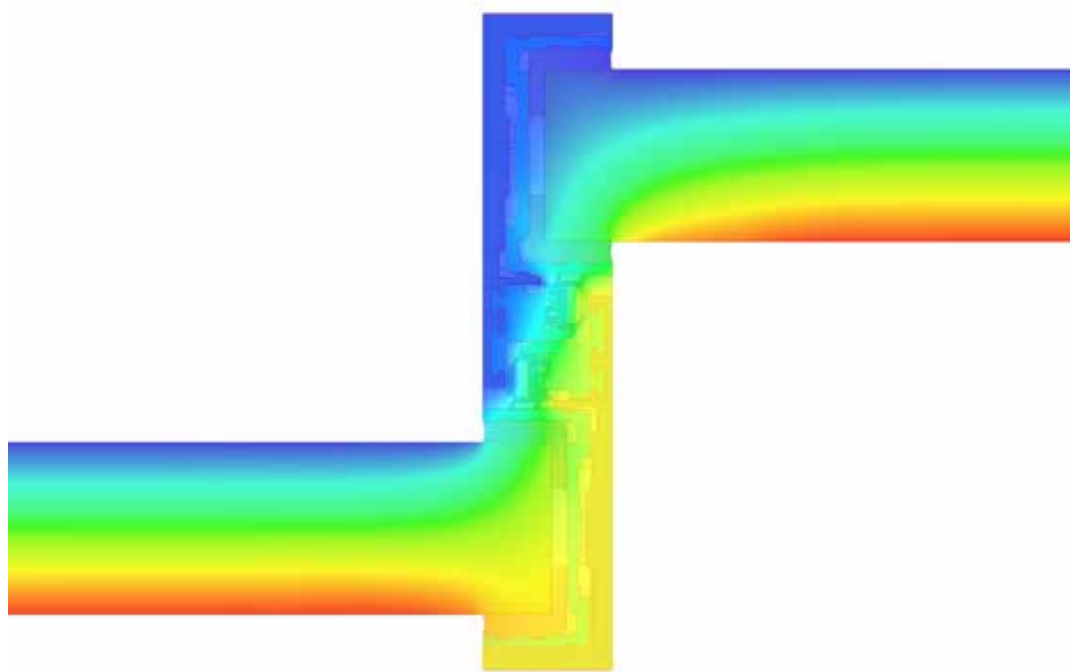
C



D

SOL • THERMAL PERFORMANCE





UW VALUES 0.7 - 1.7 W/M²K DEPENDING ON THE UG

