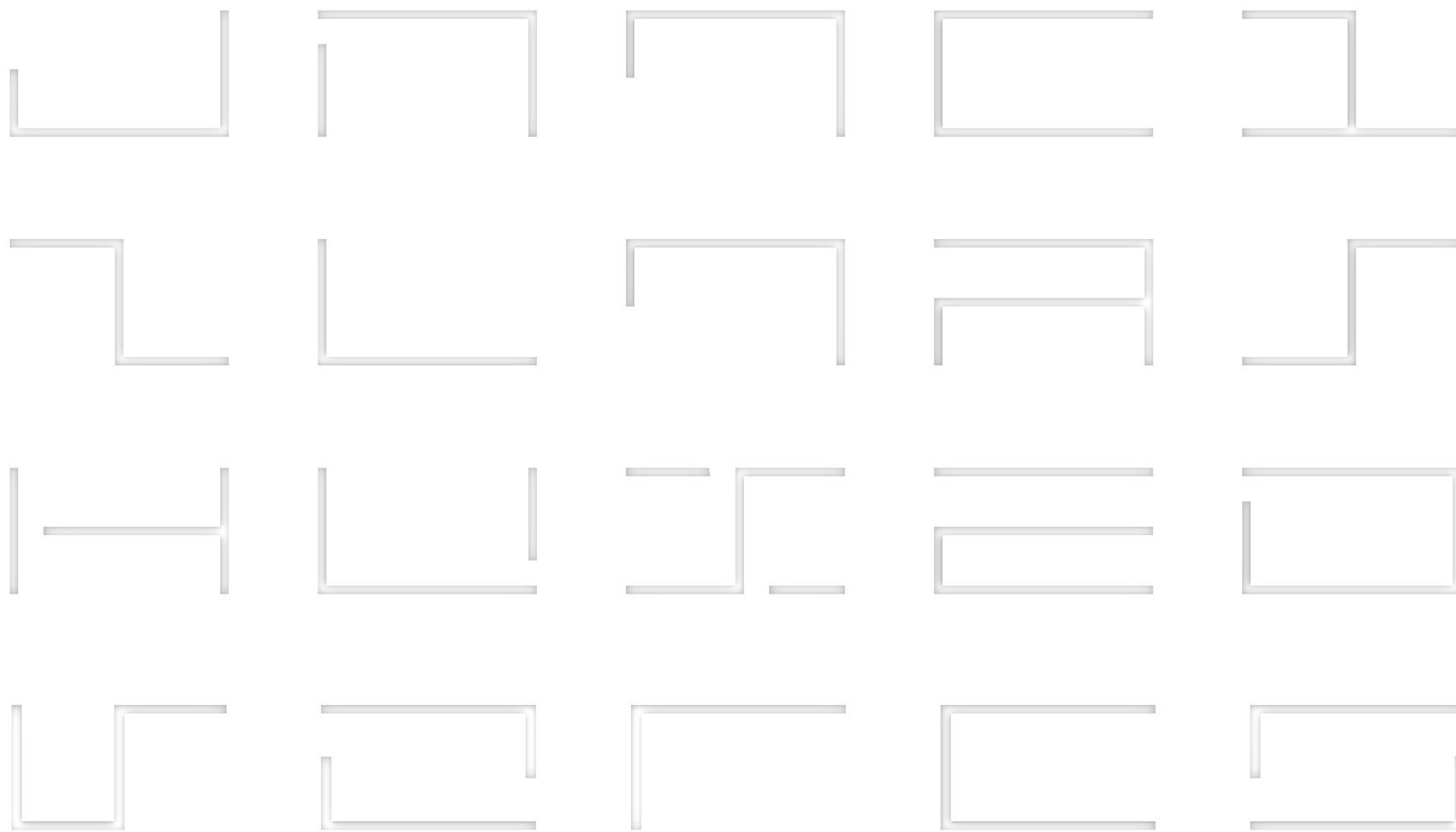


GUTMANN
ORAMA





Gutmann Orama Architectural Catalogue

Edition 2.0 / 2015 · 9

First Edition 10 · 2014

Technical drawings: **Orama R & D**

Catalogue design: **Role Play** / roleplay.gr

Request digital drawings by contacting us

at info@oramaminimalframes.com

or visit www.oramaminimalframes.com/downloads

2	Introduction
3	Technical sheet
4	OMICRON
4.1	Typical Sections
4.2	Multitrack Frames
4.3	Labyrinth Profiles
4.4	Glass Combinations
4.5	Invisible base
5	OMEGA
5.1	Typical Sections
5.2	Multitrack Frames
5.3	Labyrinth Profiles
5.3	Glass Combinations
6	Locking devices
7	Handle
8	Motorization
9	Base Sections
10	Installation Mode
11	Main frame solutions
11.1	F Fix
11.2	FF Double Fix
11.3	SS Double Sliding
11.4	SF Sliding Fix
11.5	Pocket single track
11.6	Pocket double track
11.7	FSSF Sliding on different track
11.8	FSSF Sliding on same track
11.9	FSF Fix · Sliding · Fix
11.10	SSF Double Sliding · Fix
11.11	SSS Triple Sliding
11.12	FSFSF Fix · Sliding · Fix · Sliding · Fix
11.13	F+F Fixed corner
11.14	FF+FF Double fixed corner
11.15	FS+SF Open corner sliding inside
11.16	FS+SF Open corner sliding outside
12	Wind load diagrams
13	Thermal performance

INTRODUCTION

2

A completely new system has been elaborated, based on a 20 year experience in aluminum profiles, aiming to meet the highest standards in elegance, comfort, performance and reasonable prices.

The system offers the 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 and silent sliding action and extreme ease of movement with large glass areas.

Concealed **electric motorization 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 ORAMA 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.



OMICRON is our standard minimal frames system incorporating all the significant features of the Orama system in a double-glazed setup.



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



· THE GUTMANN ORAMA SYSTEM ·

3

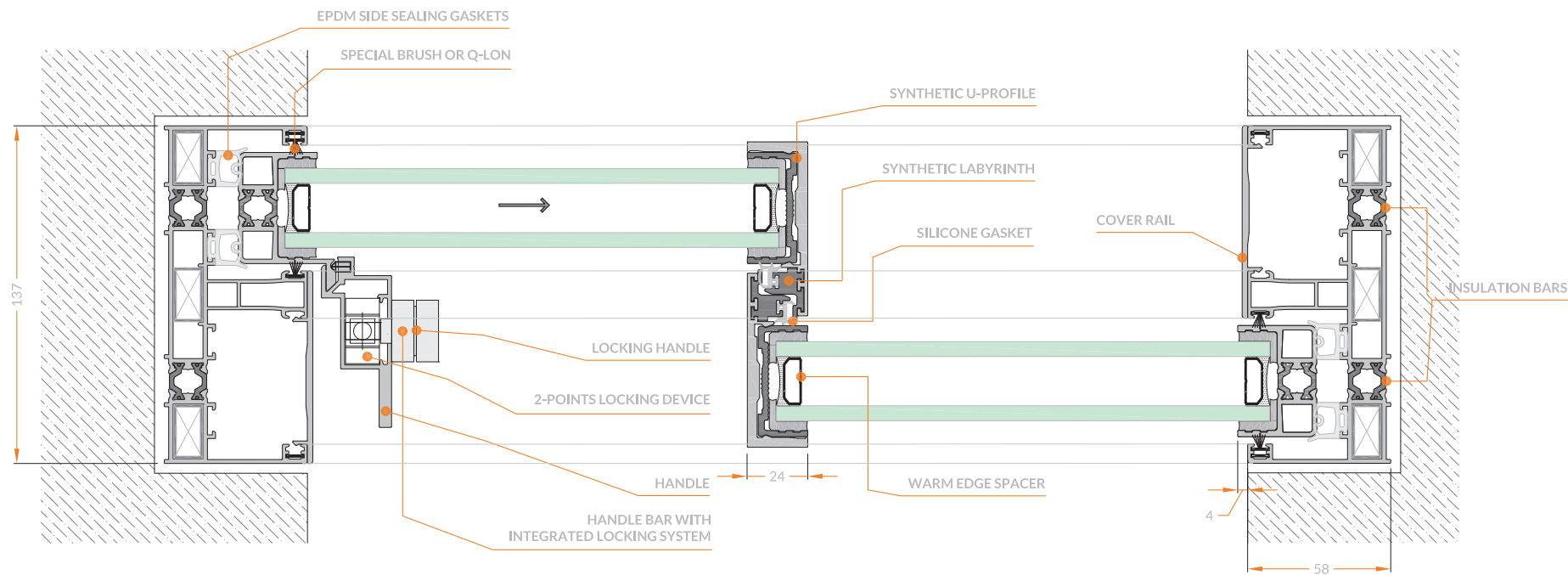
	OMICRON	ΩMEGA	
Facing width	30 - 24mm	30 - 24mm	
Installation flush to the floor	yes	yes	
Installation flush to the ceiling	yes	yes	
Max. leaf height	4.5m	6.5m	
Max. leaf width	3m	3m	
Max. leaf weight	500kg	1000kg	
Max. sliding leaf area	12m ²	16m ²	
Max. fix leaf dimension	18m ²	21m ²	
Motorization	yes	yes	
"Invisible" railing (optional)	yes	no	
Glass thickness	36 - 30 mm	54 - 46 mm	

· THE GUTMANN ORAMA CERTIFICATES ·

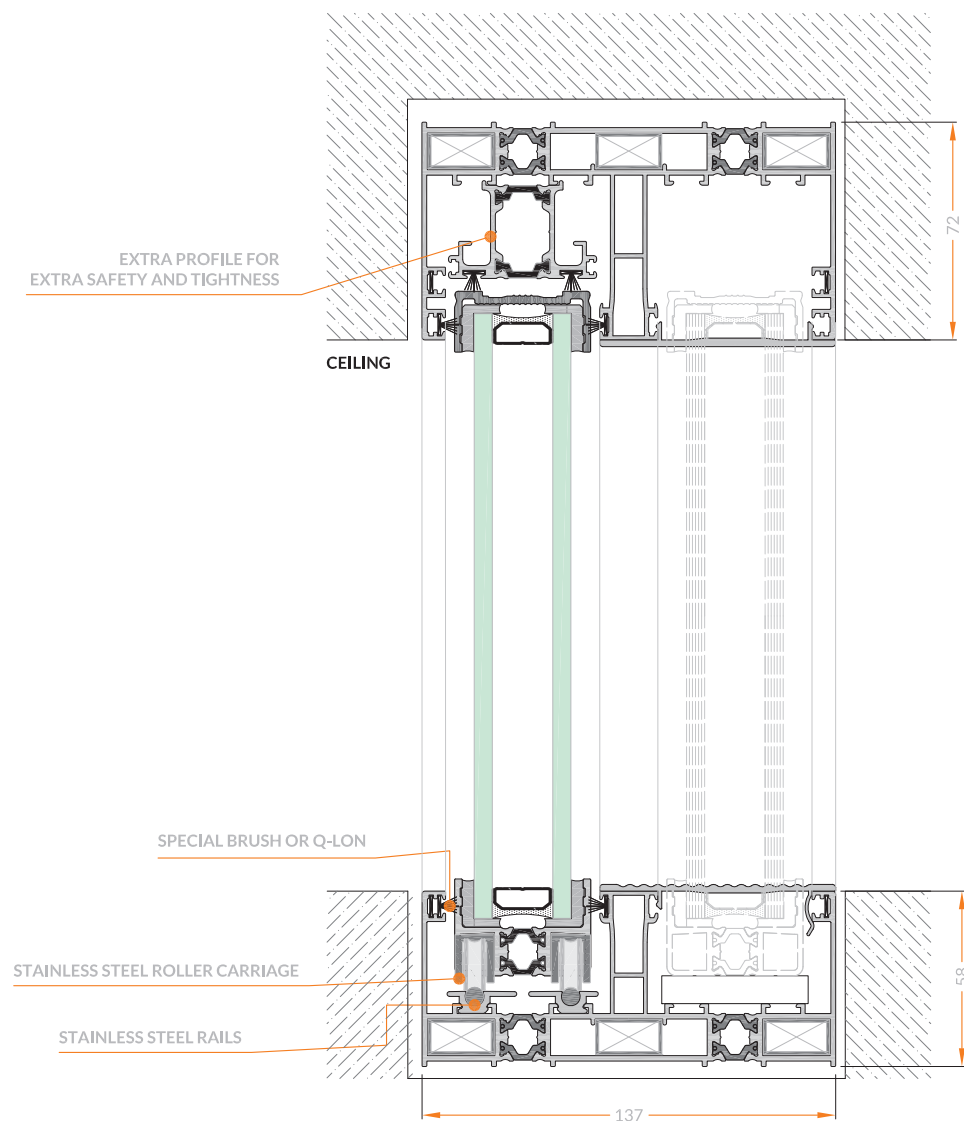
	OMICRON	ΩMEGA	
Uw values (depending on glass type & dimension)	From 0,7 to 1,7 W/mK		
Air permeability	EN 12207 : Class 4		
Resistance to rain penetration	EN 12208 : Class 7A	EN 12208 : Class 8A	
Resistance to wind loads	EN 12210 : Class C5		
Sound insulation	up to 42 dB DIN EN ISO 3:2005-140		
Resistance to burglary	ENV 1627 WK2-/RC2- (under testing)		

OMICRON • TYPICAL SECTIONS

4.1



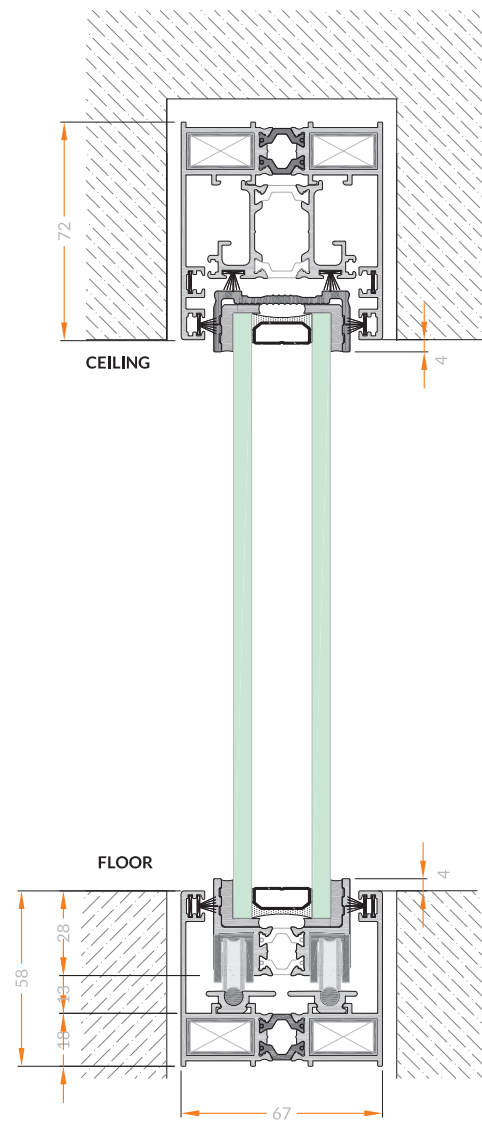
HORIZONTAL SECTION



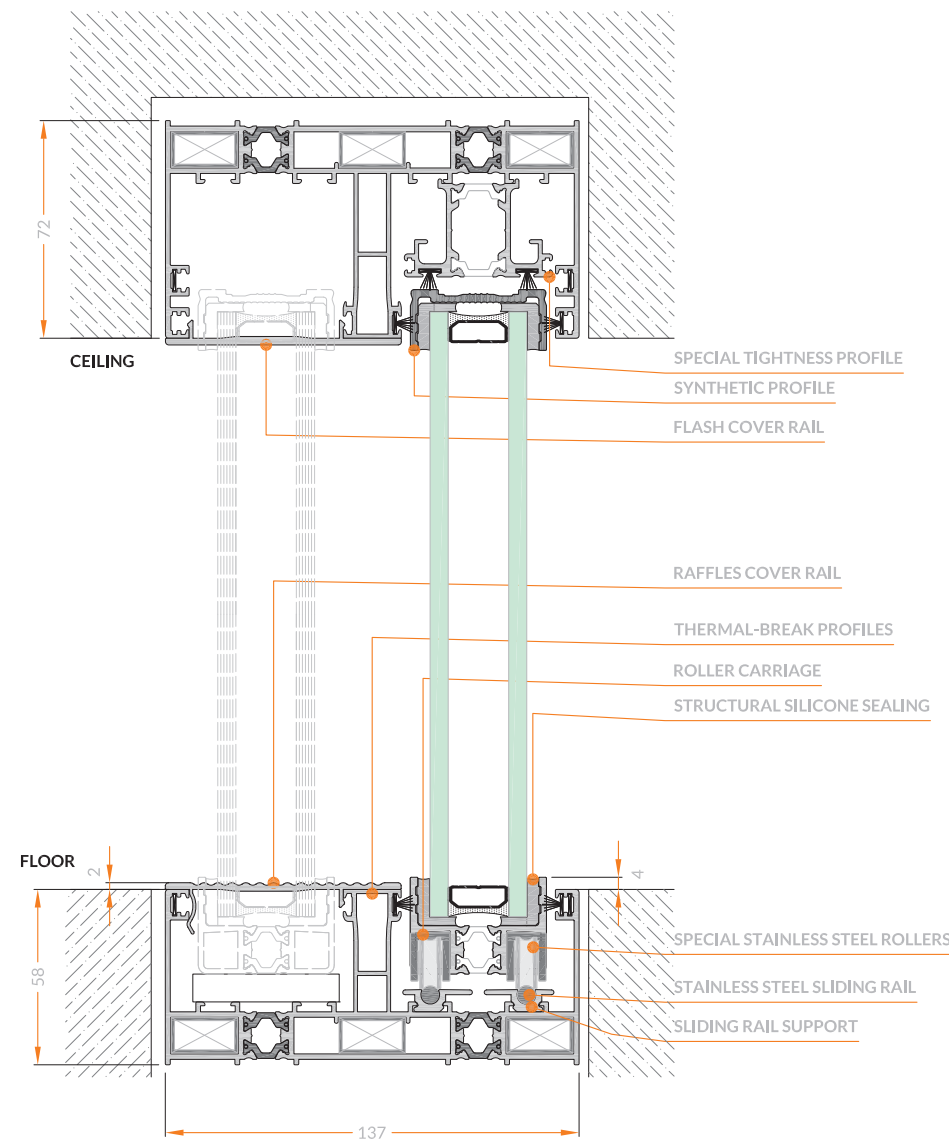
VERTICAL SECTION

OMICRON • MULTI-TRACK FRAMES

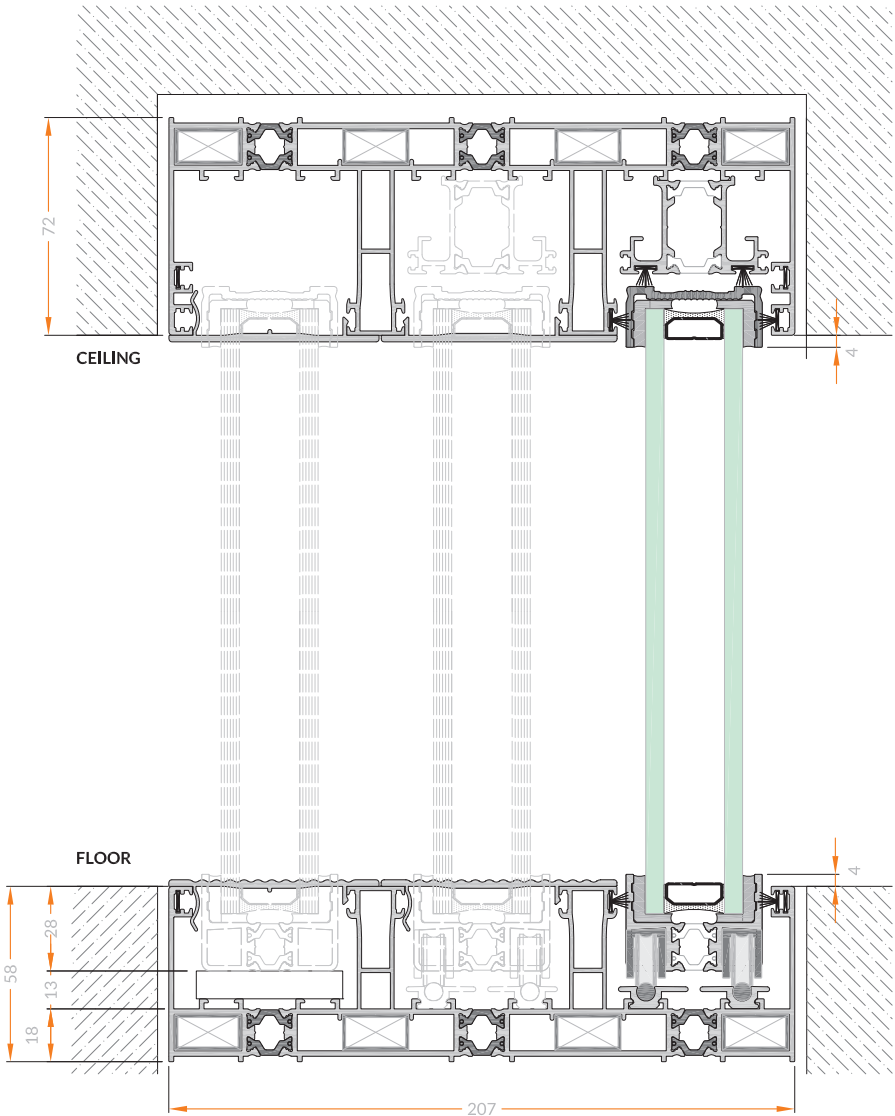
4.2



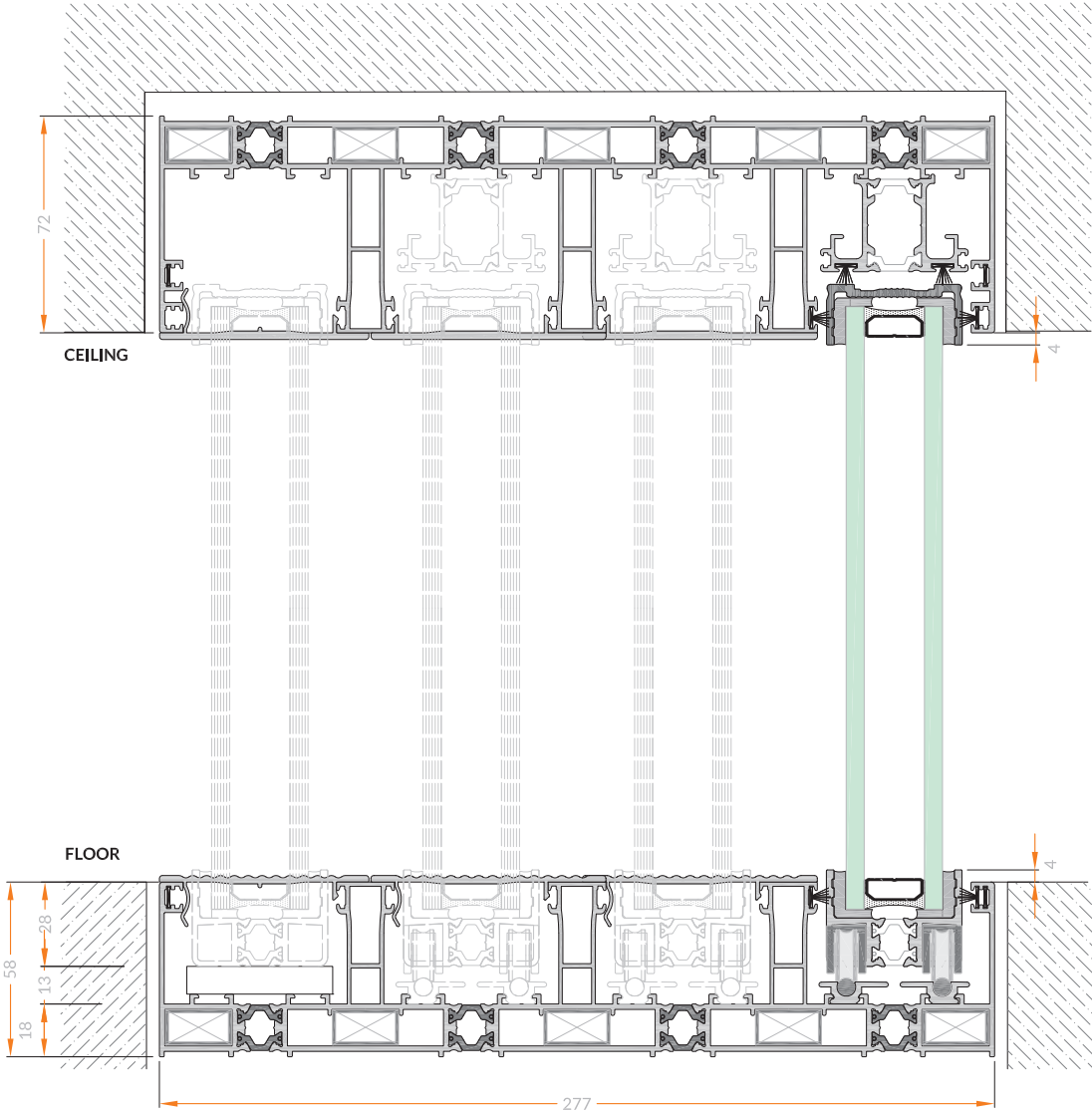
SINGLE TRACK FRAME • SLIDING • FIX



DOUBLE TRACK FRAME • SLIDING • FIX



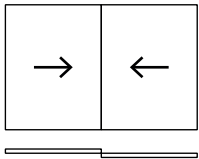
TRIPLE TRACK FRAME · S · S · F



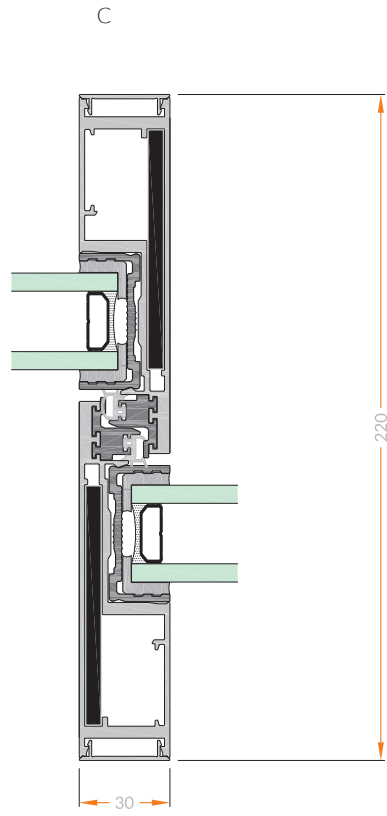
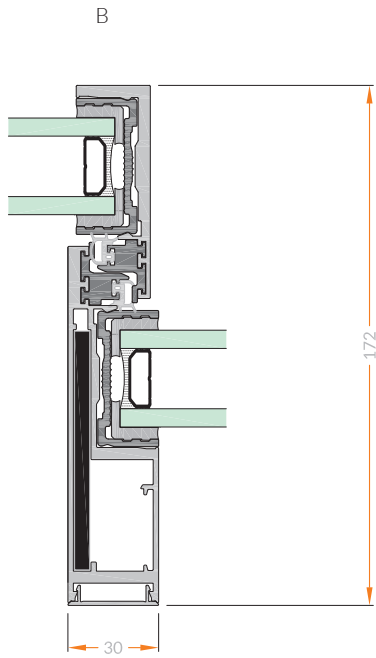
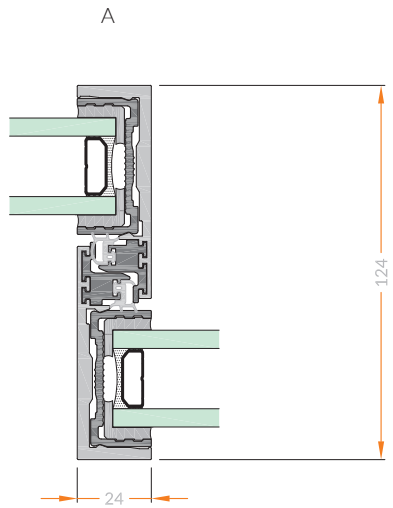
QUADRUPLE TRACK FRAME · S · S · S · F

OMICRON • LABYRINTH PROFILES

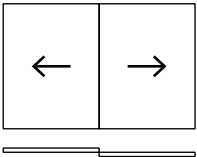
4.3



Standard
sliding frames
(different track)



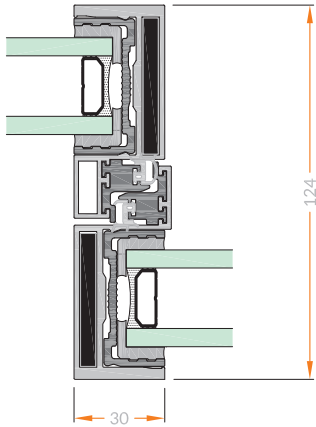
Steel reinforcement
when statically required



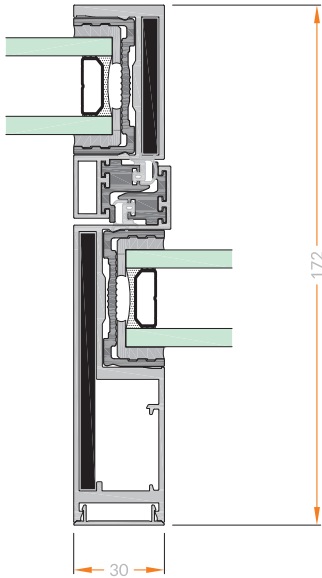
Sliding away
from each other
(different track)

4.3

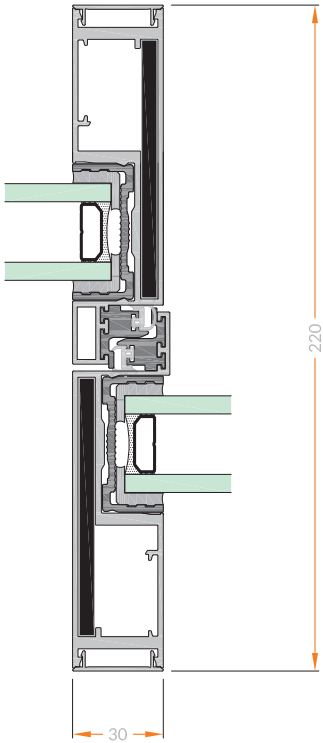
E



D



F

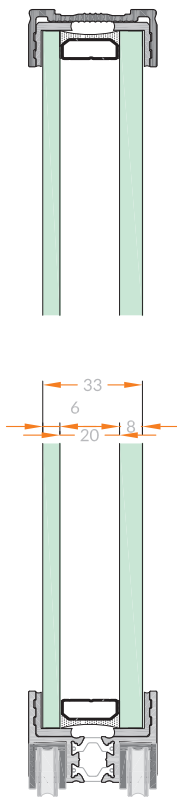


Steel reinforcement
when statically required

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

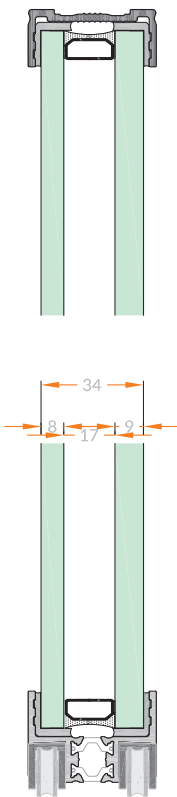
4.4

Double Glass



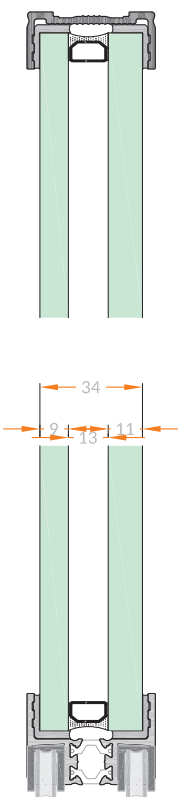
6 · 21 · 44.1
D = 35mm

Double Glass



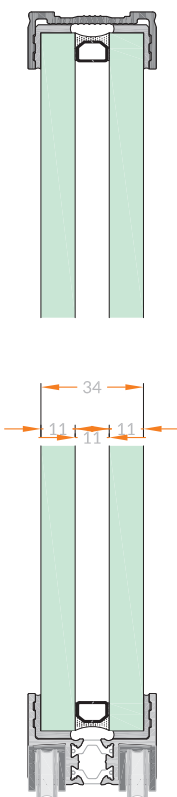
44.1 · 18 · 55.1
D = 36mm

Double Glass



10 · 14 · 66.1
D = 36mm

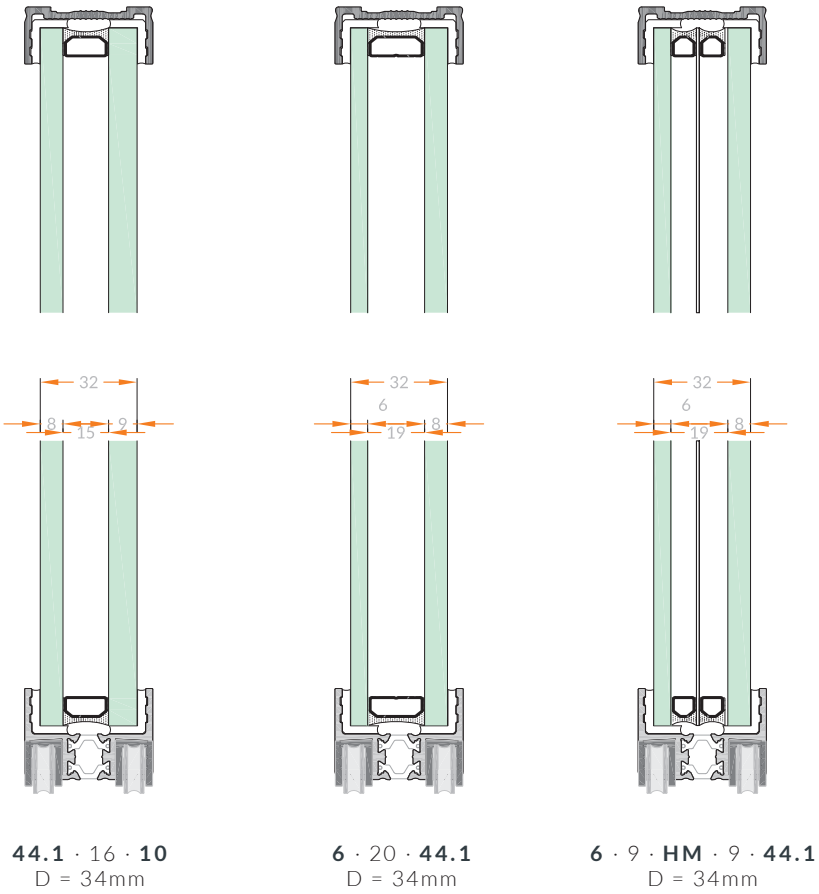
Double Glass



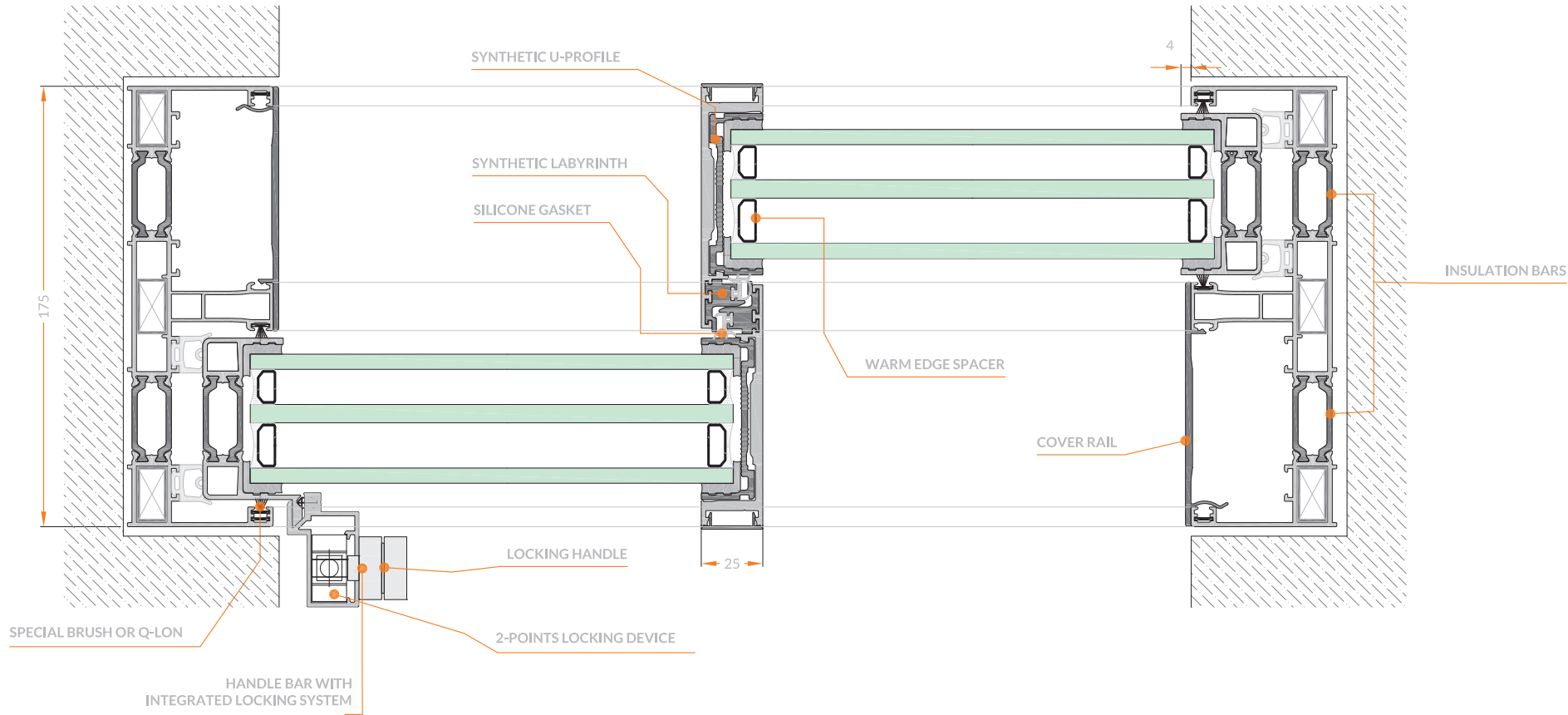
66.1 · 12 · 66.1
D = 36mm

HEAT MIRROR GLASS

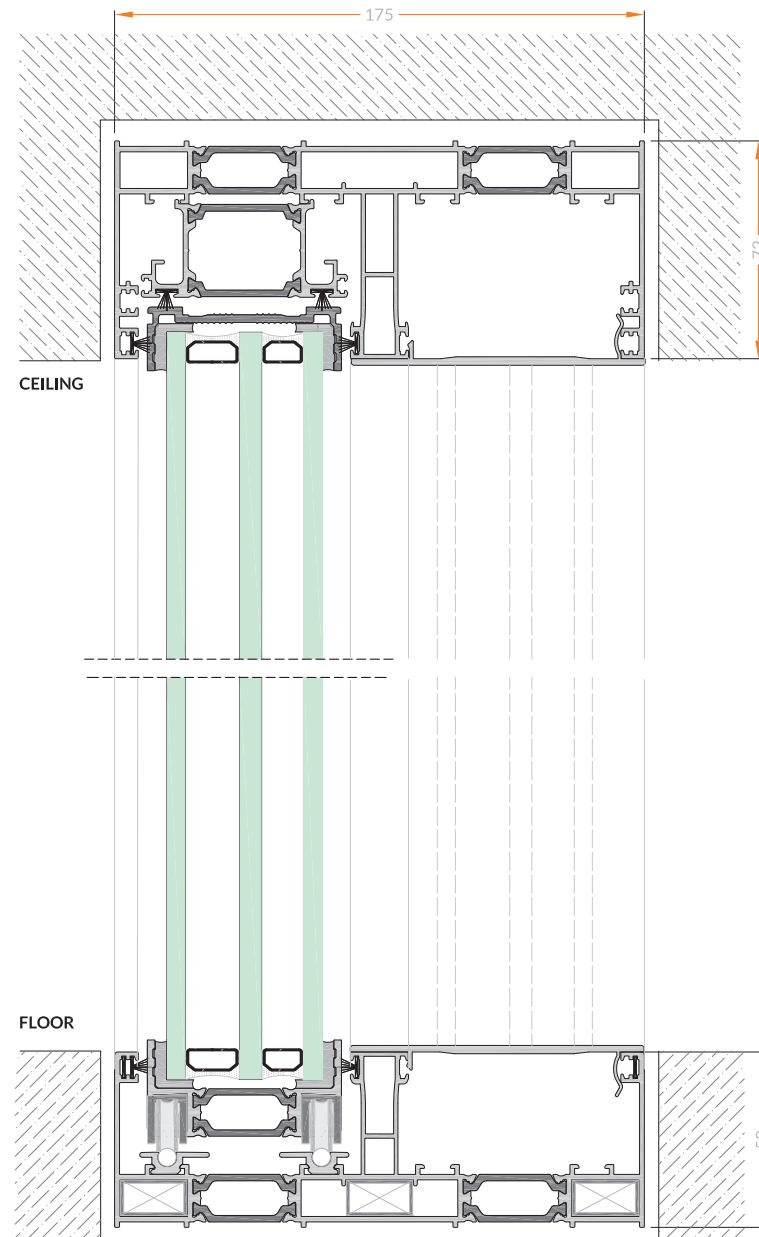
4.4



5.1

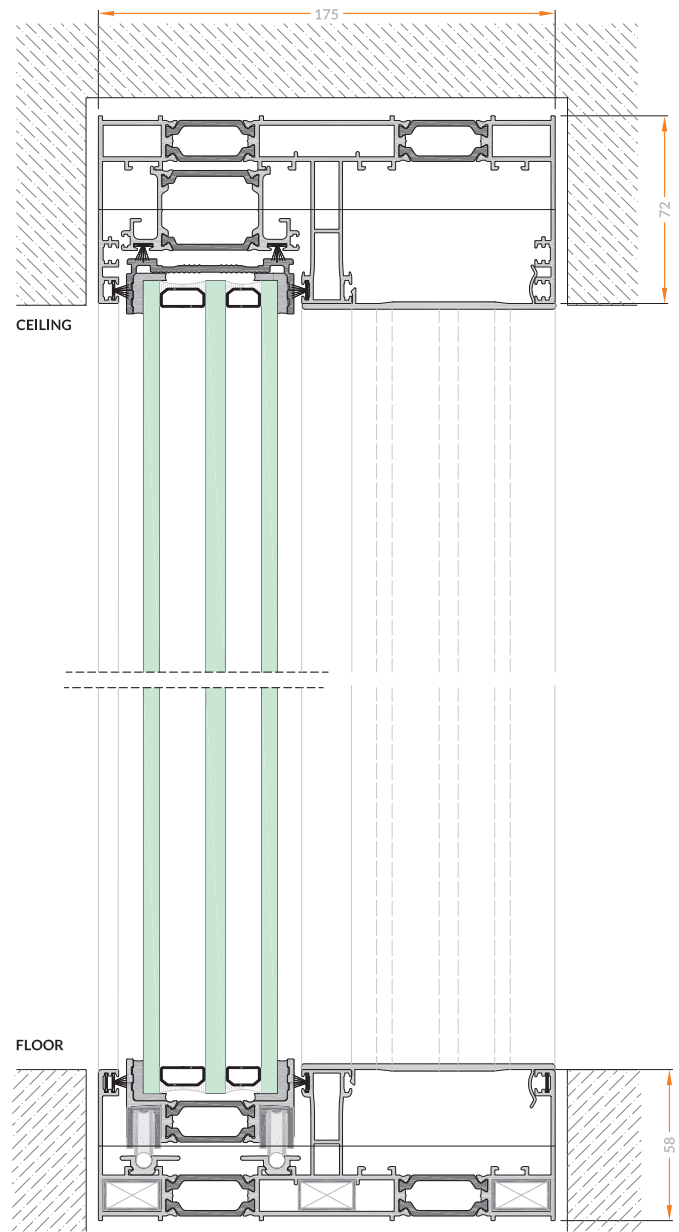
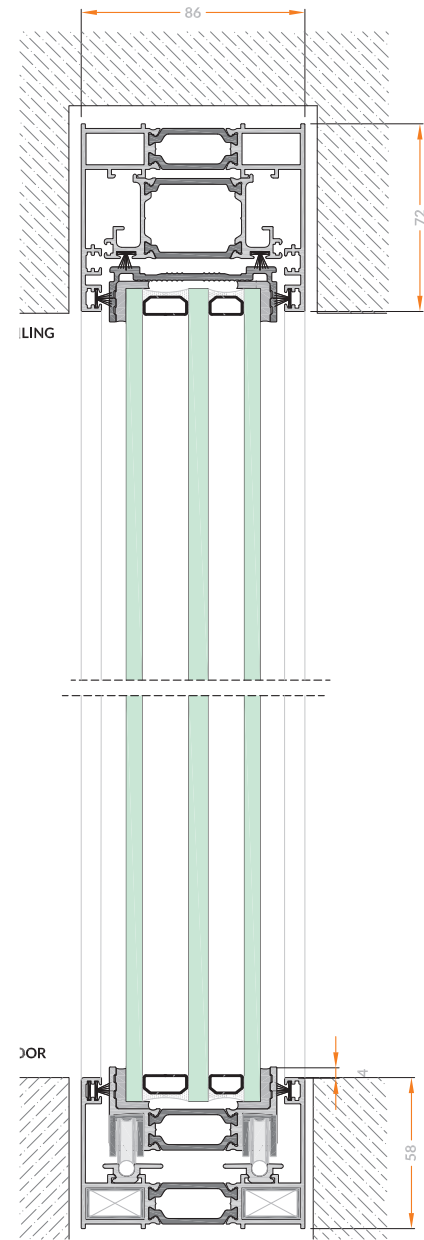


HORIZONTAL SECTION

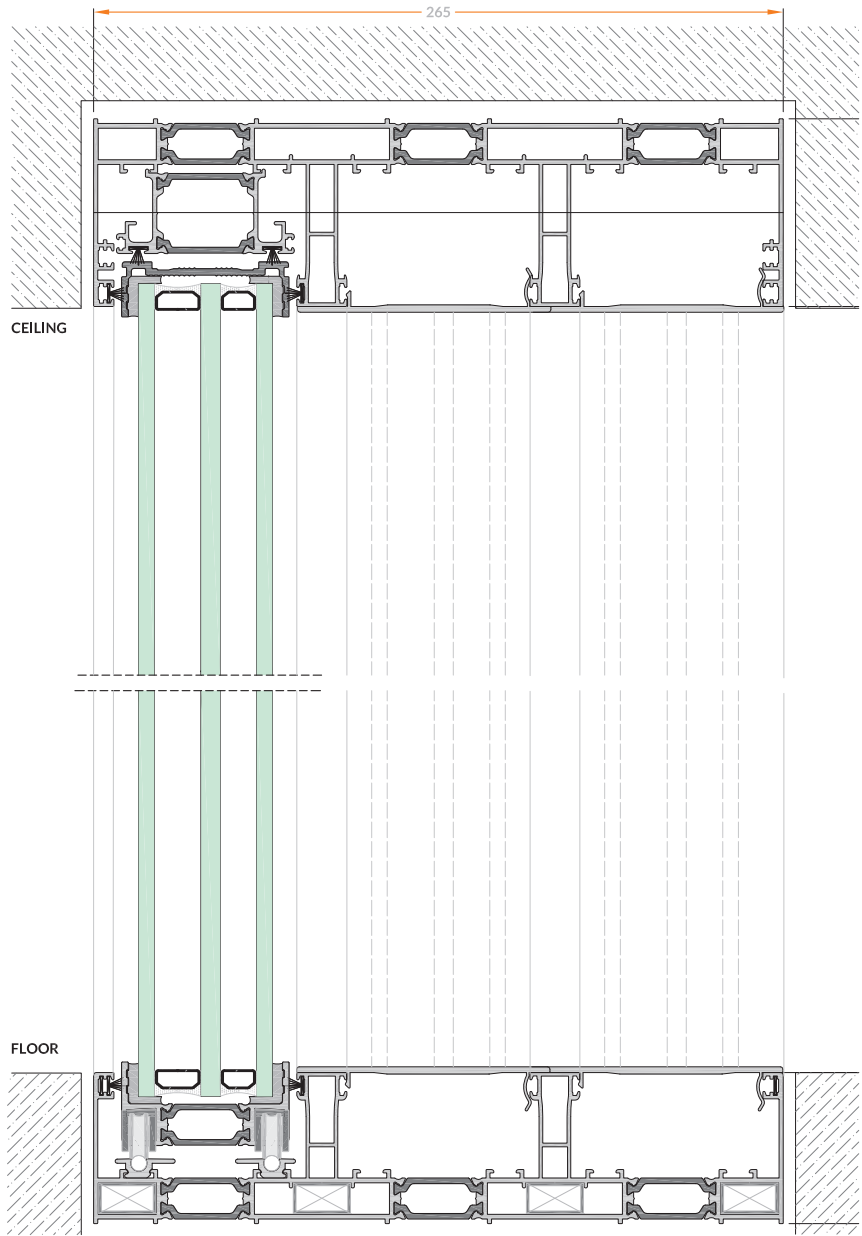


VERTICAL SECTION

5.2

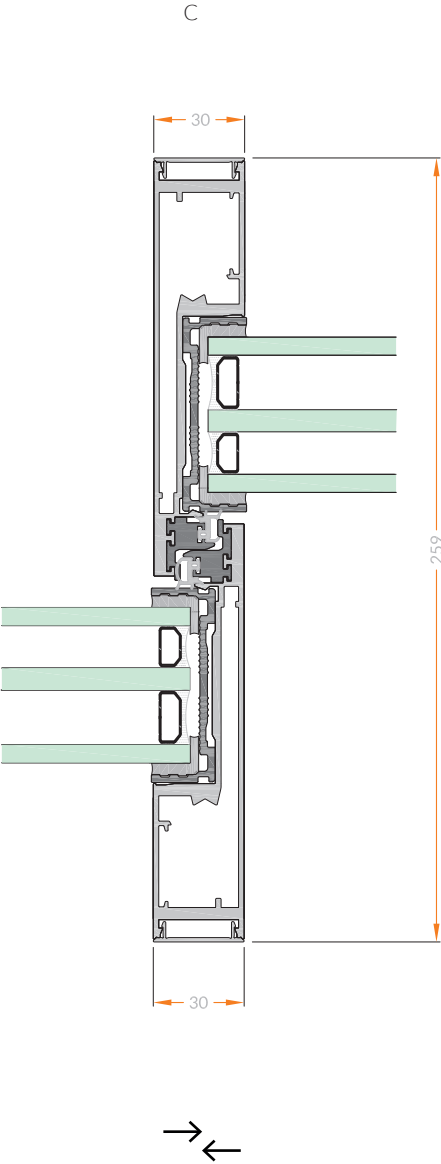
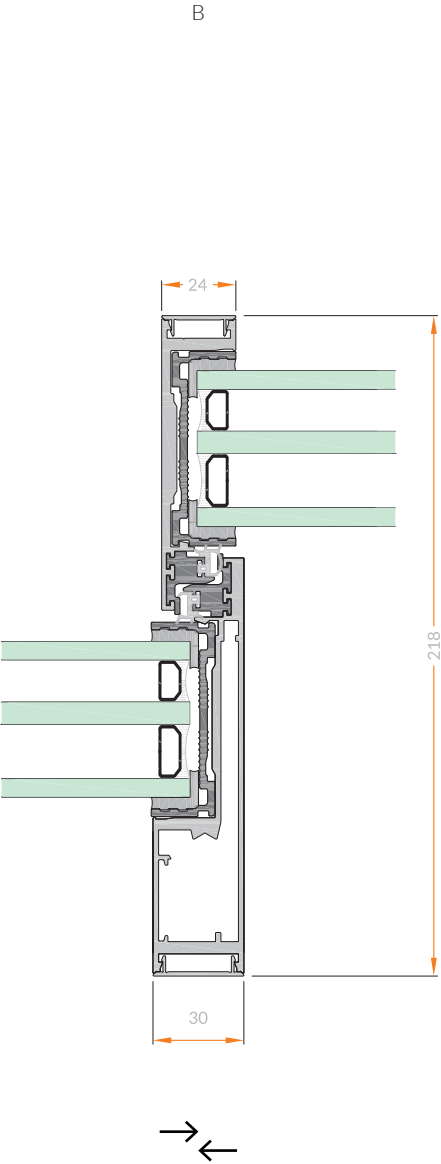
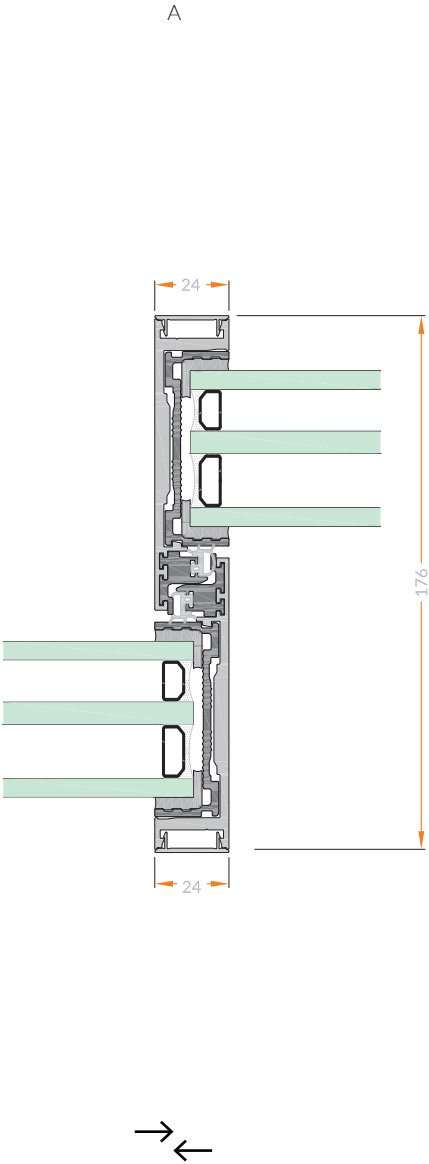


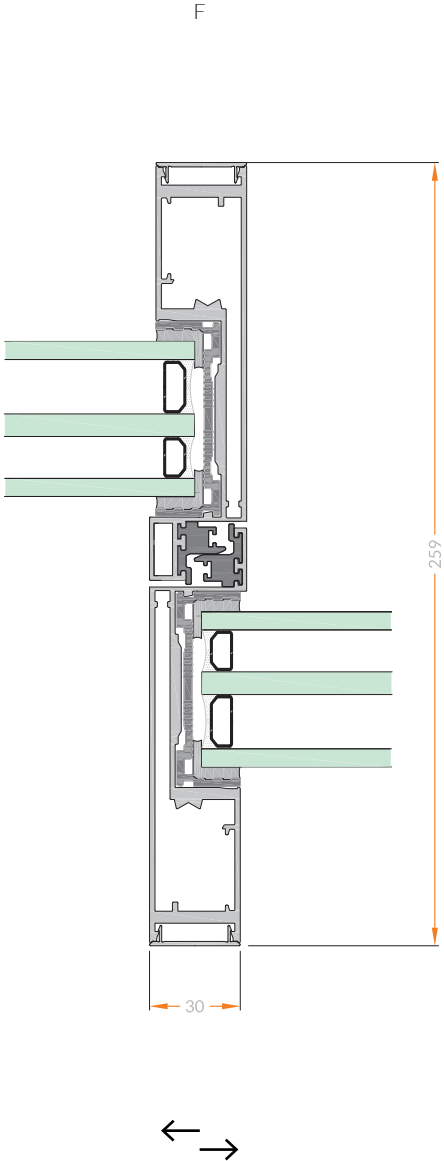
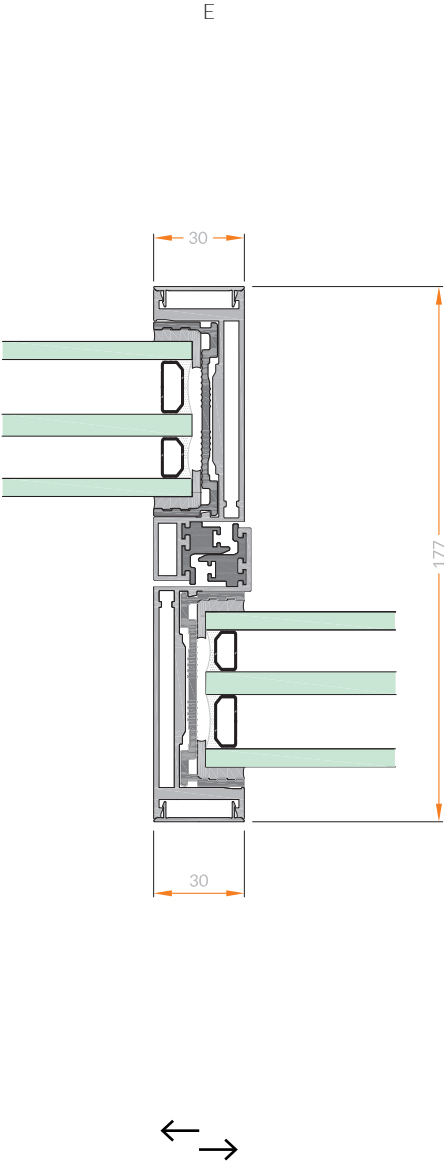
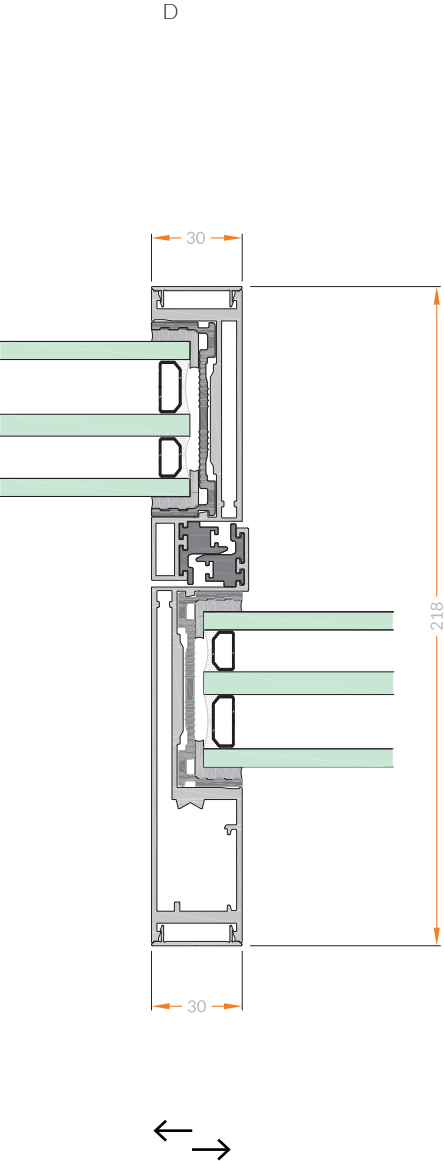
VERTICAL SECTIONS



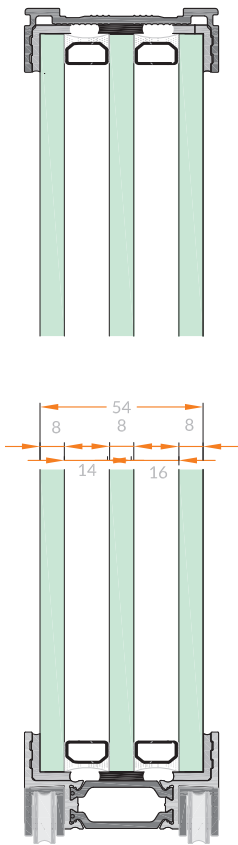
VERTICAL SECTION

5.3

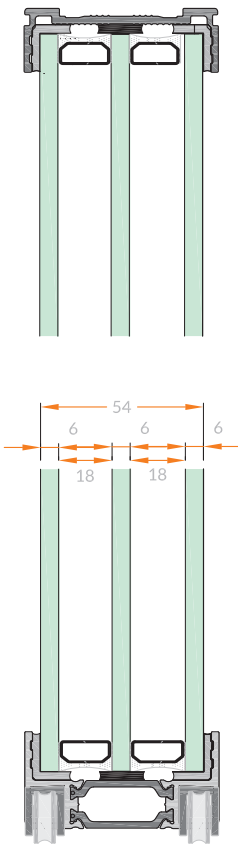




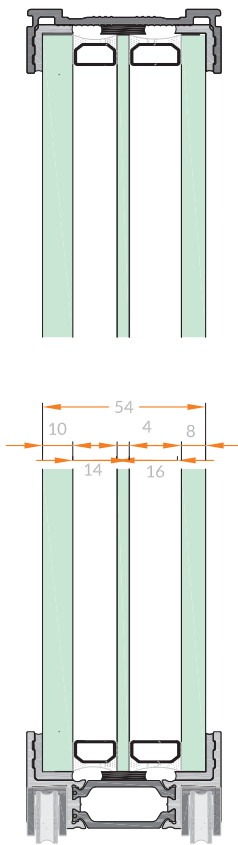
5.4



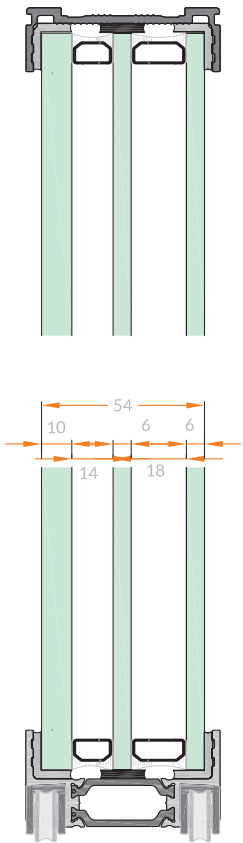
8 · 14 · 8 · 16 · 8
D = 54mm



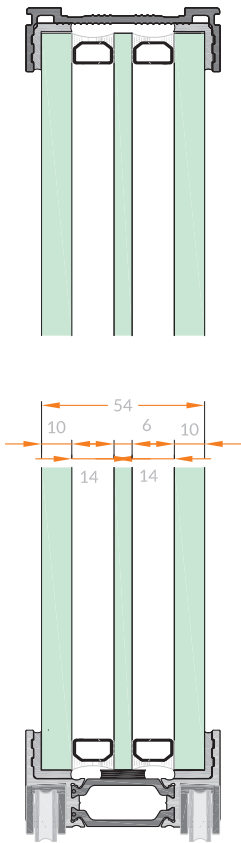
6 · 18 · 6 · 18 · 6
D = 54mm



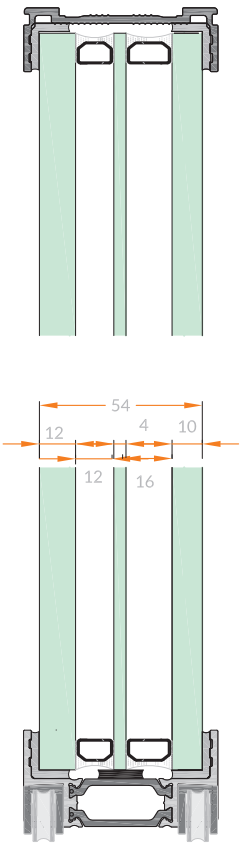
10 · 14 · 4 · 14 · 8
D = 54mm



10 · 14 · 6 · 18 · 6
D = 54mm



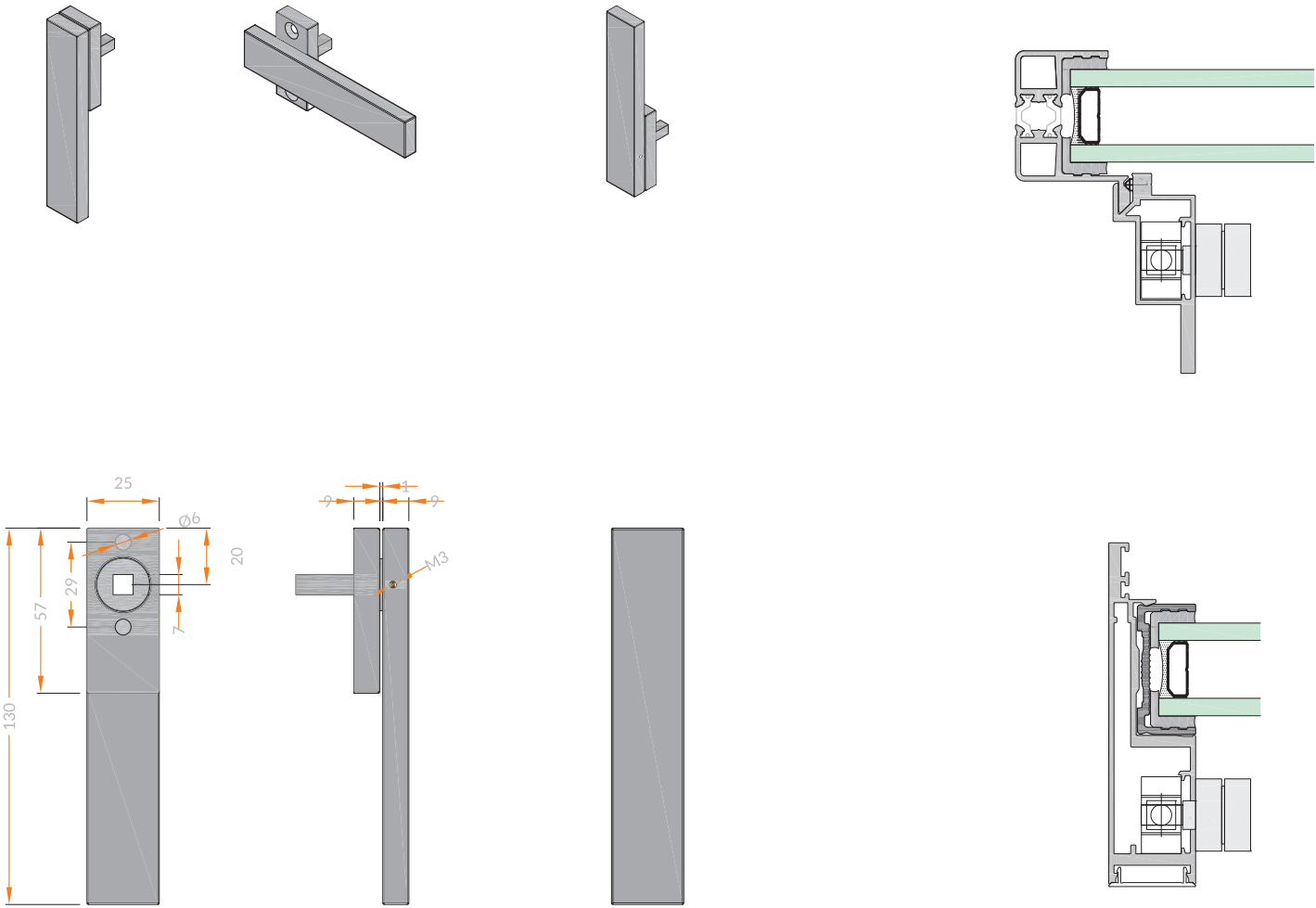
10 · 14 · 6 · 14 · 10
D = 54mm

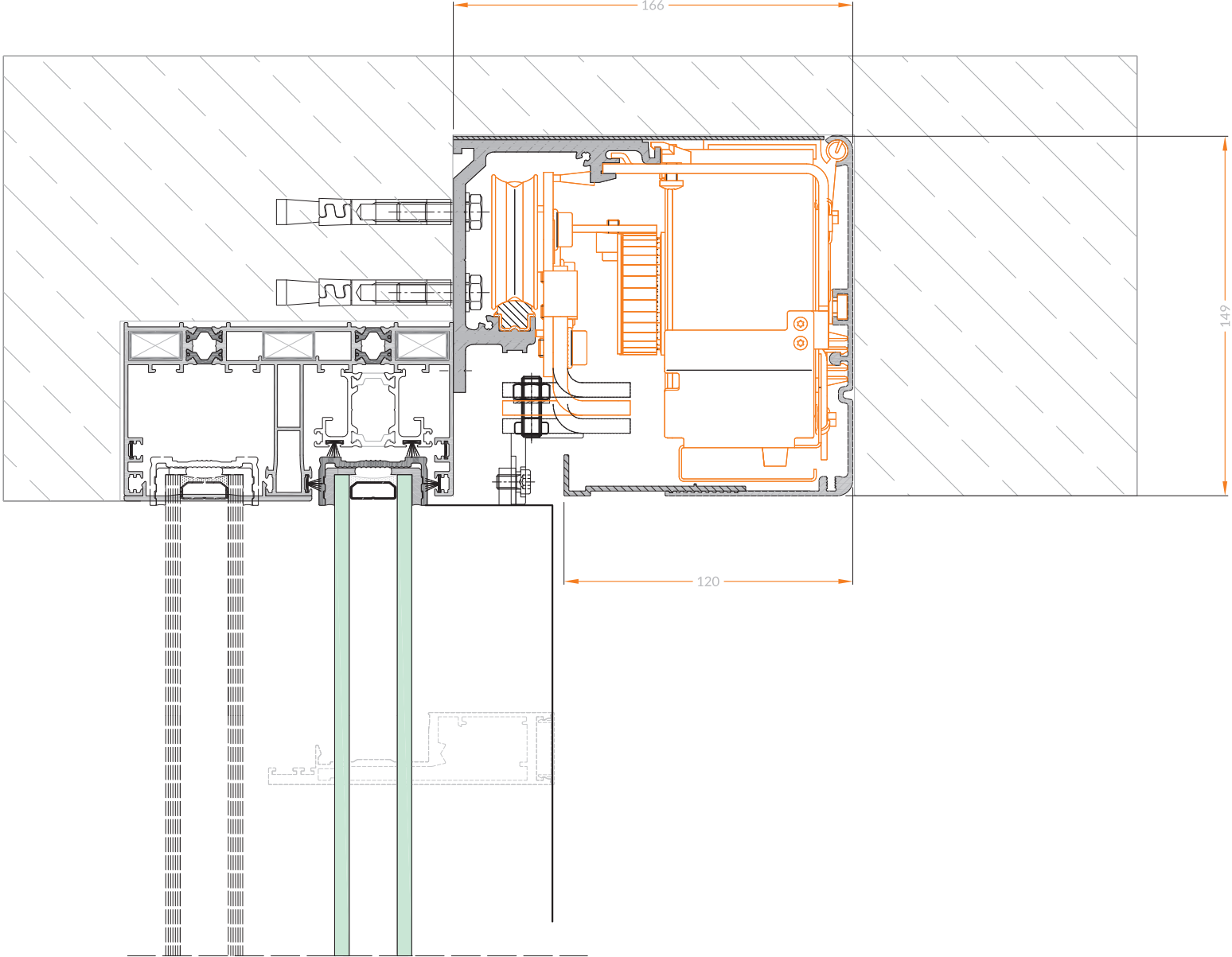


12 · 12 · 4 · 16 · 10
D = 54mm

HANDLE

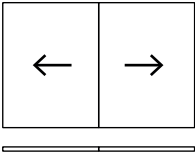
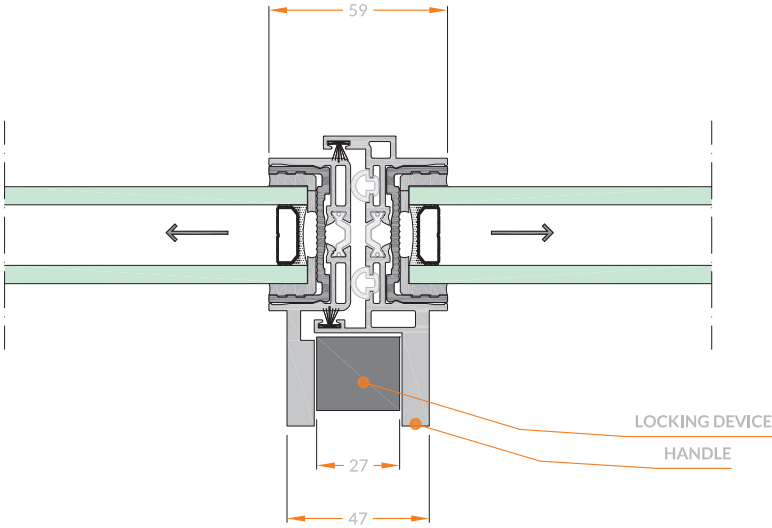
7



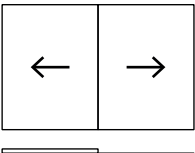
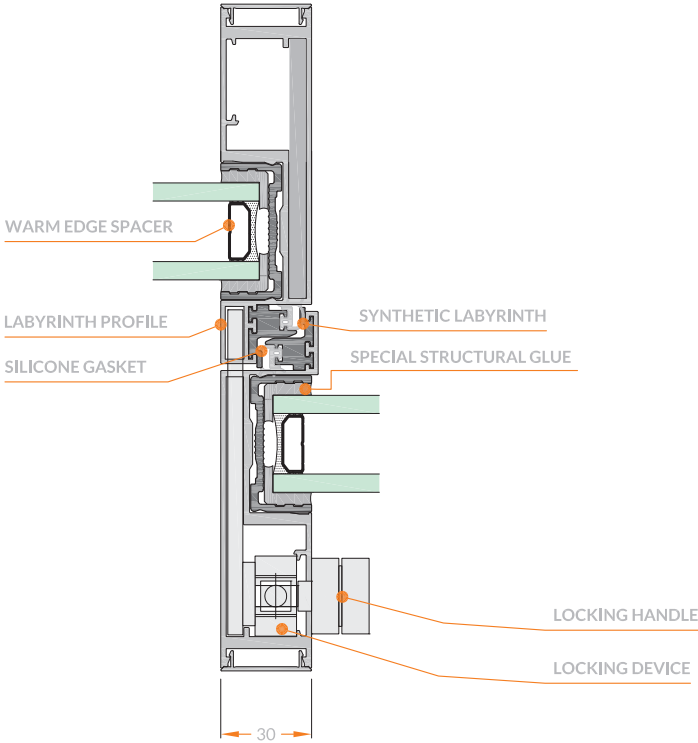


LOCKING DEVICES

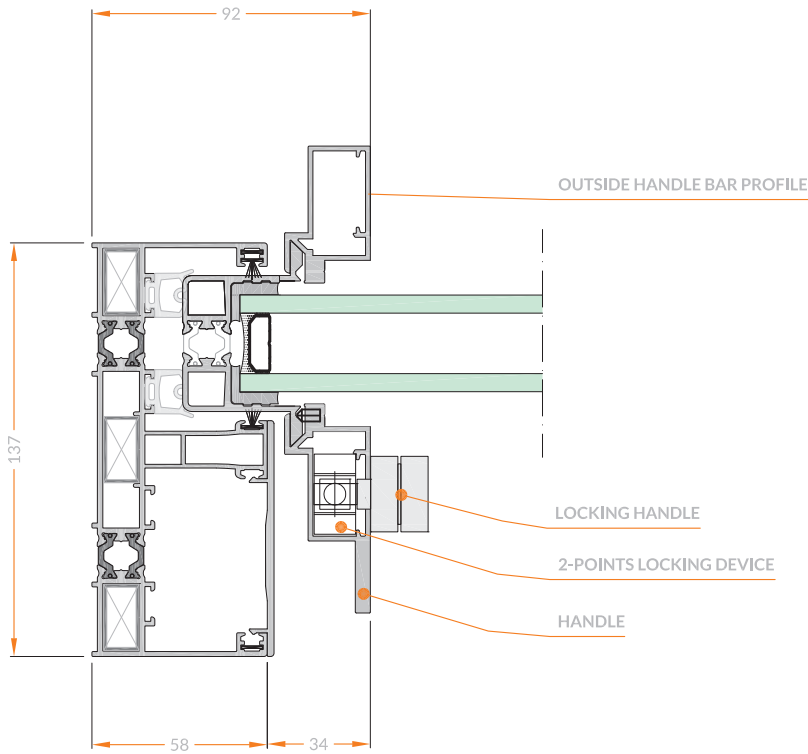
8.1



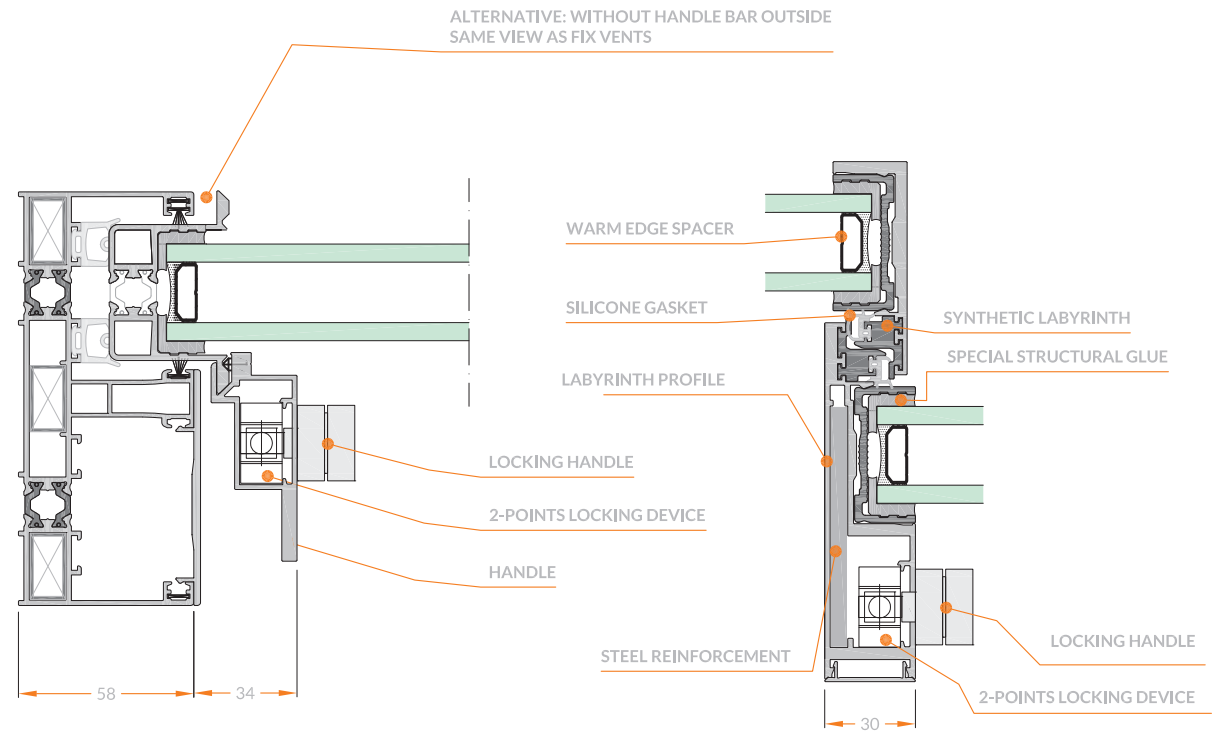
Sliding away from each other (same track)



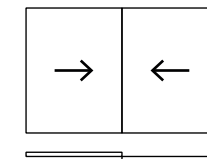
Sliding away from each other (different track)



Side handle
Inside & outside



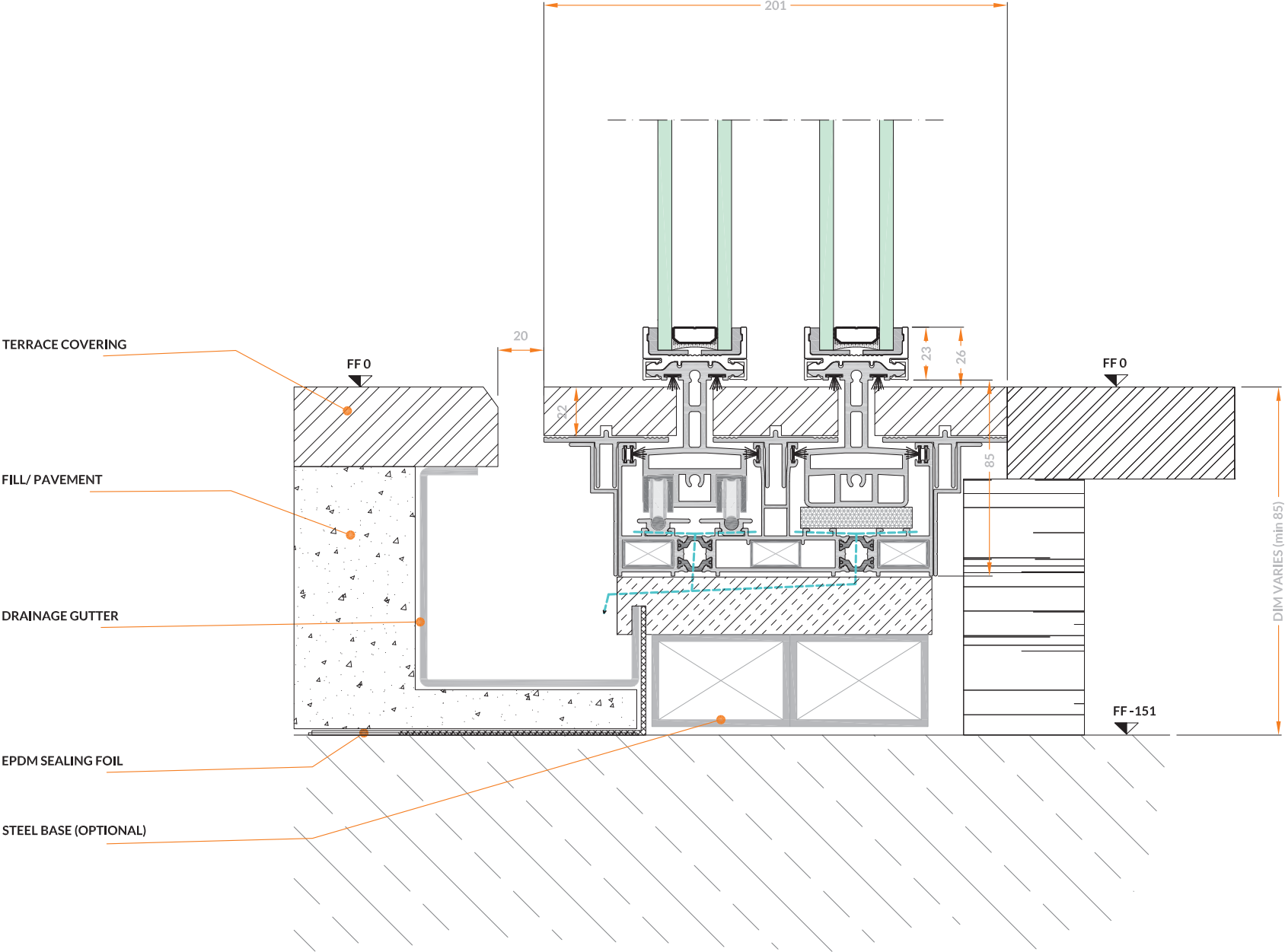
Side handle
Inside only



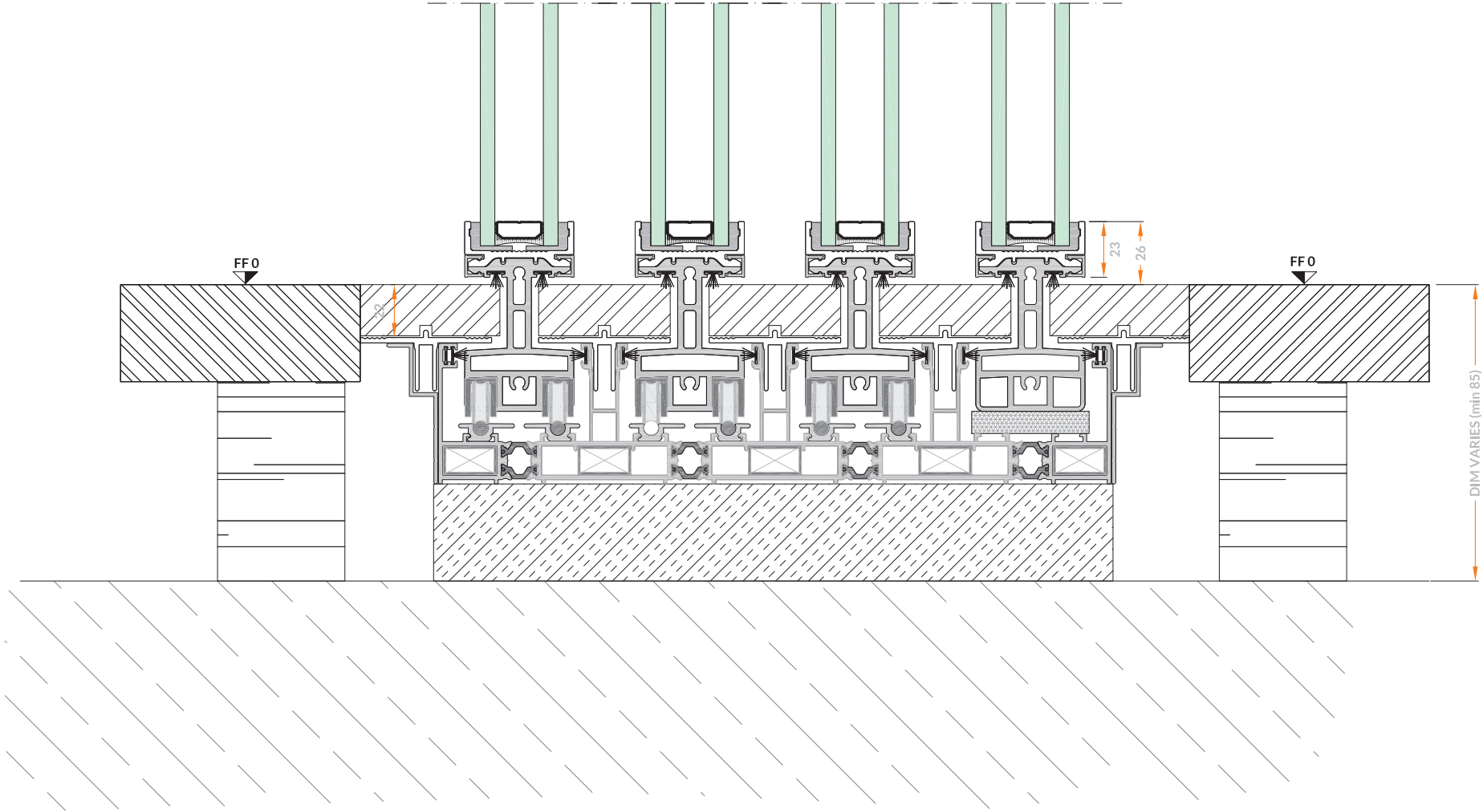
Successive
sliding frames
(different track)

OMICRON • INVISIBLE BASE

9.1



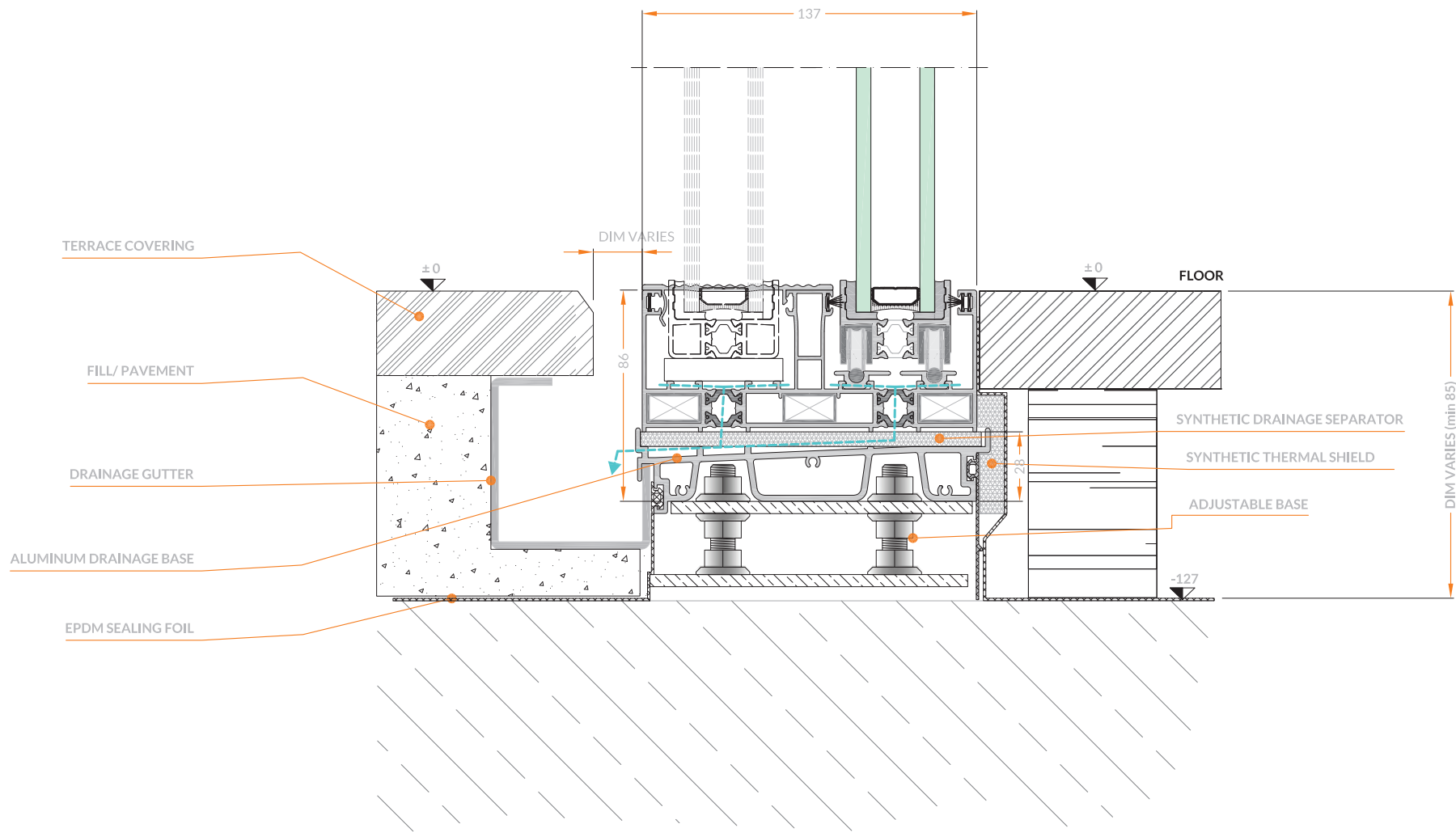
SYNTHETIC BASE WITH SUB-FRAME



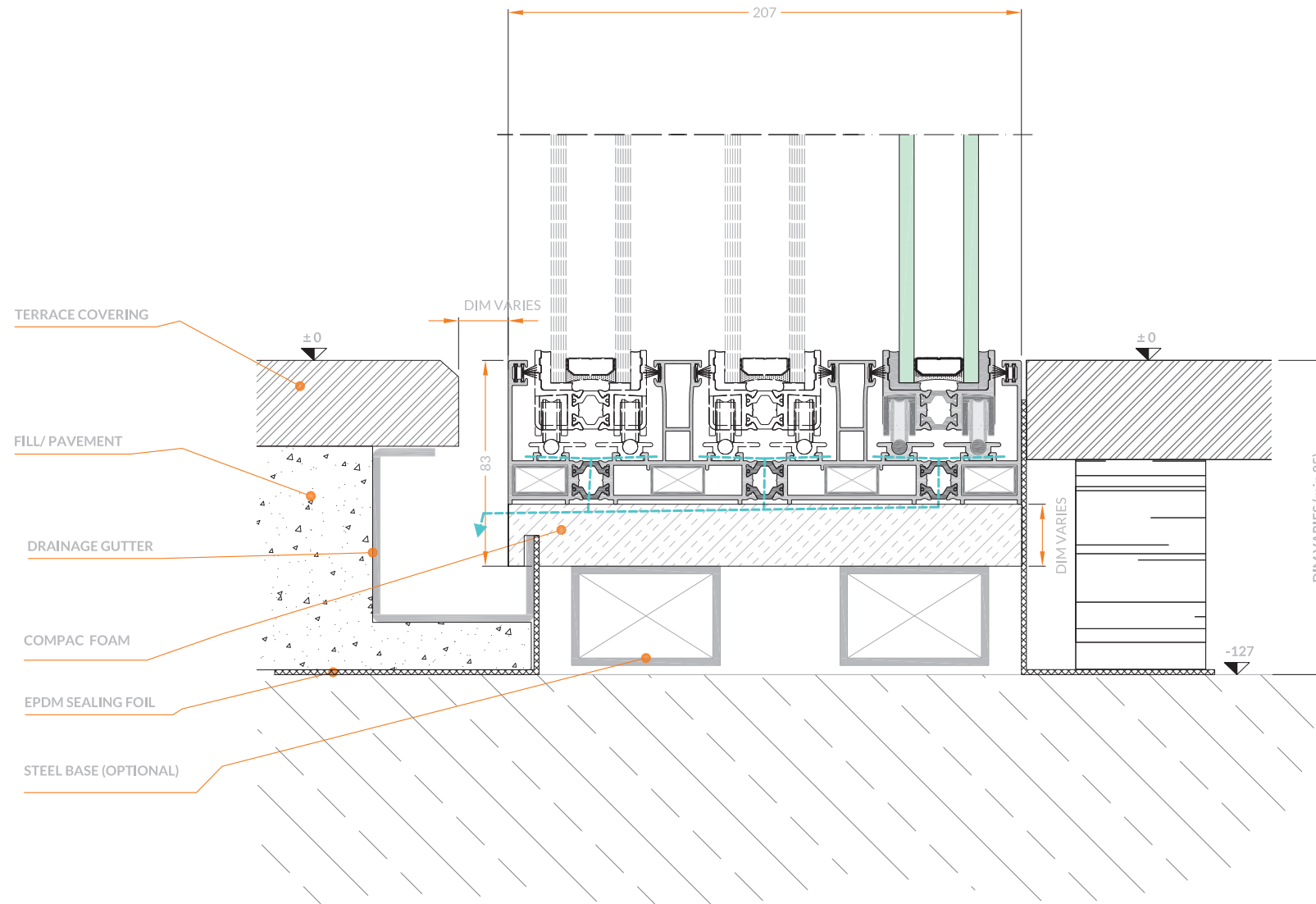
SYNTHETIC BASE WITH SUB-FRAME

BASE SECTIONS

9.3



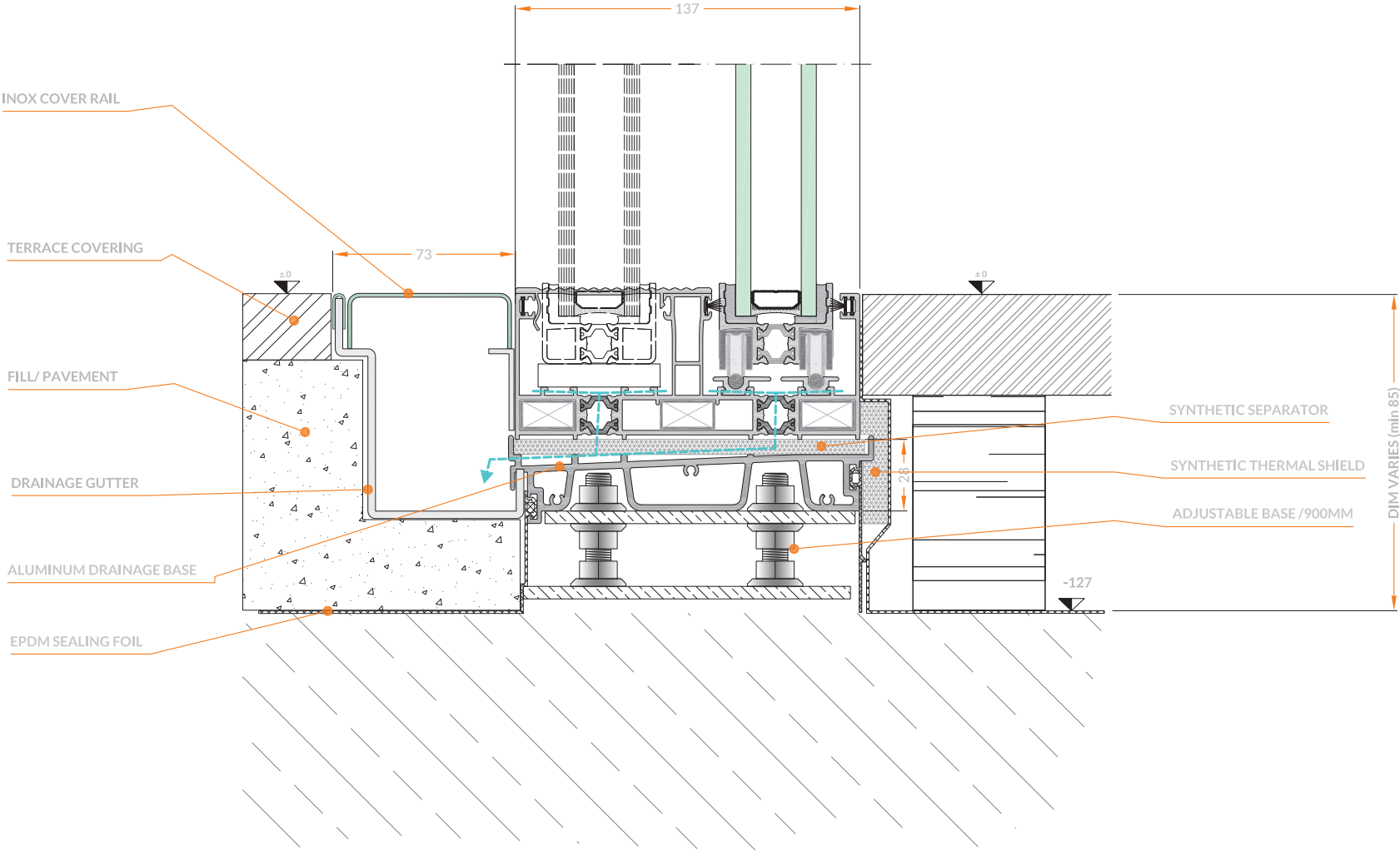
ALUMINUM BASE WITH ADJUSTABLE SUPPORT



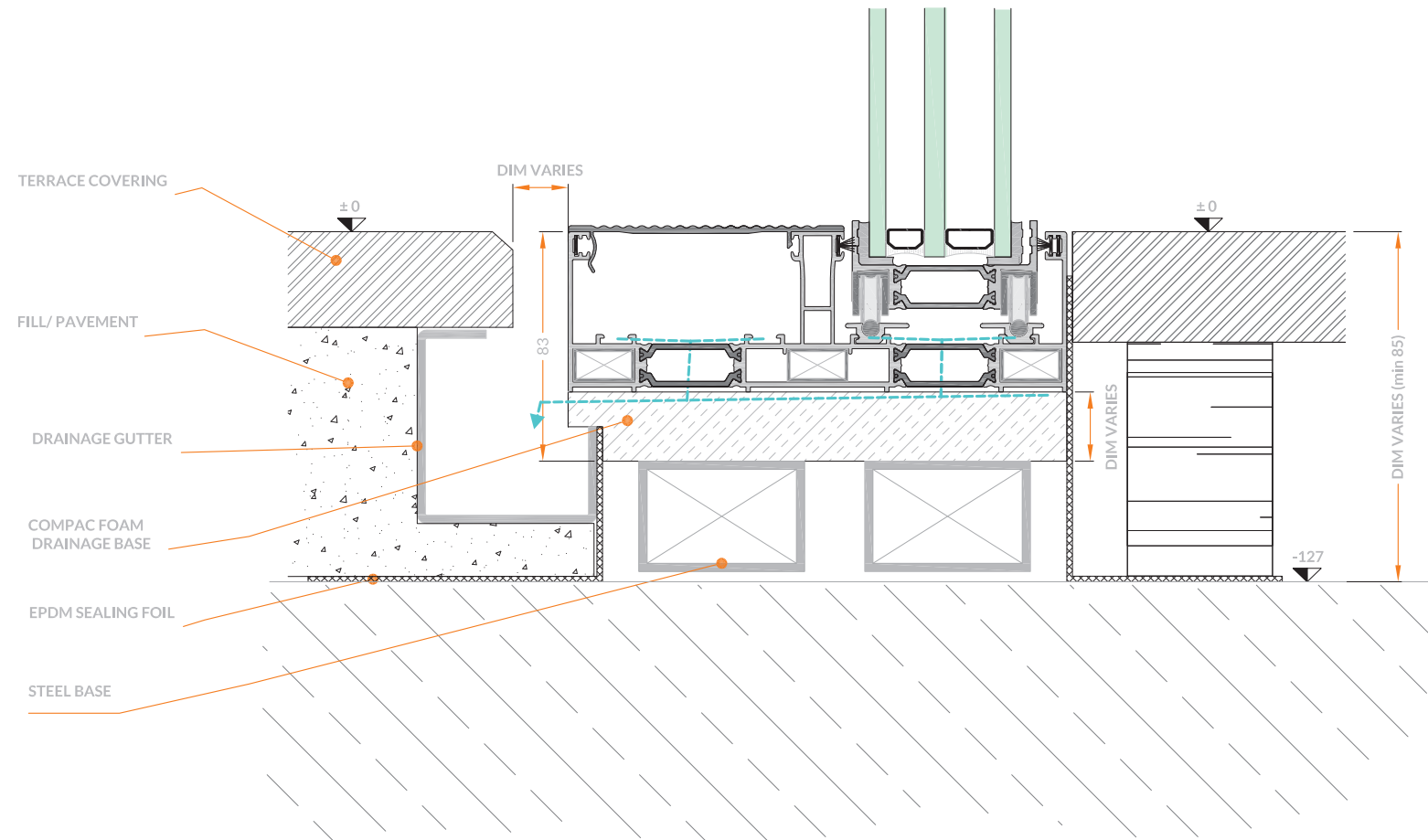
SYNTHETIC BASE WITH SUB-FRAME

BASE SECTIONS

9.5

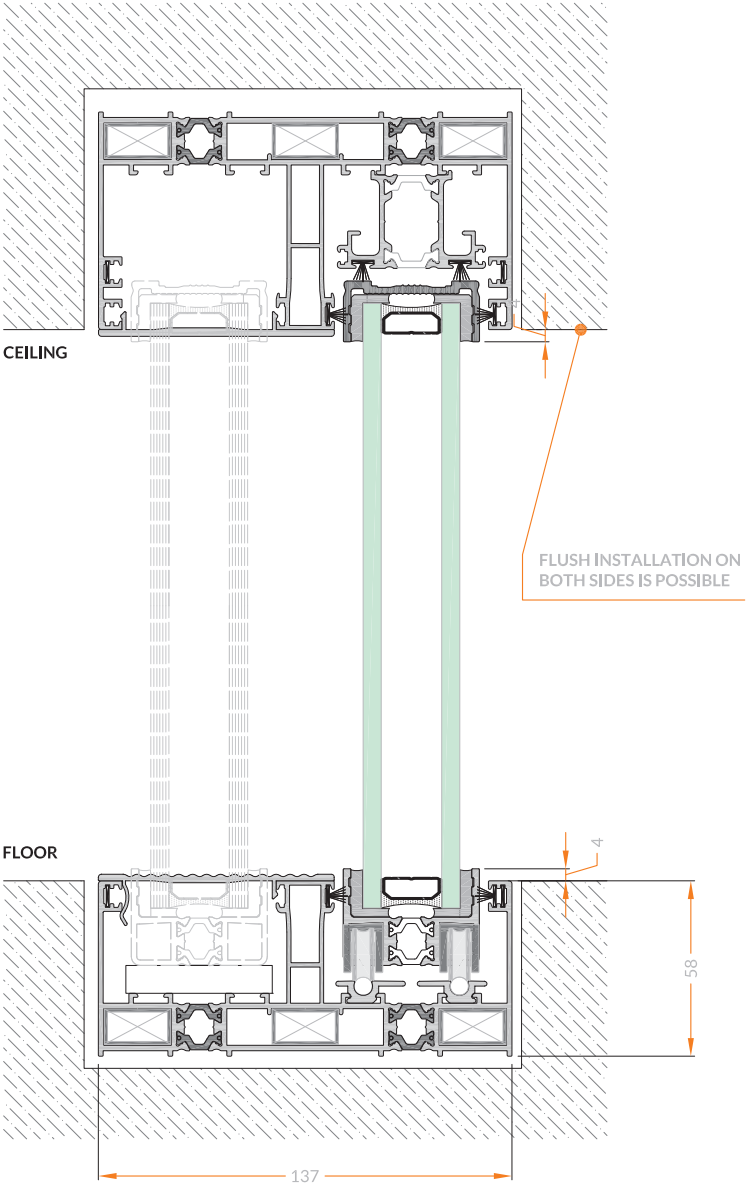


ALUMINUM BASE WITH ADJUSTABLE SUPPORT B

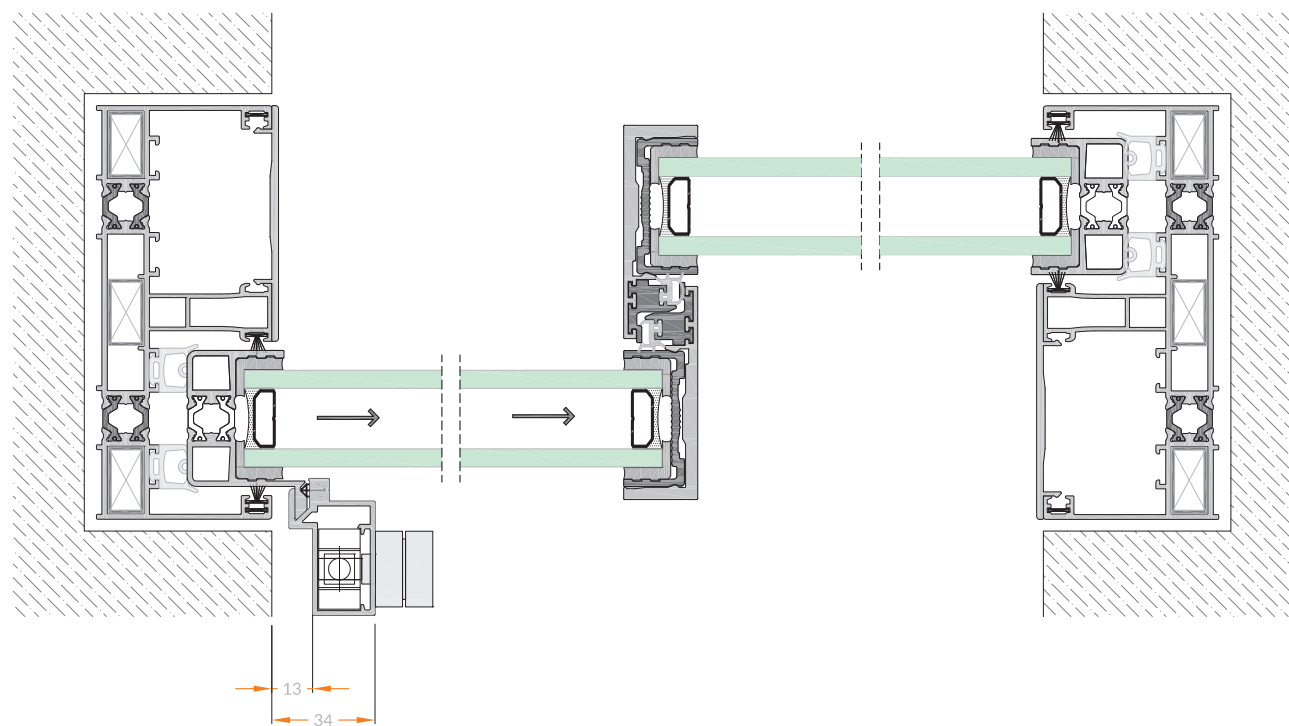


INSTALLATION MODES

10.1



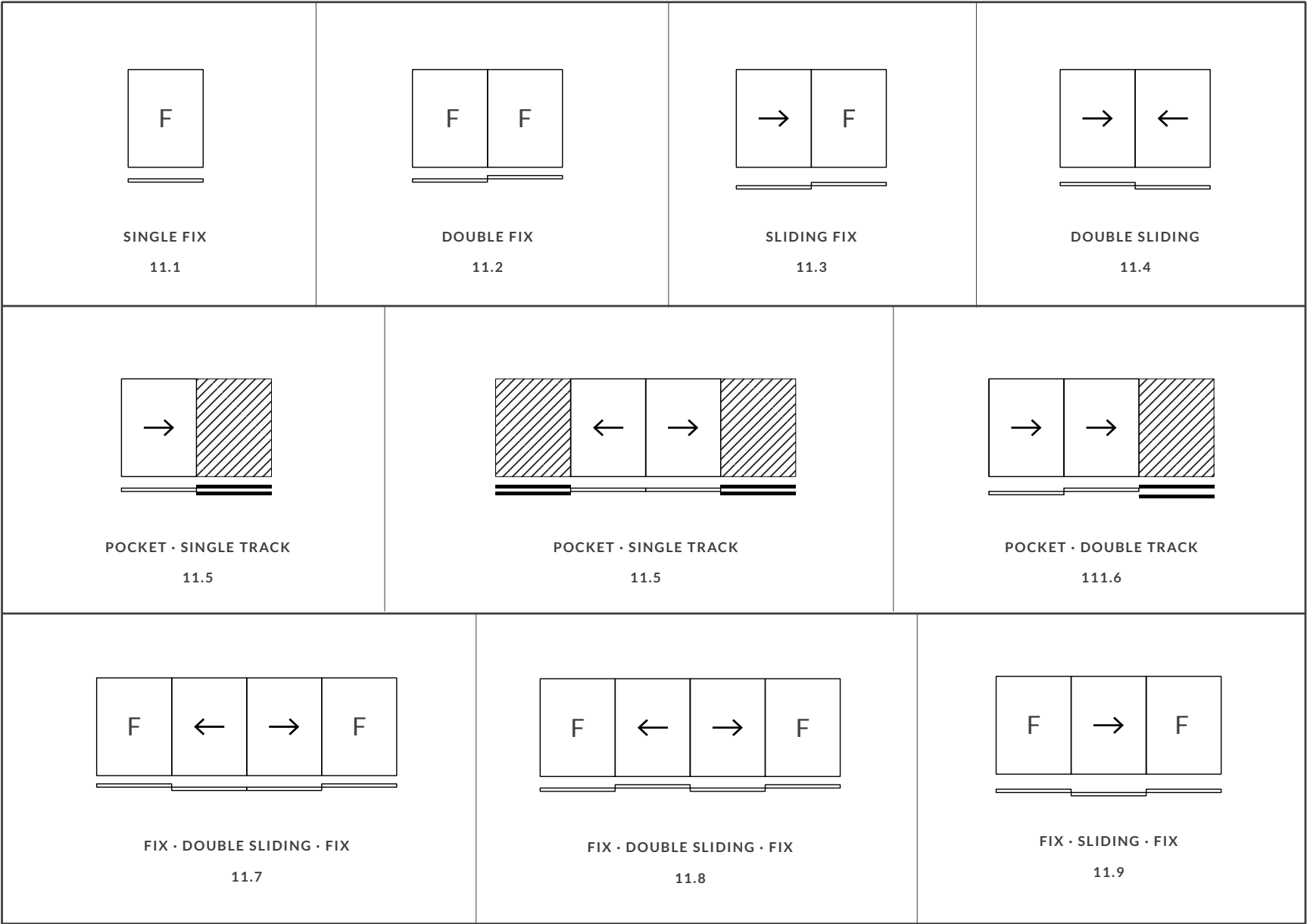
VERTICAL SECTION

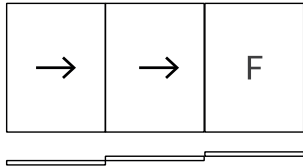
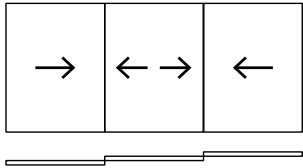
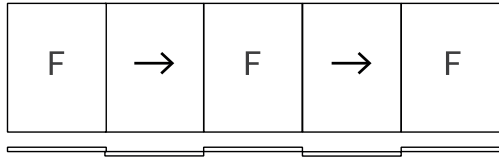
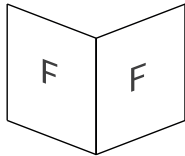
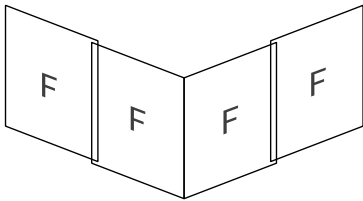
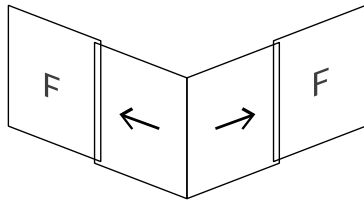
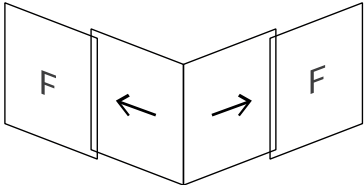


HORIZONTAL SECTION

MAIN FRAME SOLUTIONS

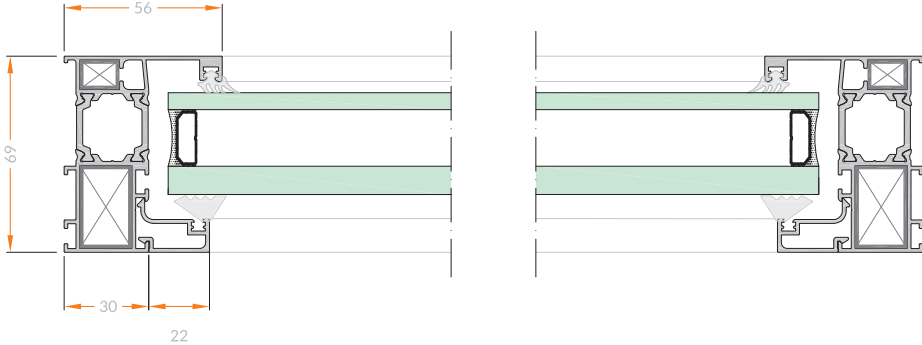
11



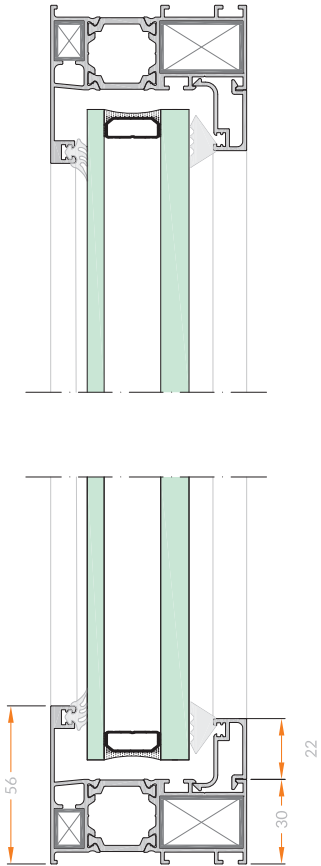
 DOUBLE SLIDING · FIX 11.10	 TRIPLE SLIDING 11.11	 FIX · SLIDING · FIX · SLIDING · FIX 11.12	
 FIXED CORNER 11.13	 TWO TRACK FIXED CORNER 11.14	 OPEN CORNER (OUT) 11.15	 OPEN CORNER (IN) 11.16

FIX FRAME

11.1

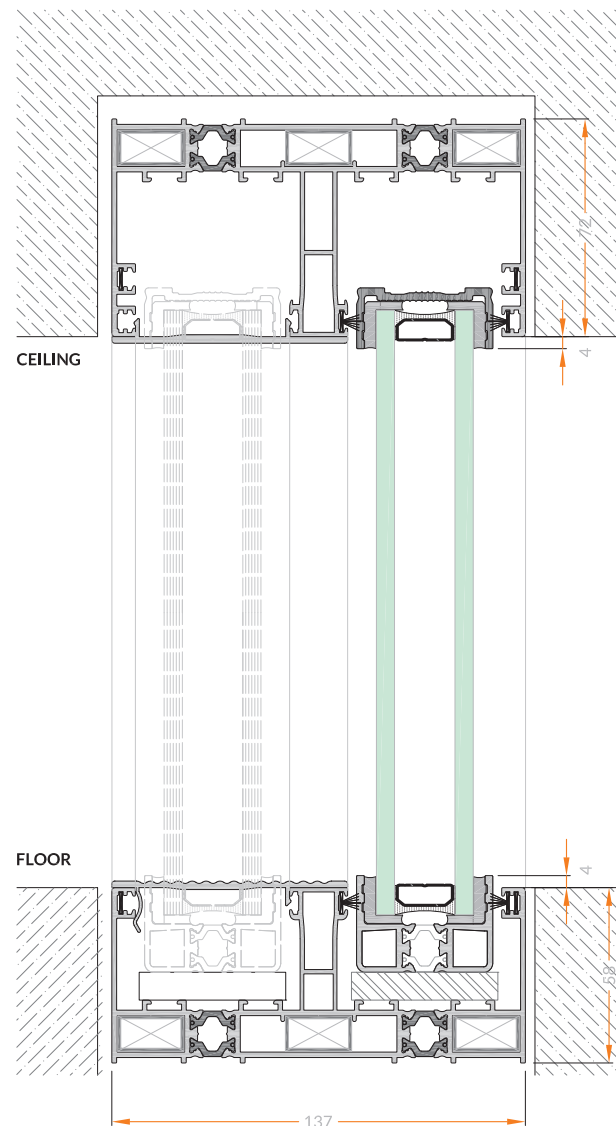


HORIZONTAL SECTION

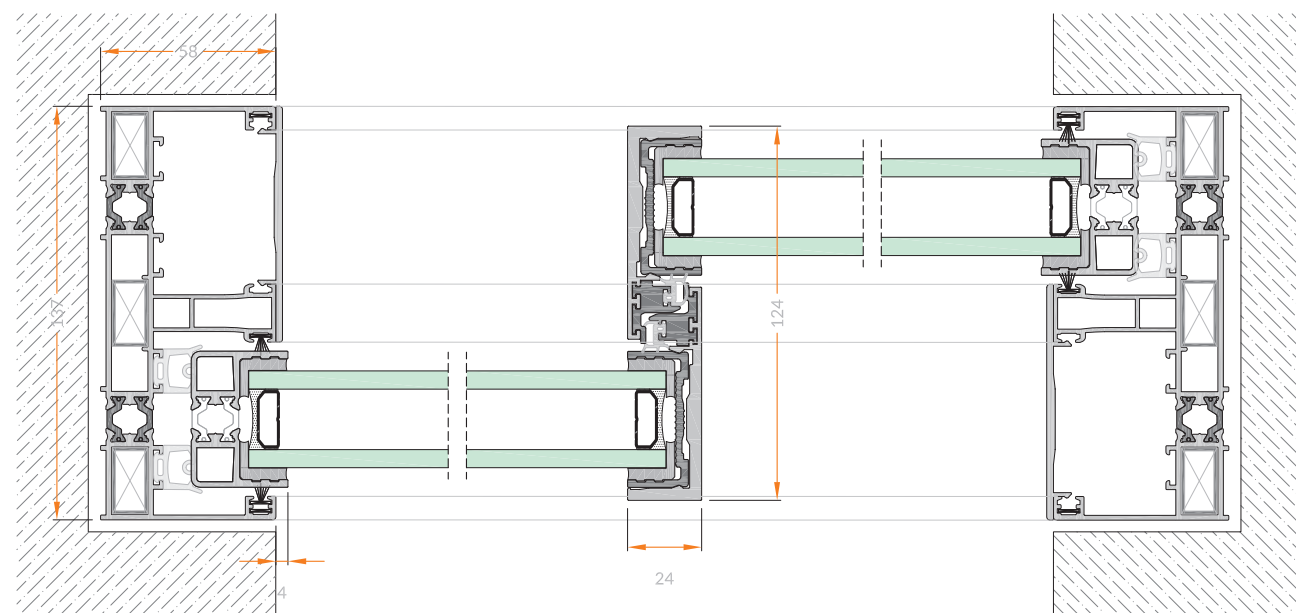


VERTICAL SECTION

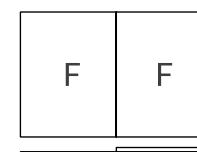
DOUBLE FIX FRAME



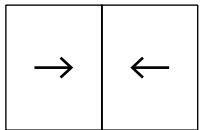
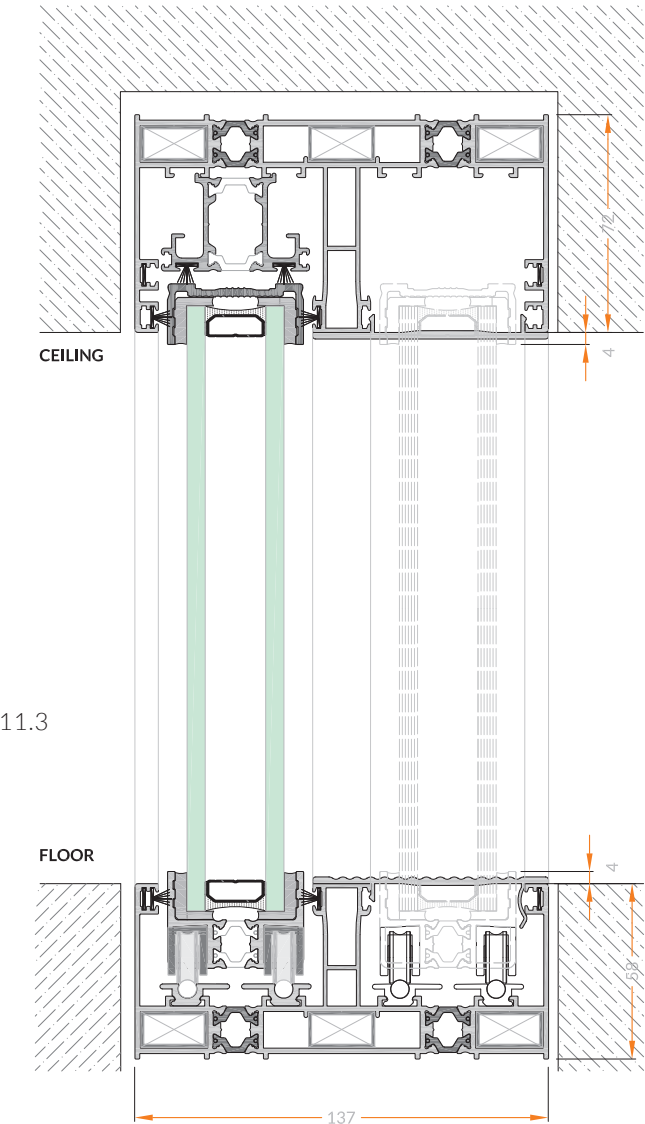
VERTICAL SECTION



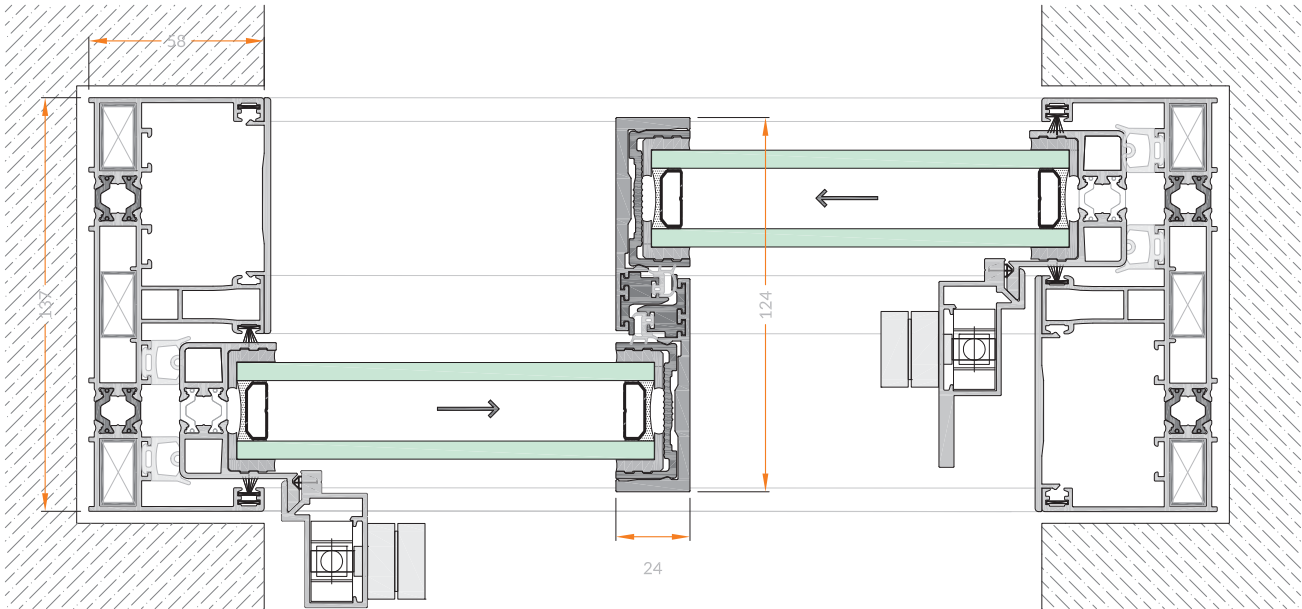
HORIZONTAL SECTION



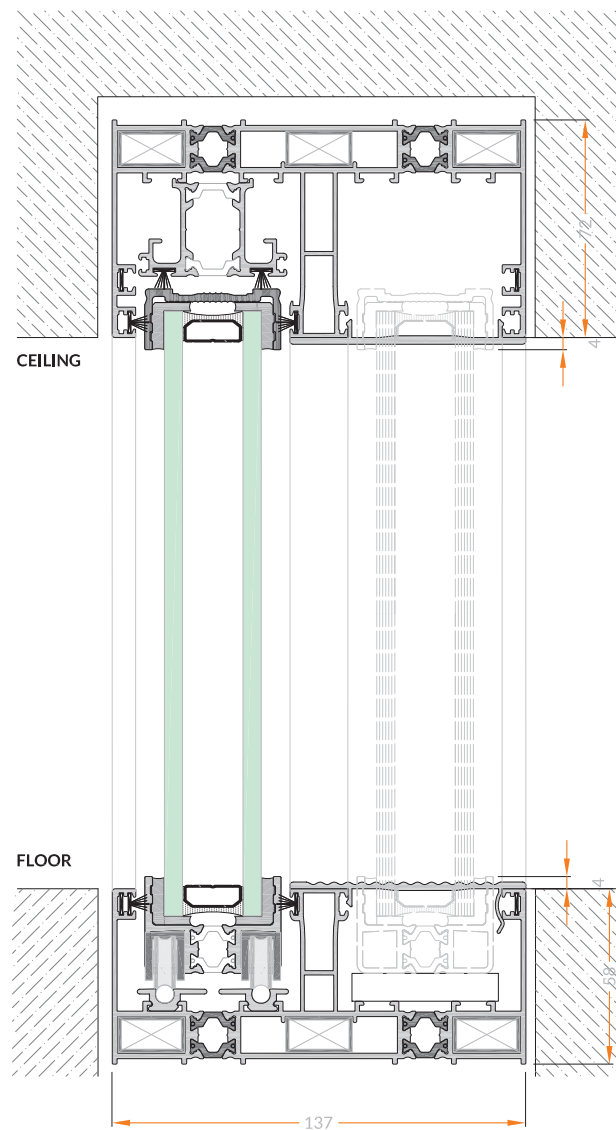
DOUBLE SLIDING FRAME



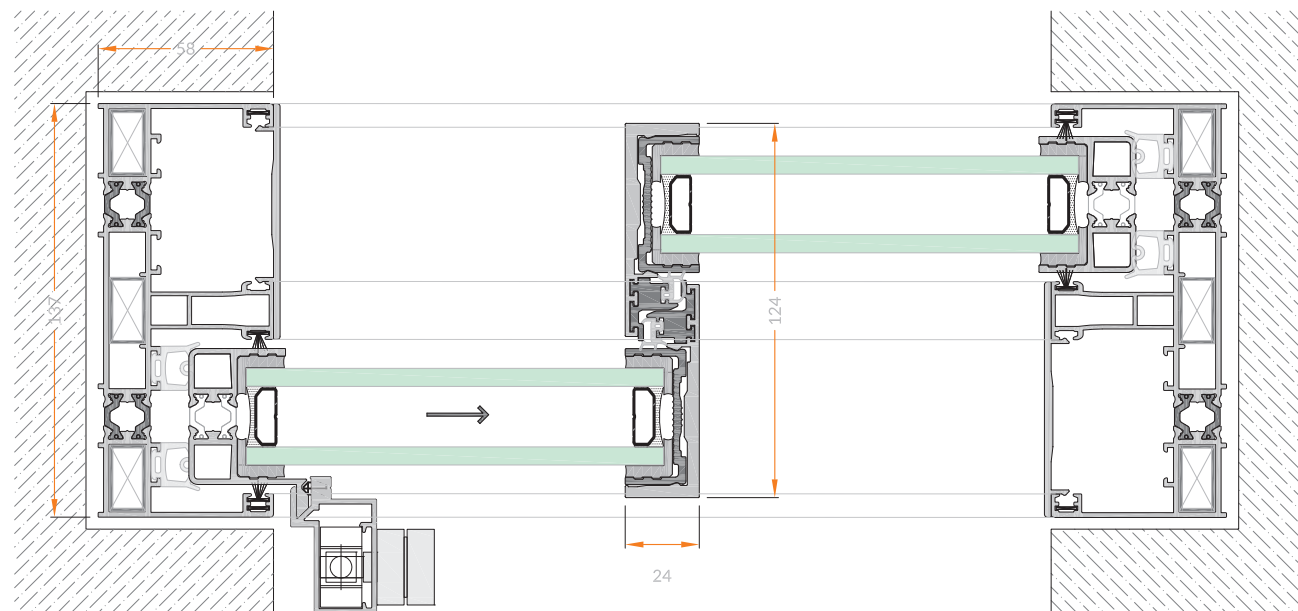
VERTICAL SECTION



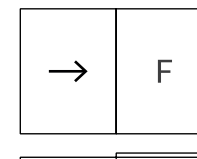
HORIZONTAL SECTION



VERTICAL SECTION

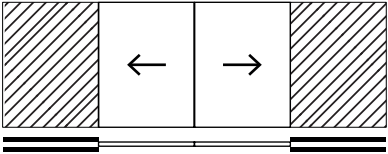
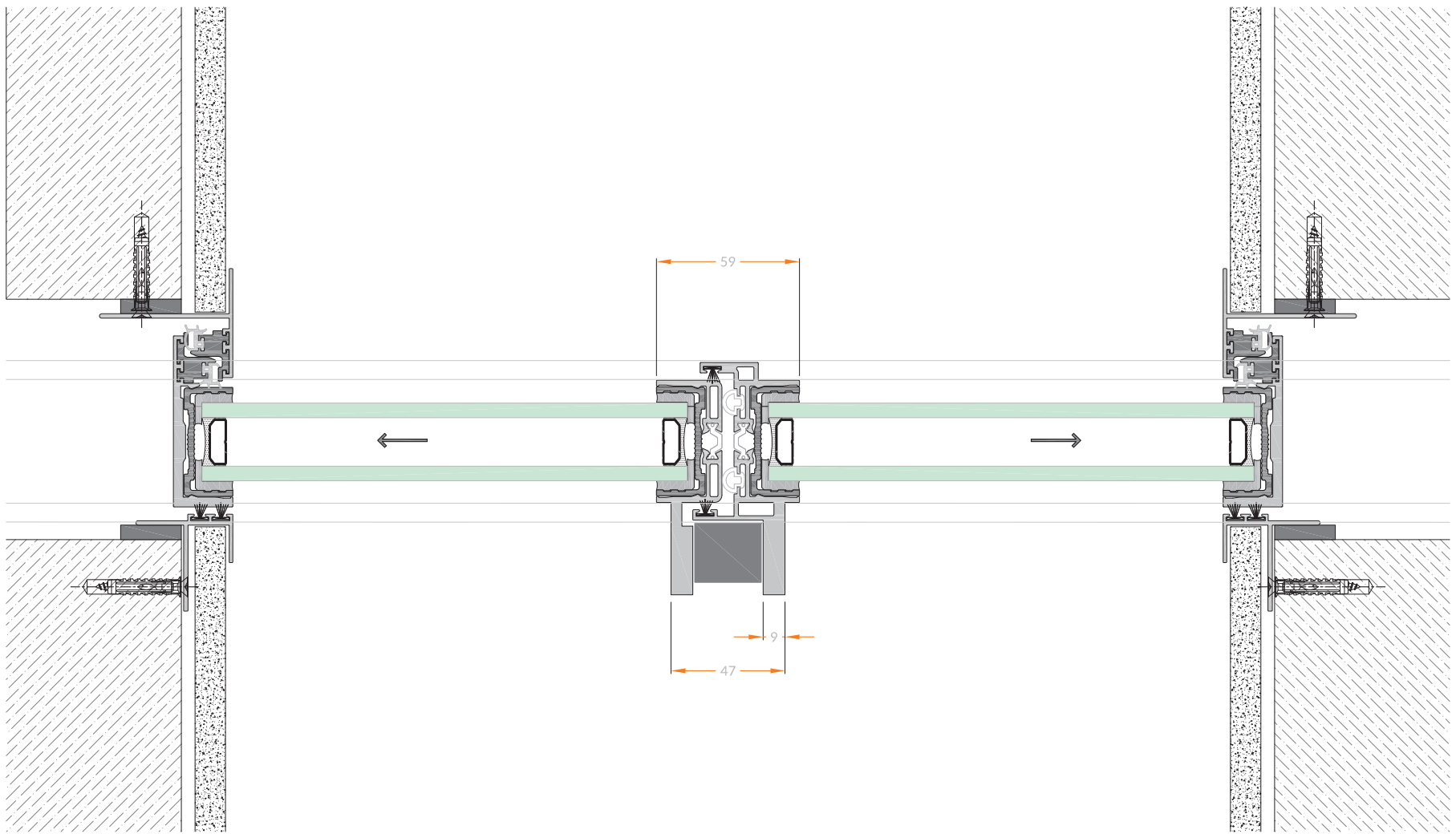


HORIZONTAL SECTION



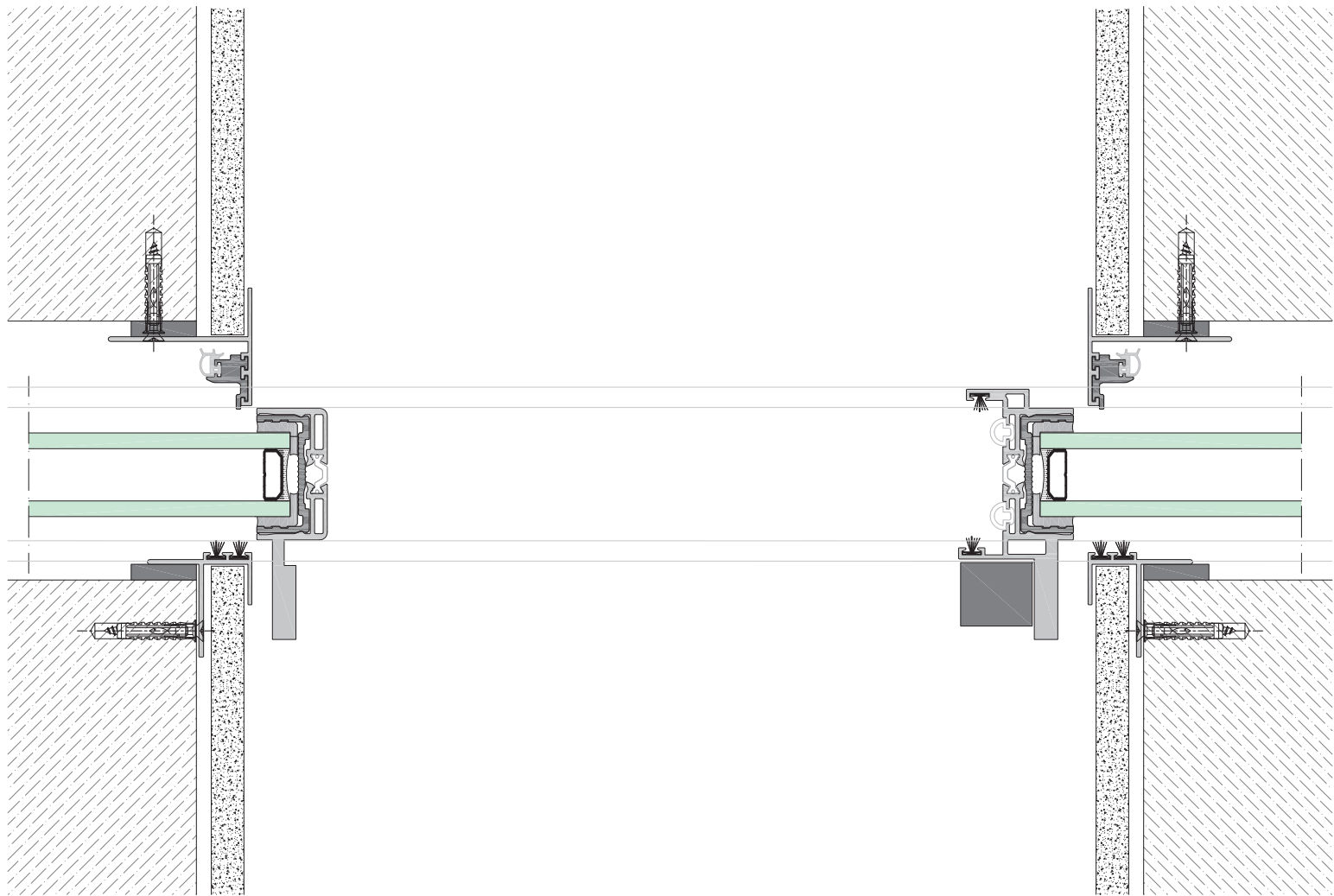
POCKET WINDOWS · SINGLE TRACK

11.5

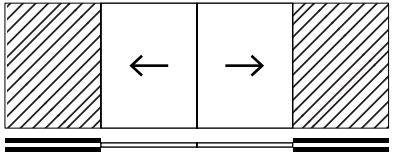


HORIZONTAL SECTION · CLOSED

POCKET WINDOWS · SINGLE TRACK

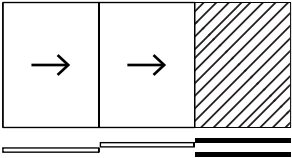
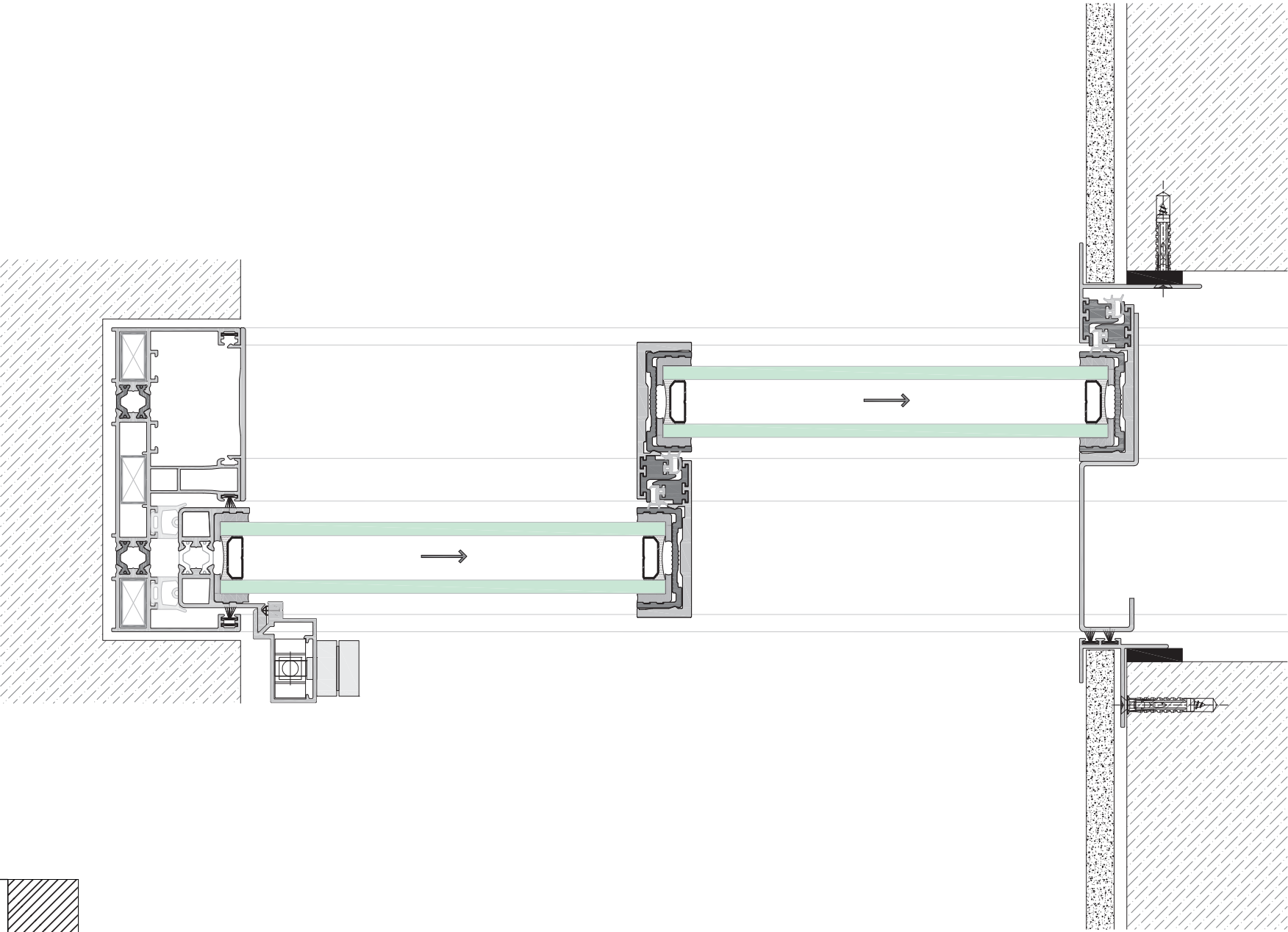


HORIZONTAL SECTION · OPEN



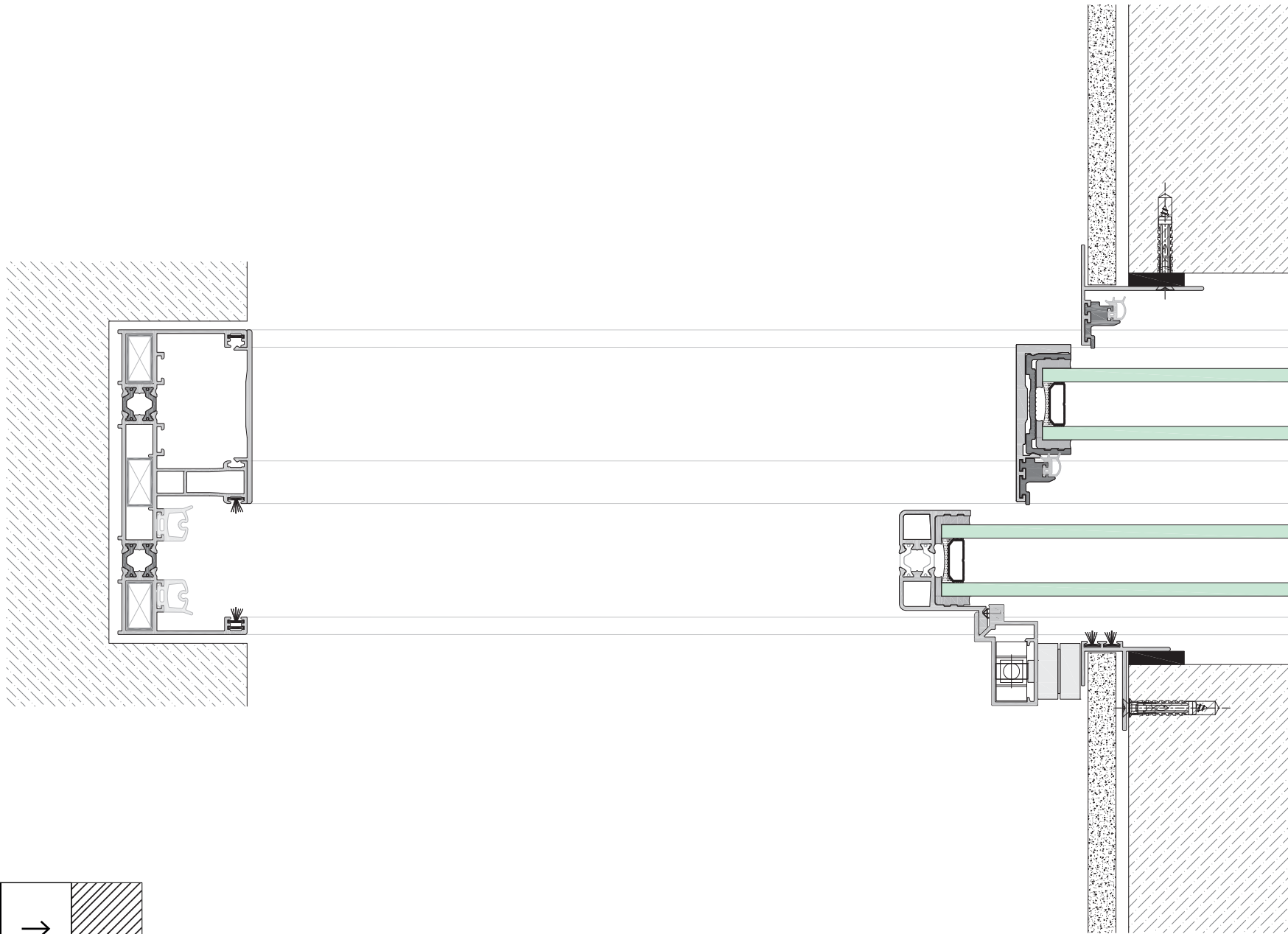
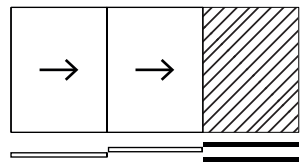
POCKET WINDOWS · DOUBLE TRACK

11.6



HORIZONTAL SECTION · OPEN

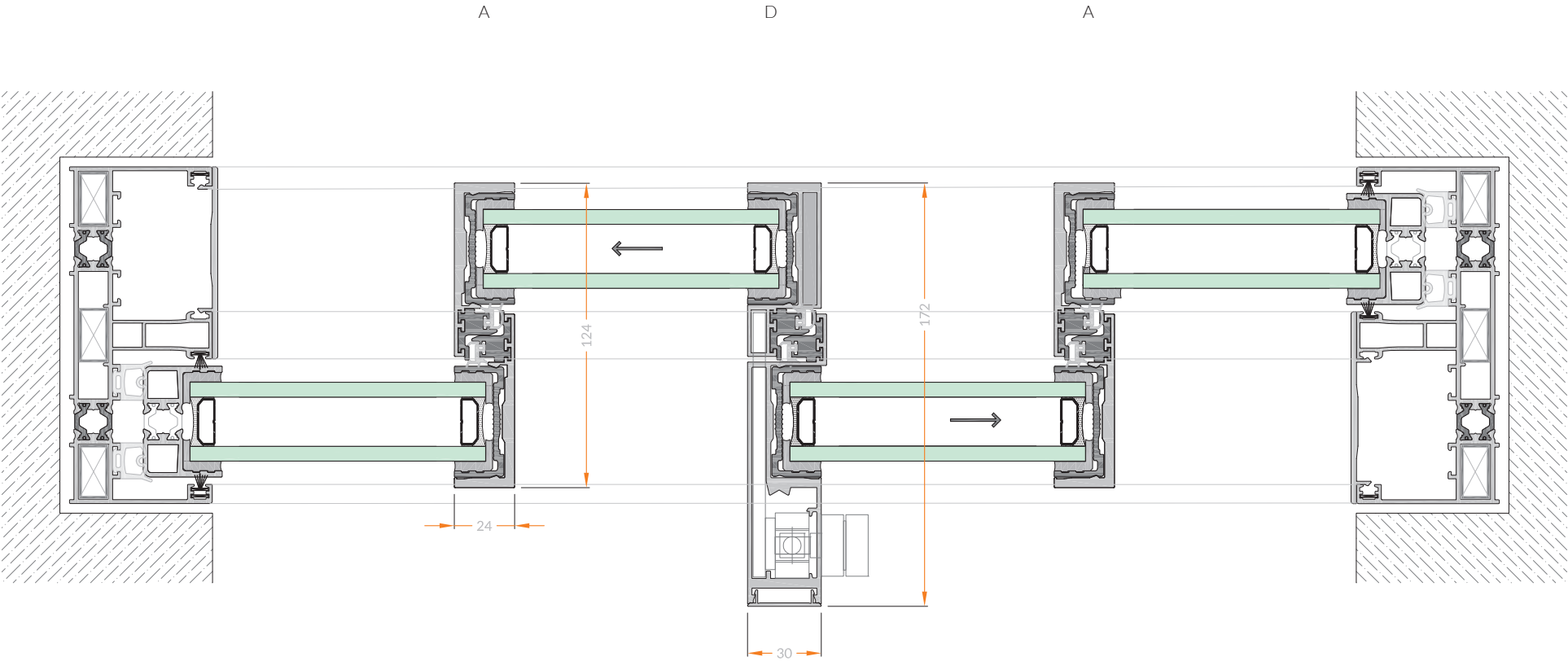
POCKET WINDOWS · DOUBLE TRACK



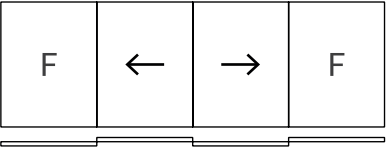
HORIZONTAL SECTION · CLOSED

11.6

FIX · DOUBLE SLIDING · FIX (ALTERNATE)

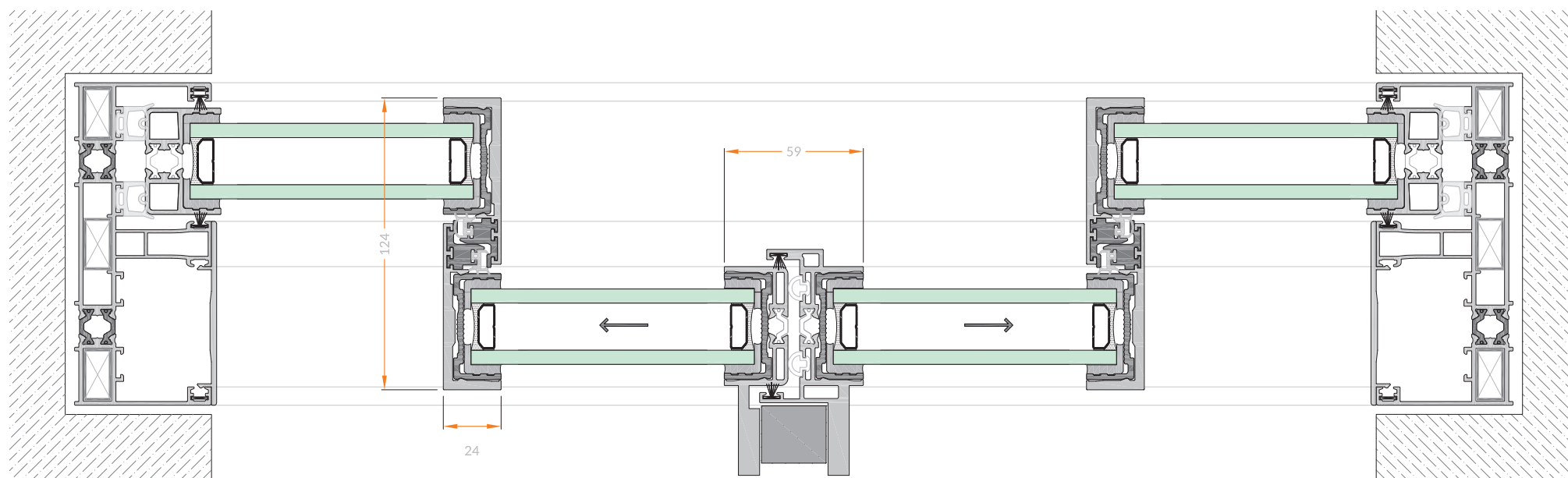


11.7



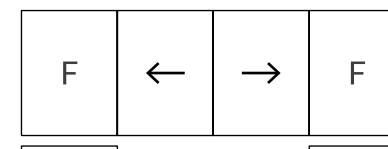
4-POINT LOCKING DEVICE UNDER DEVELOPMENT

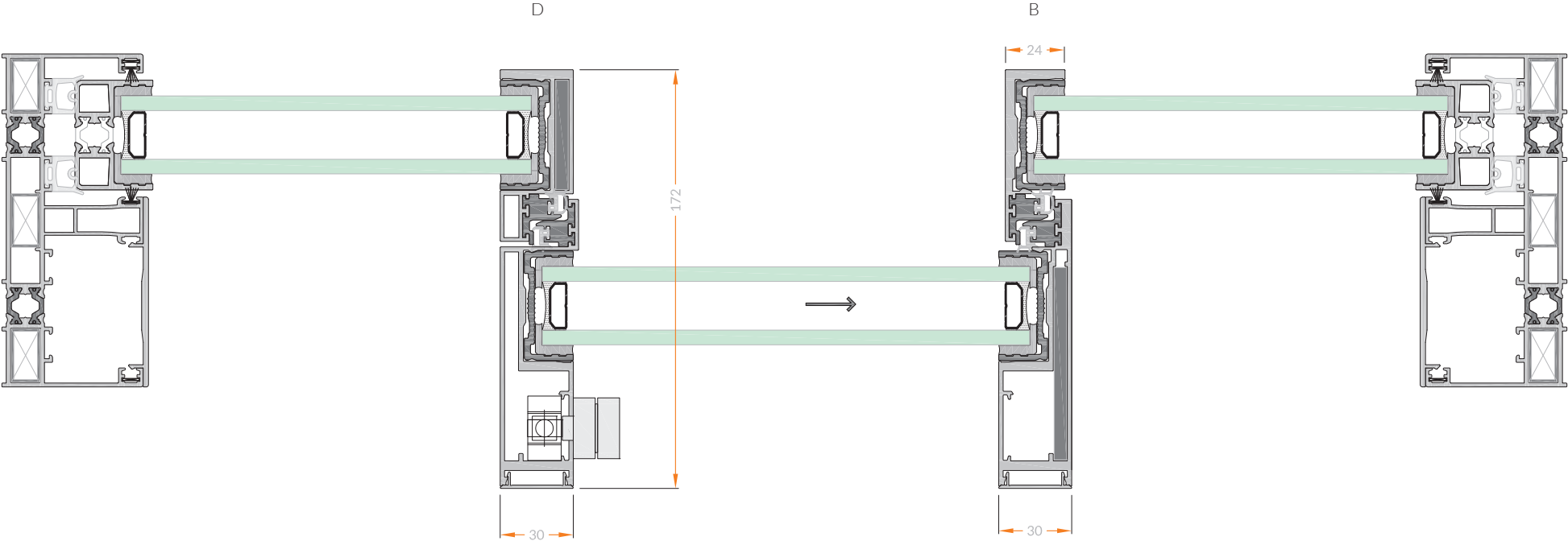
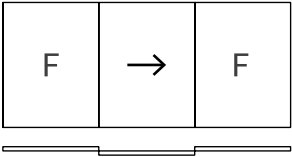
FIX · DOUBLE SLIDING IN THE SAME TRUCK · FIX



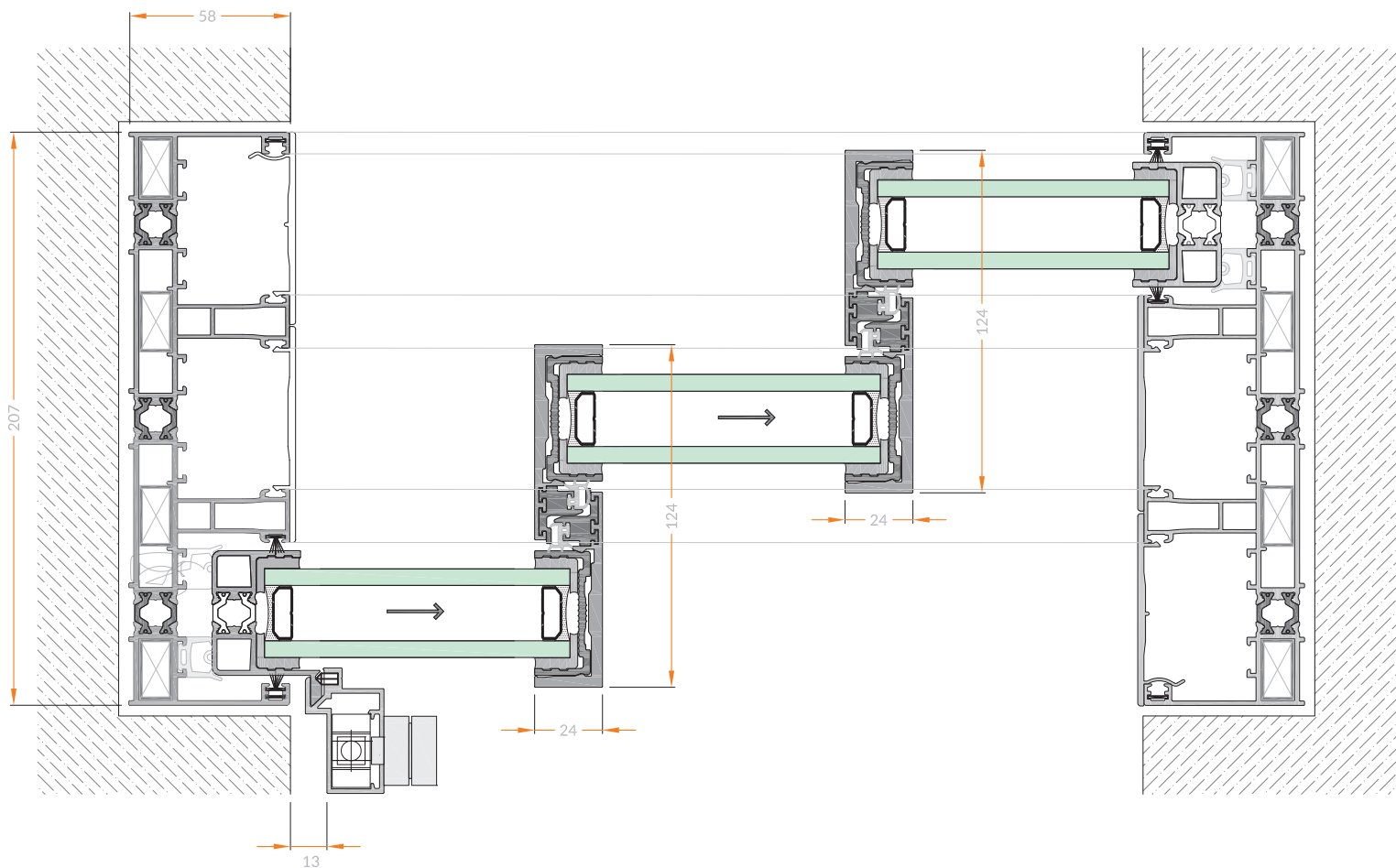
11.8

HORIZONTAL SECTION

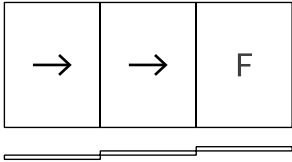




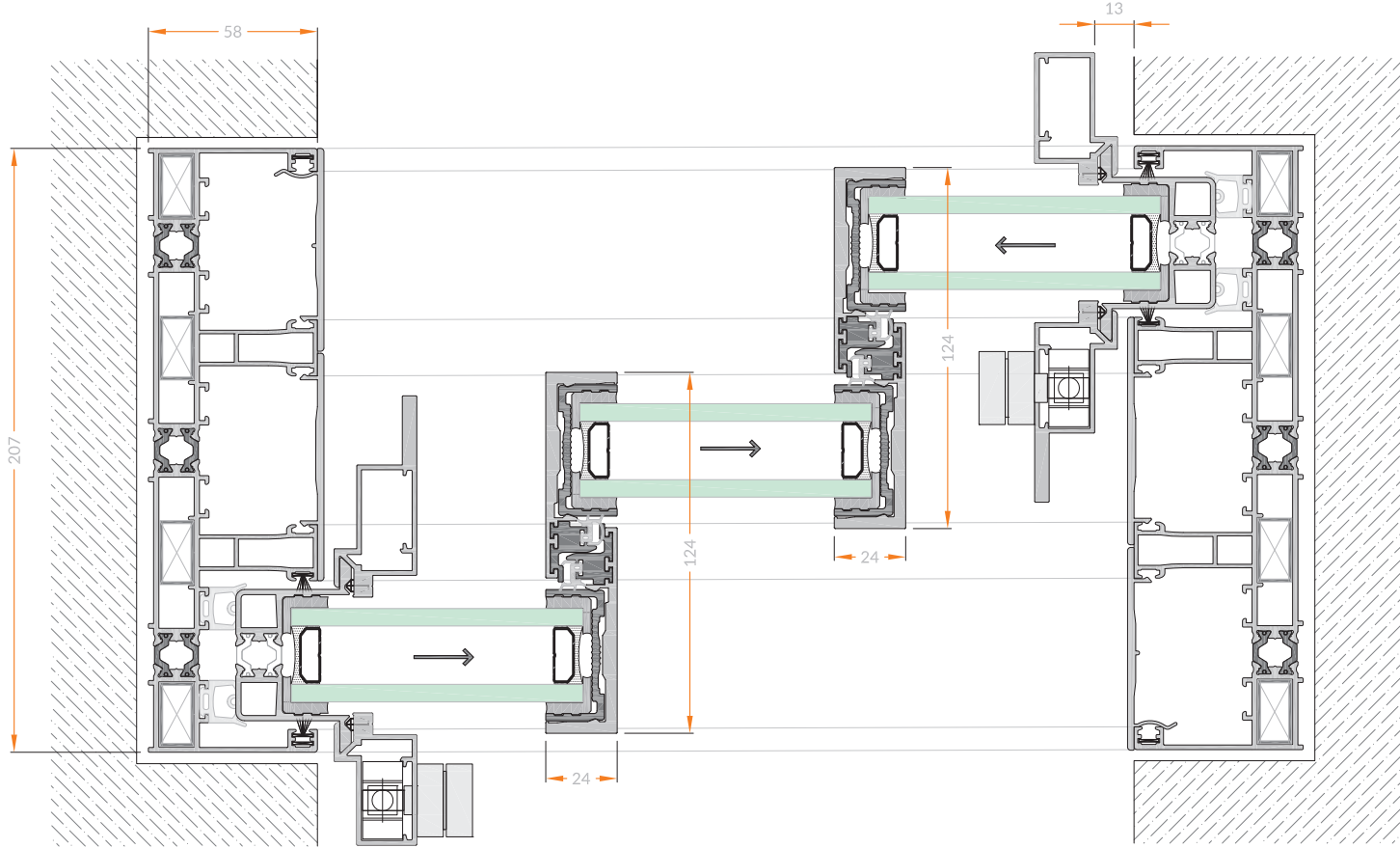
HORIZONTAL SECTION



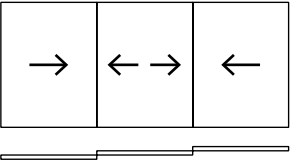
HORIZONTAL SECTION



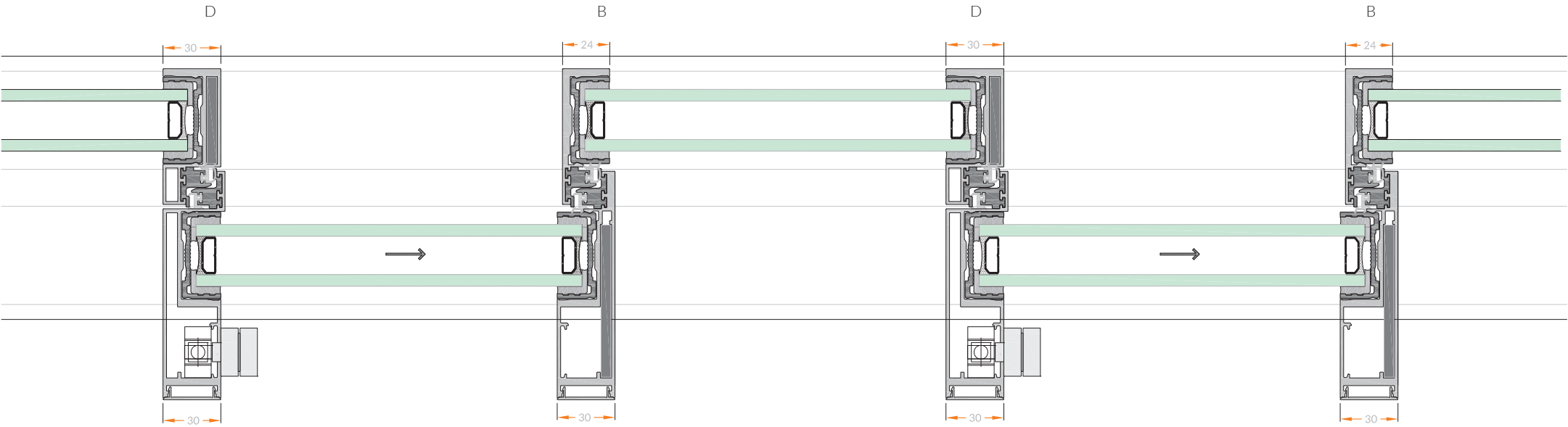
TRIPLE SLIDING



11.11



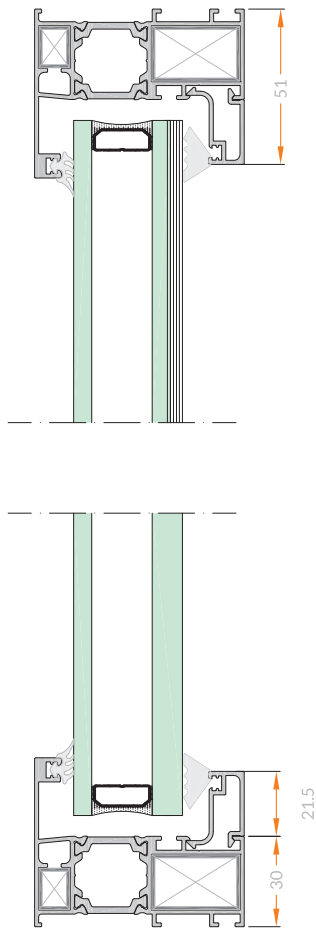
HORIZONTAL SECTION



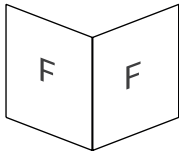
HORIZONTAL SECTION



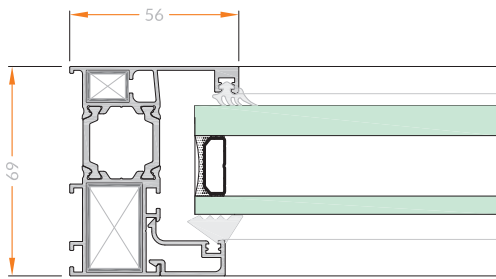
SINGLE CORNER FRAME



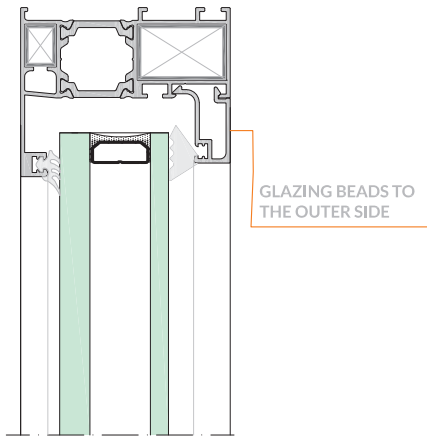
11.13



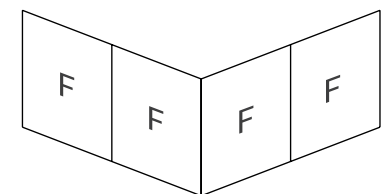
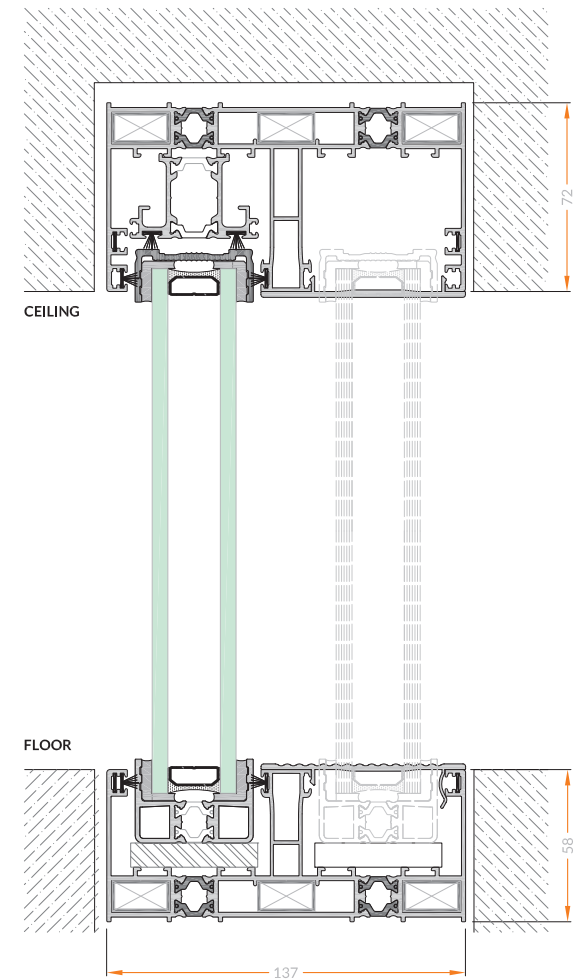
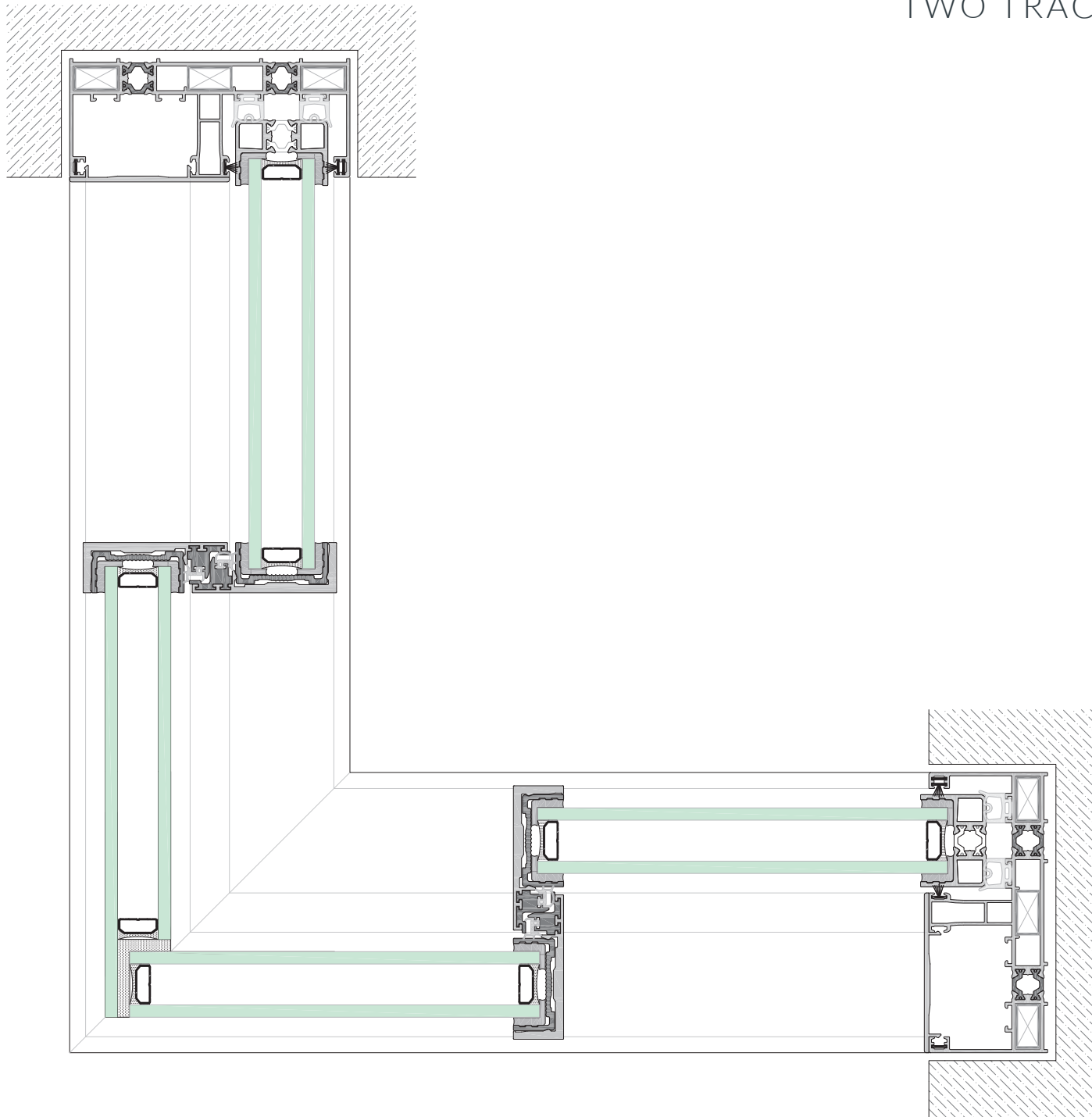
VERTICAL SECTION



HORIZONTAL SECTION

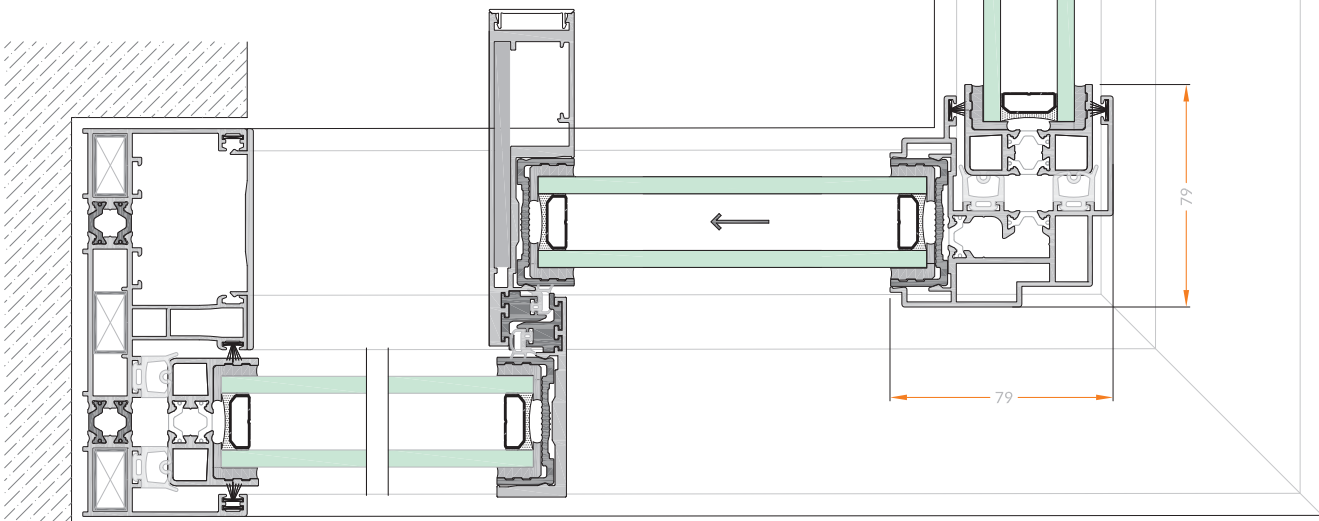
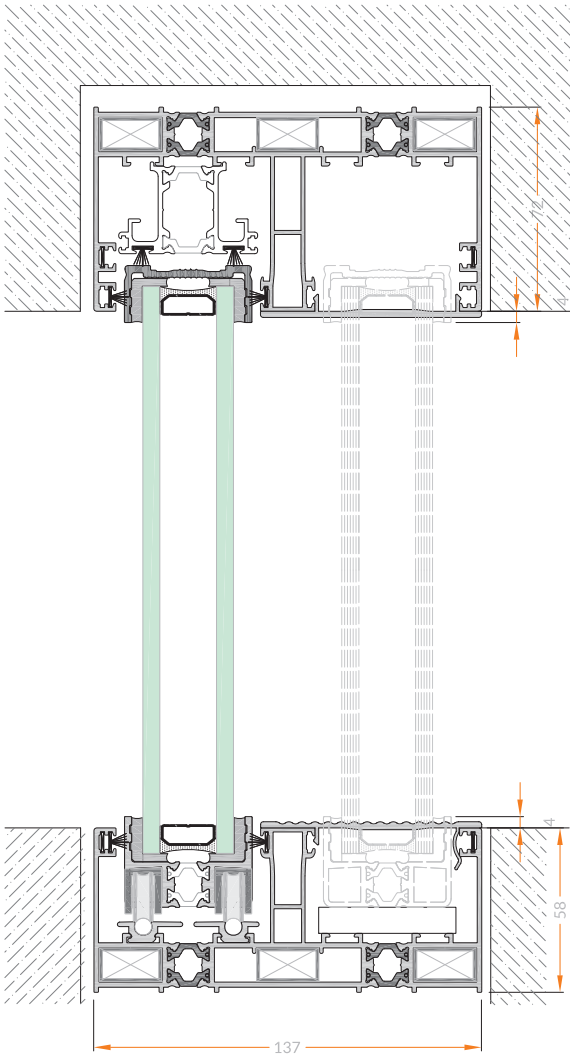


TWO TRACK CLOSED CORNER FRAMES

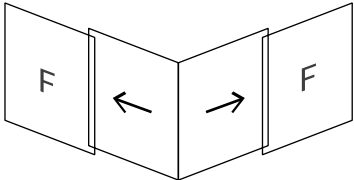


11.14

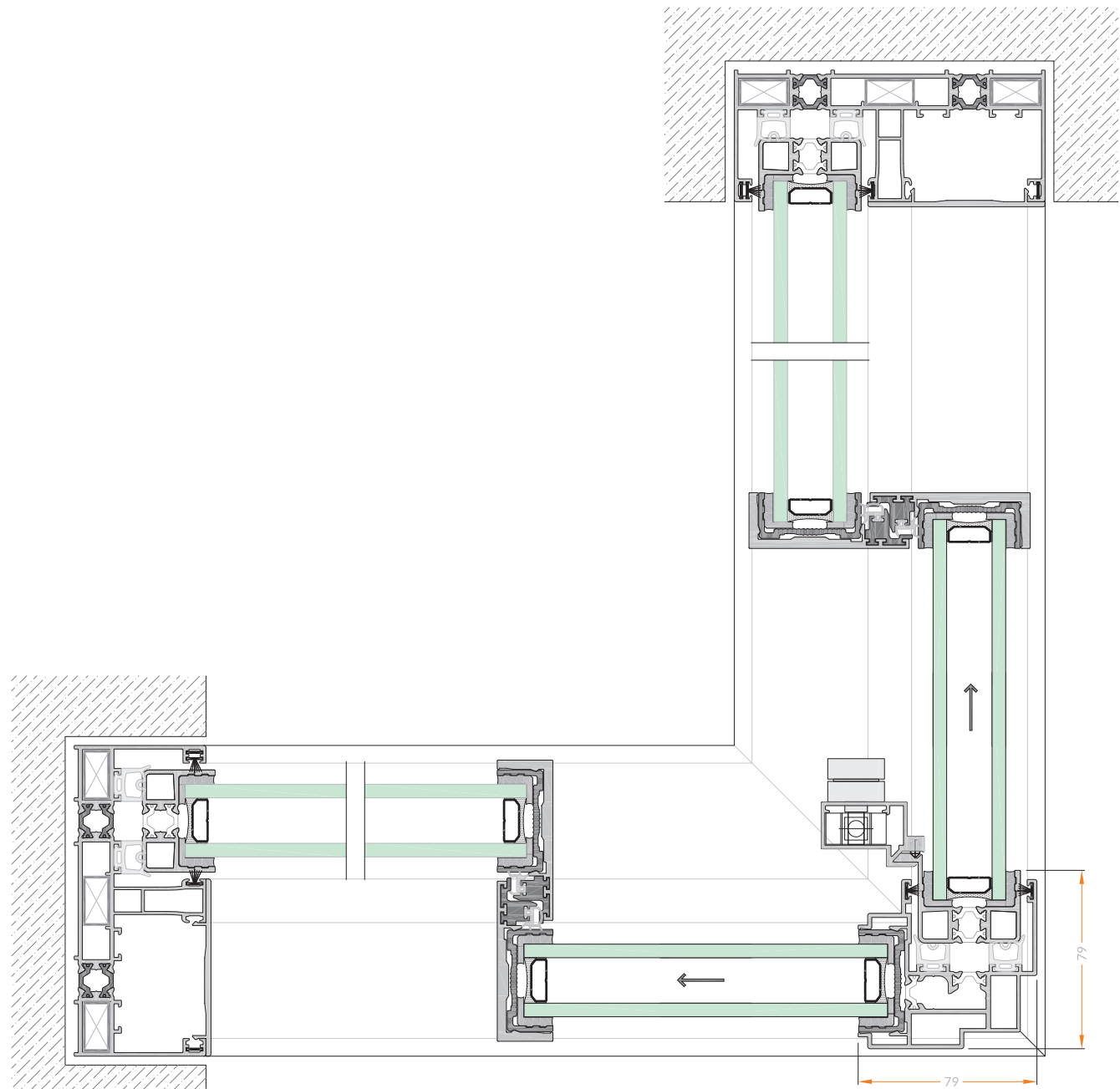
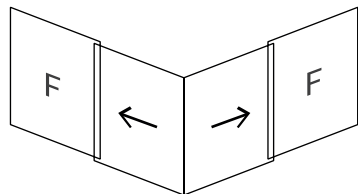
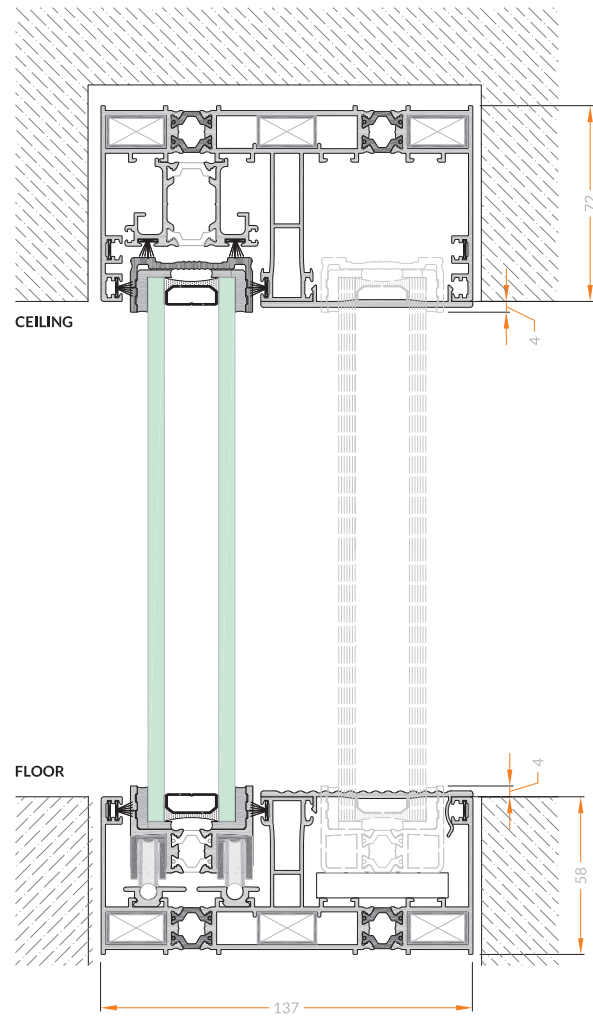
TWO TRACK OPEN CORNER FRAMES (SLIDING INSIDE)



11.15



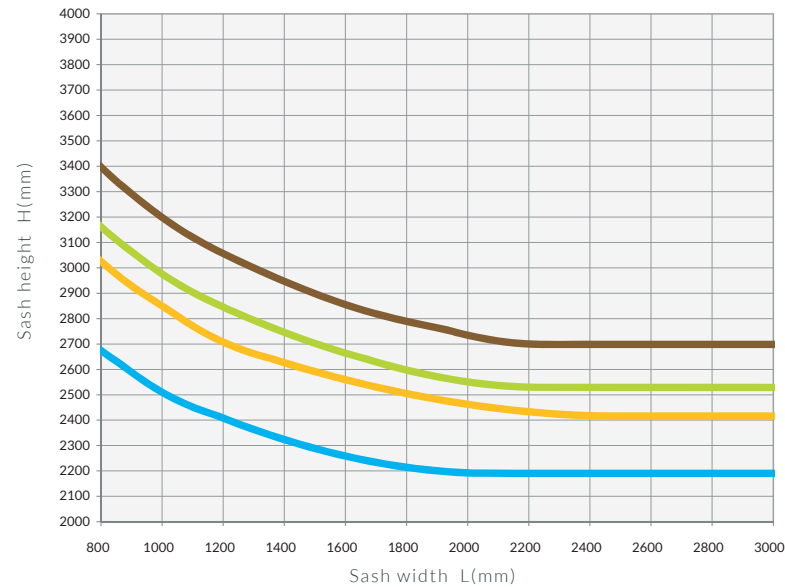
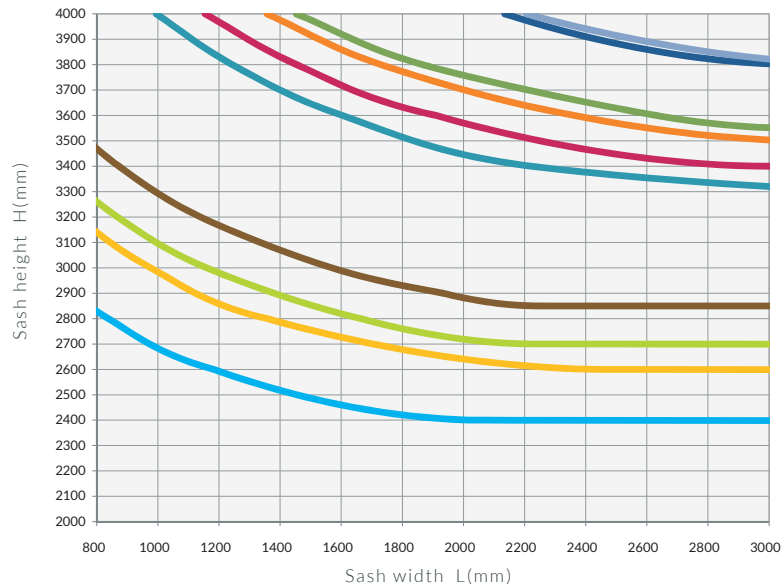
TWO TRACK OPEN CORNER FRAMES *(SLIDING OUTSIDE)*



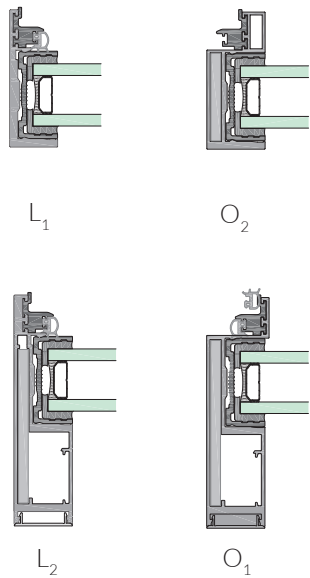
WIND LOAD DIAGRAMS

0,5

kN/m²



OMICRON



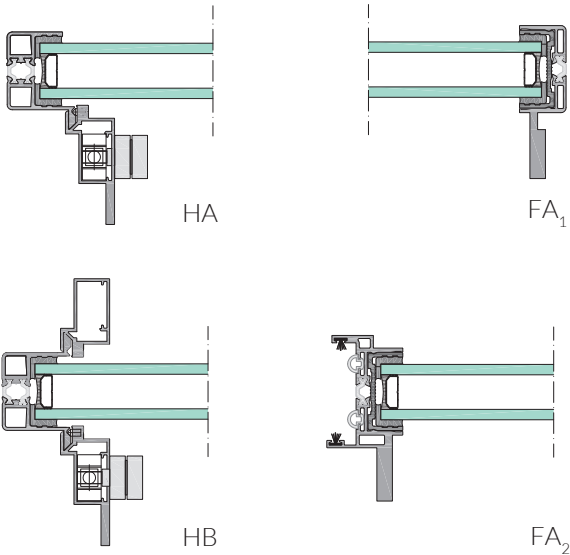
- O₁ + Steel reinf. —
- L₂ + Steel reinf. —
- L₂ —
- O₁ —
- L₂ + Alum. reinf. —
- O₂ —
- O₂ + Steel reinf. —
- O₂ + Alum. reinf. —
- O₁ + Alum. reinf. —
- L₁ —

HA

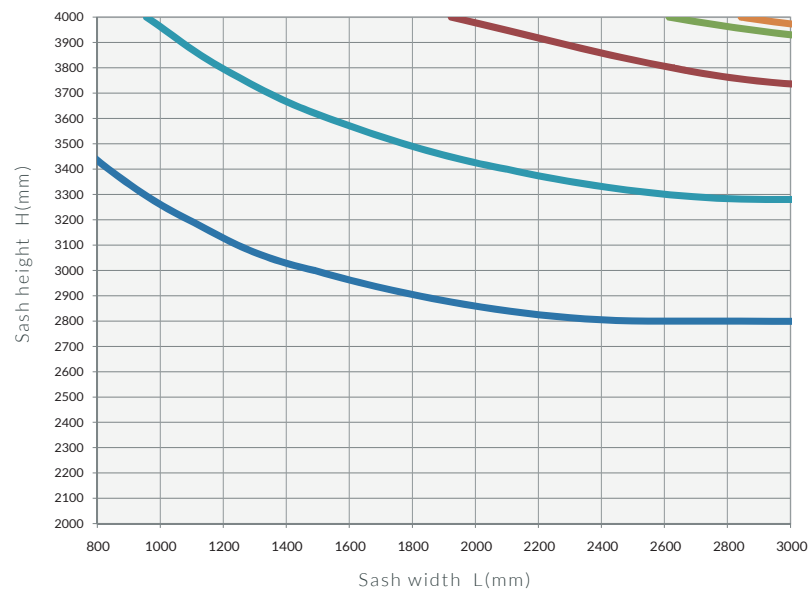
FA₁

HB

FA₂



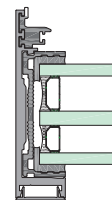
103
Km/h



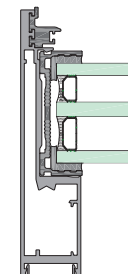
ΩMEGA

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

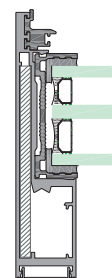
WIND LOAD DIAGRAMS



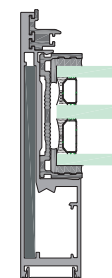
A



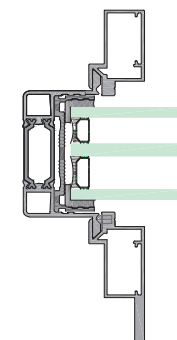
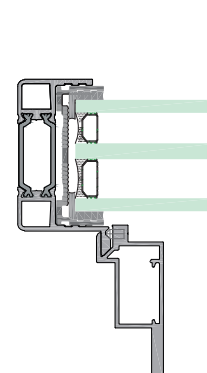
B



B + Alum. reinf.

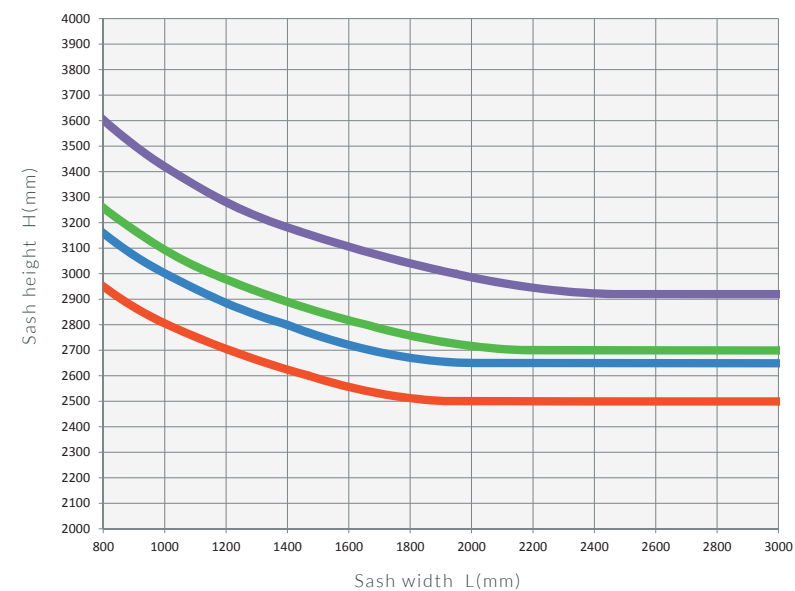
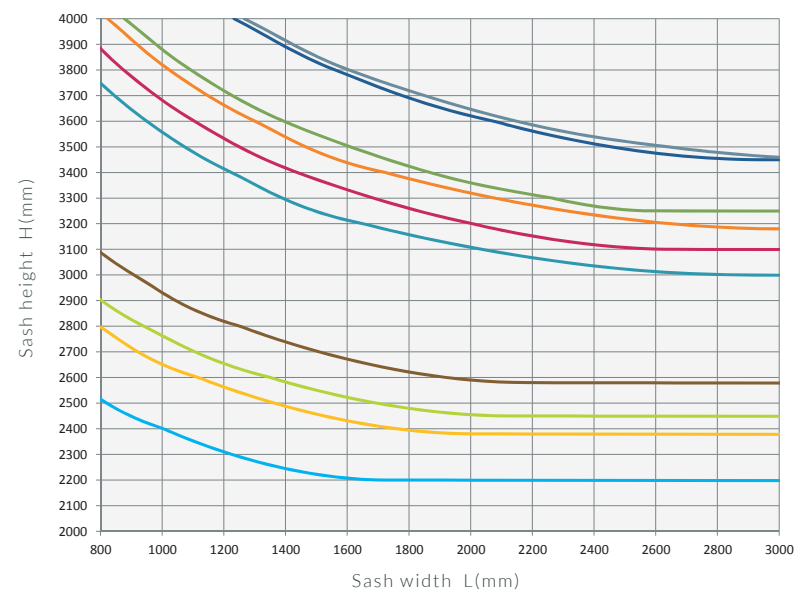


B + Steel reinf.

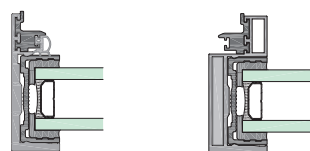


WIND LOAD DIAGRAMS

0,8
kN/m²

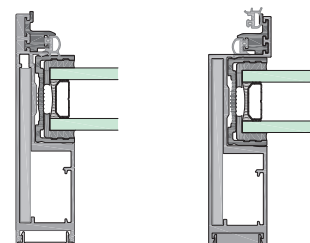


OMICRON



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.

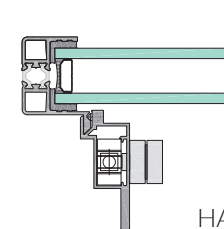
L₁

HA

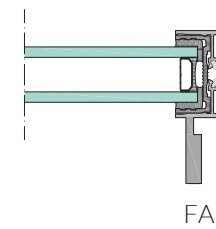
FA₁

HB

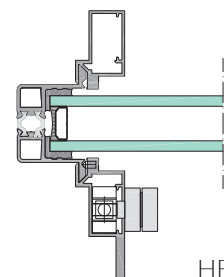
FA₂



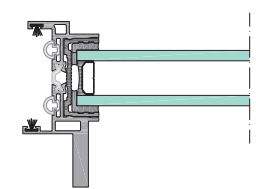
HA



FA₁



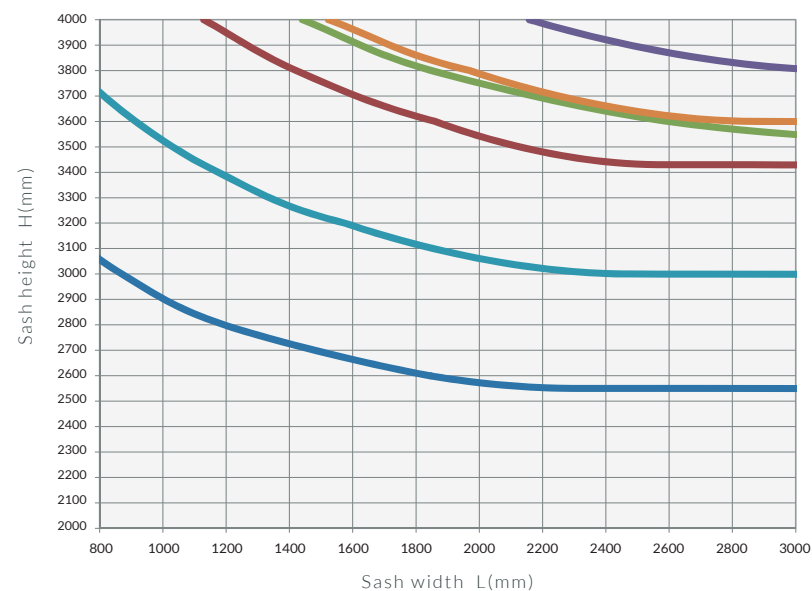
HB



FA₂

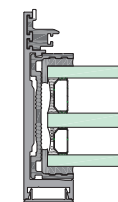
WIND LOAD DIAGRAMS

130
Km/h

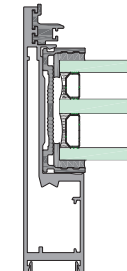


ΩMEGA

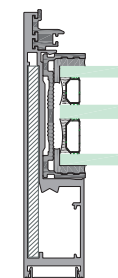
- D
- C
- B + Steel reinf.
- B + Alum. reinf.
- B
- A



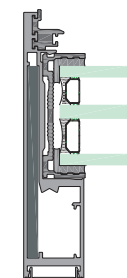
A



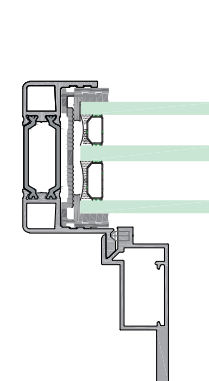
B



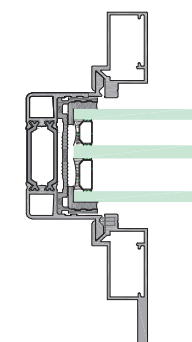
B + Alum. reinf.



B + Steel reinf.

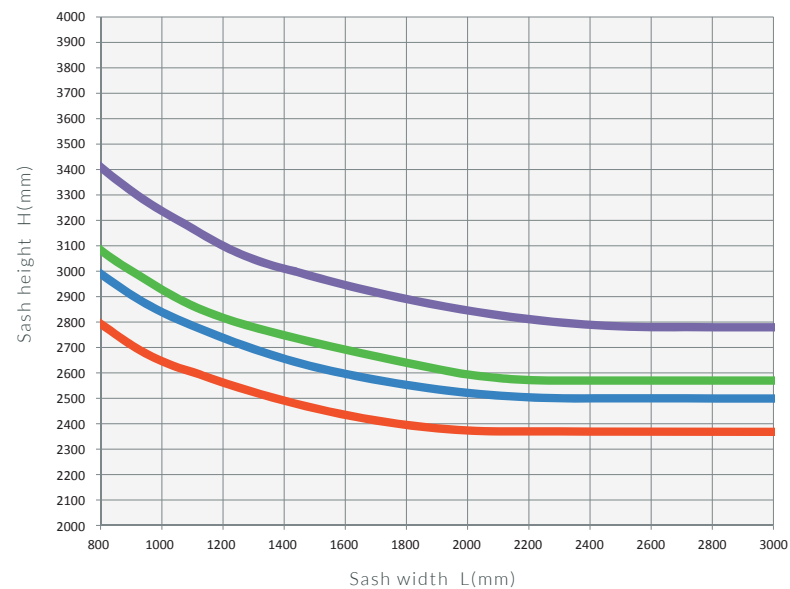


C

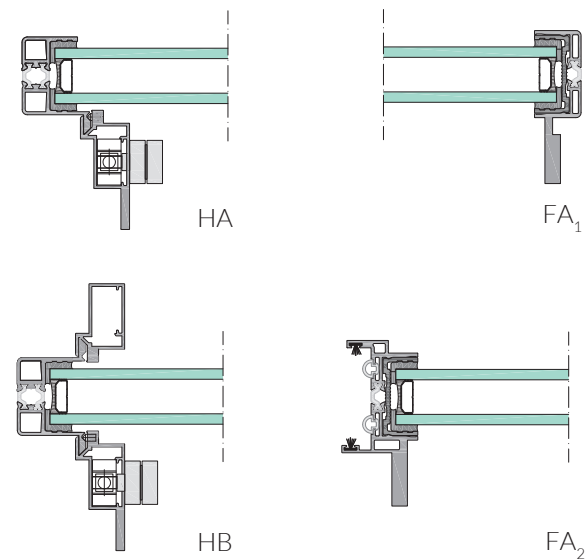


D

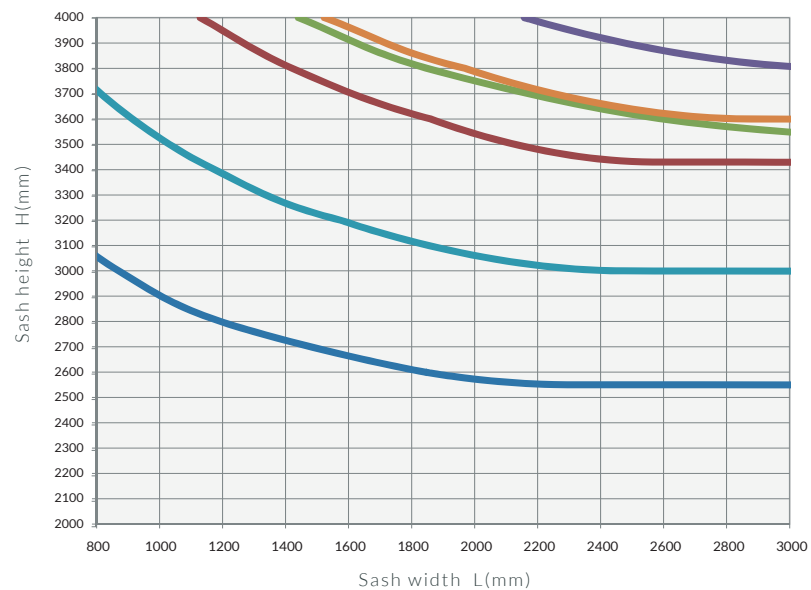
12.3



O_1 + Steel reinf.		
L_2 + Steel reinf.		
L_2		
O_1		
L_2 + Alum. reinf.		
O_2		
O_2 + Steel reinf.		HA
O_2 + Alum. reinf.		FA ₁
O_1 + Alum. reinf.		HB
L_1		FA ₂



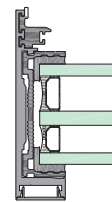
145
Km/h



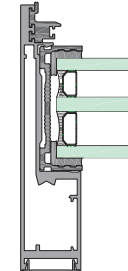
ΩMEGA

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

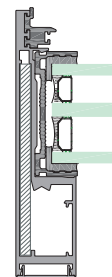
WIND LOAD DIAGRAMS



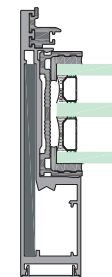
A



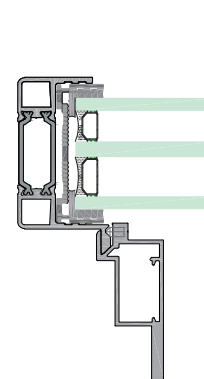
B



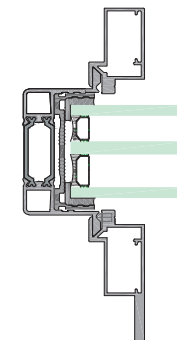
B + Alum. reinf.



B + Steel reinf.



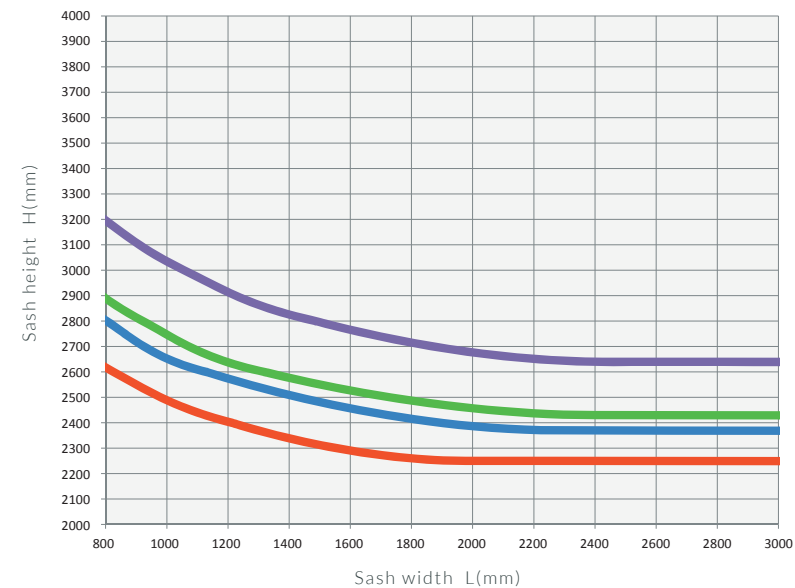
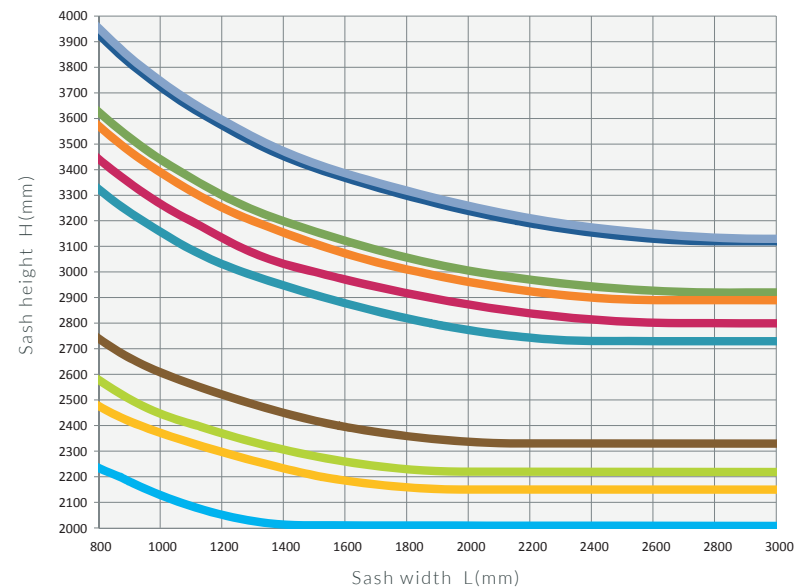
C



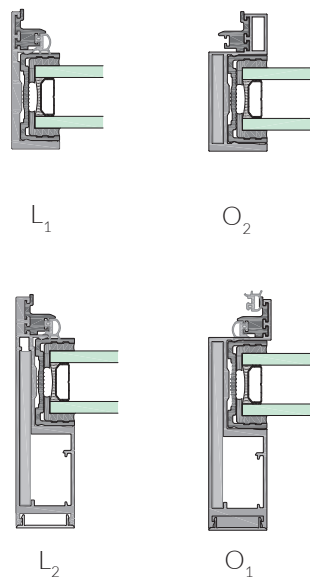
D

WIND LOAD DIAGRAMS

1,3
kN/m²



OMICRON



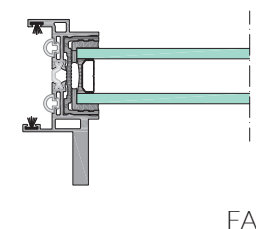
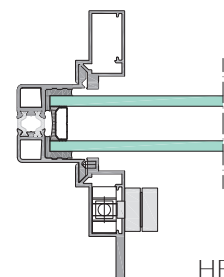
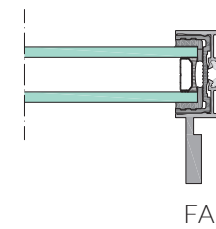
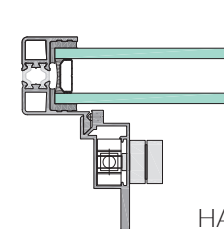
- O₁ + Steel reinf. — (light blue)
- L₂ + Steel reinf. — (dark blue)
- L₂ — (magenta)
- O₁ — (teal)
- L₂ + Alum. reinf. — (green)
- O₂ — (yellow)
- O₂ + Steel reinf. — (brown)
- O₂ + Alum. reinf. — (light green)
- O₁ + Alum. reinf. — (orange)
- L₁ — (cyan)

HA

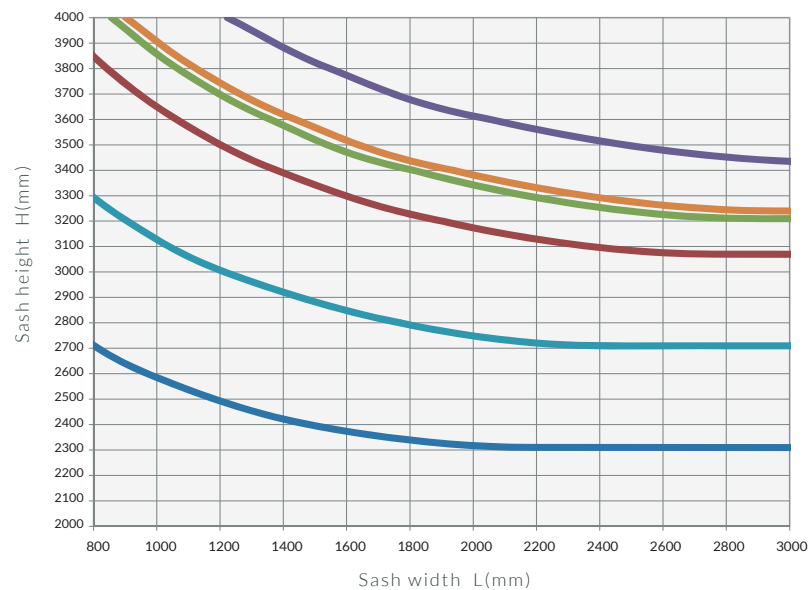
FA₁

HB

FA₂



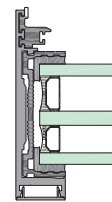
164
Km/h



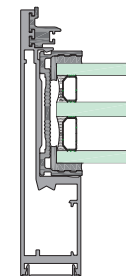
ΩMEGA

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

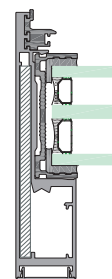
WIND LOAD DIAGRAMS



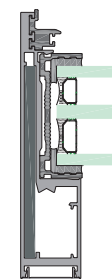
A



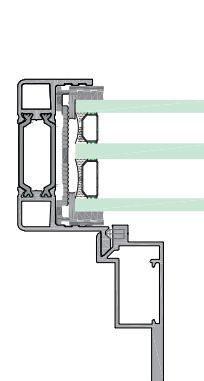
B



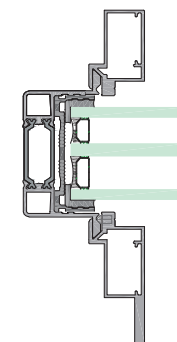
B + Alum. reinf.



B + Steel reinf.



C

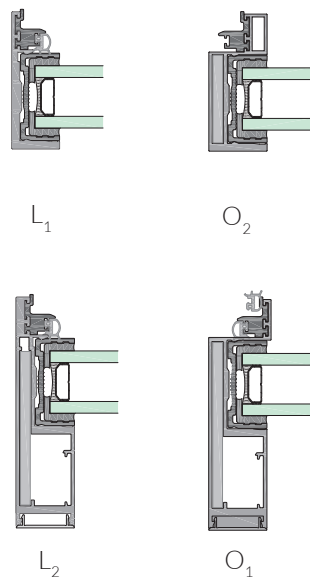
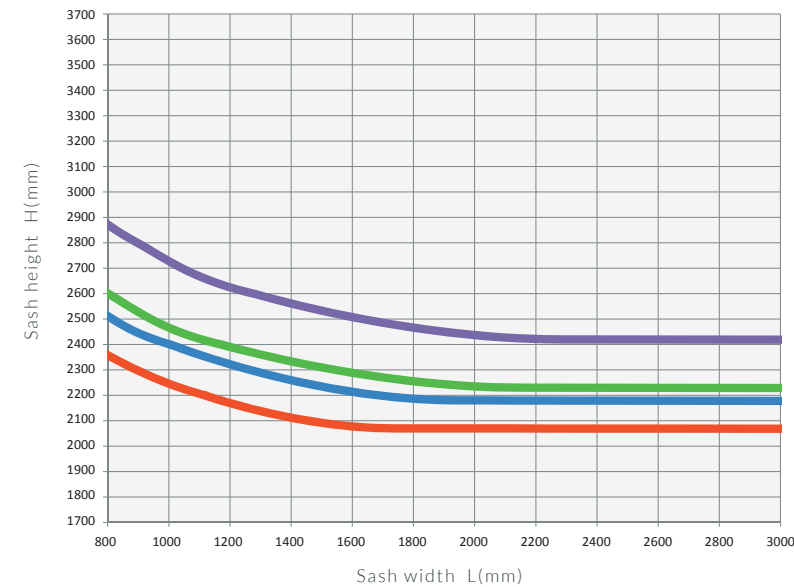
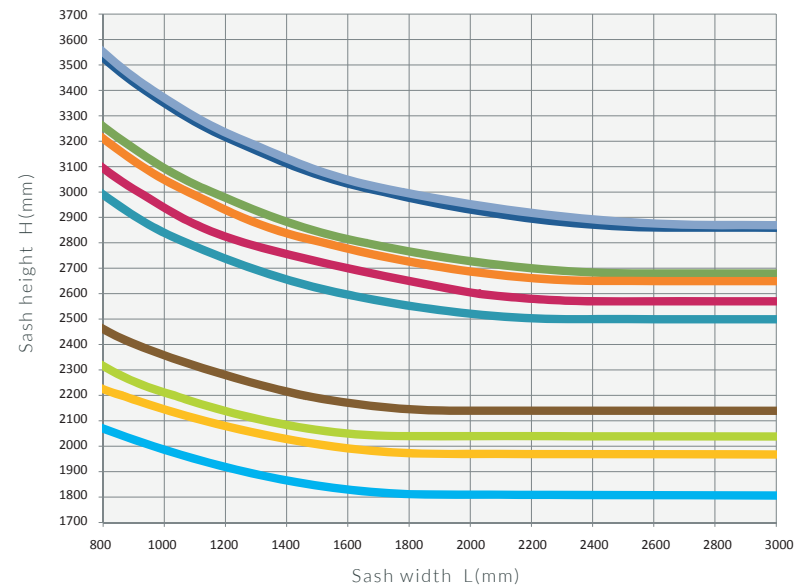


D

WIND LOAD DIAGRAMS

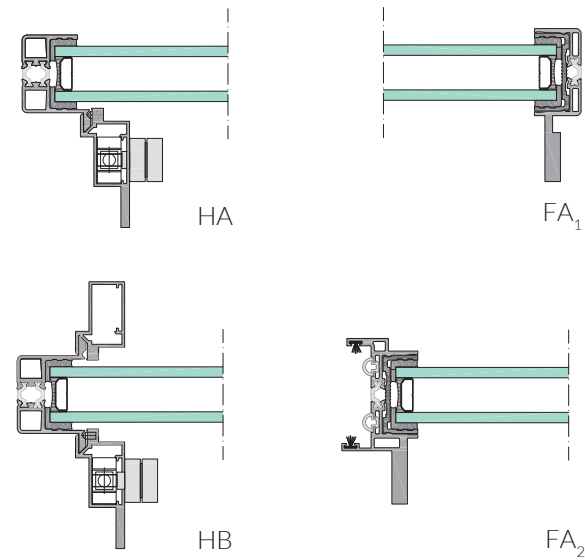
2,0

kN/m²

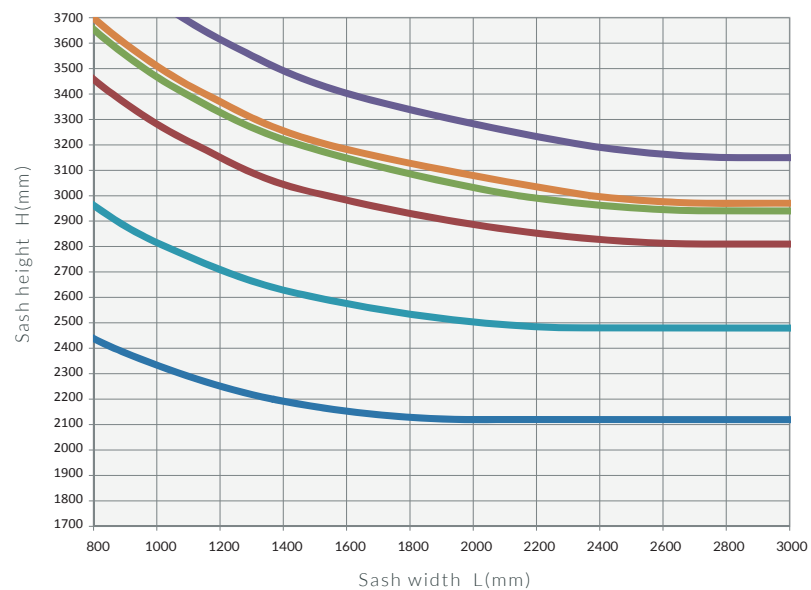


OMICRON

- O₁ + Steel reinf. —
- L₂ + Steel reinf. —
- L₂ —
- O₁ —
- L₂ + Alum. reinf. —
- O₂ —
- O₂ + Steel reinf. — HA
- O₂ + Alum. reinf. — FA₁
- O₁ + Alum. reinf. — HB
- L₁ — FA₂



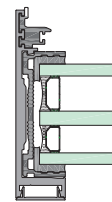
200
Km/h



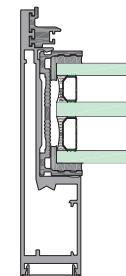
ΩMEGA

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

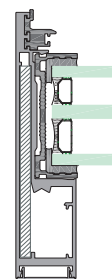
WIND LOAD DIAGRAMS



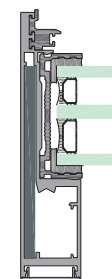
A



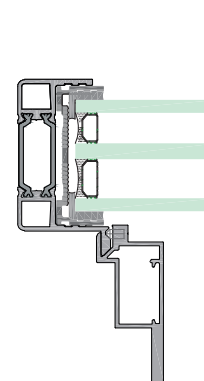
B



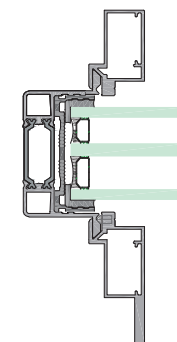
B + Alum. reinf.



B + Steel reinf.

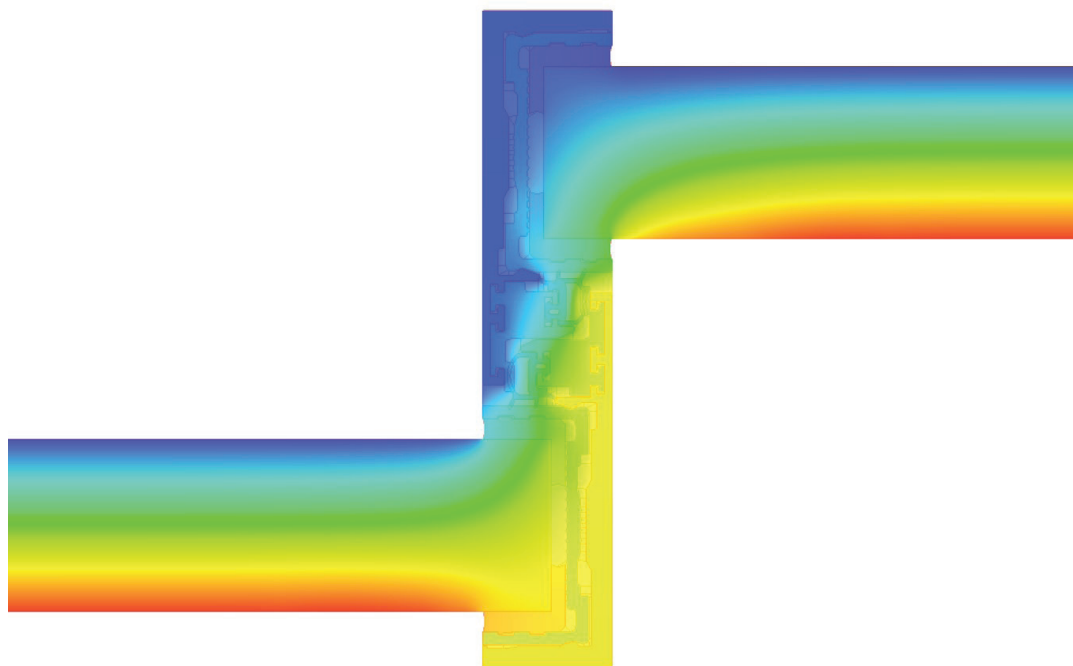


C

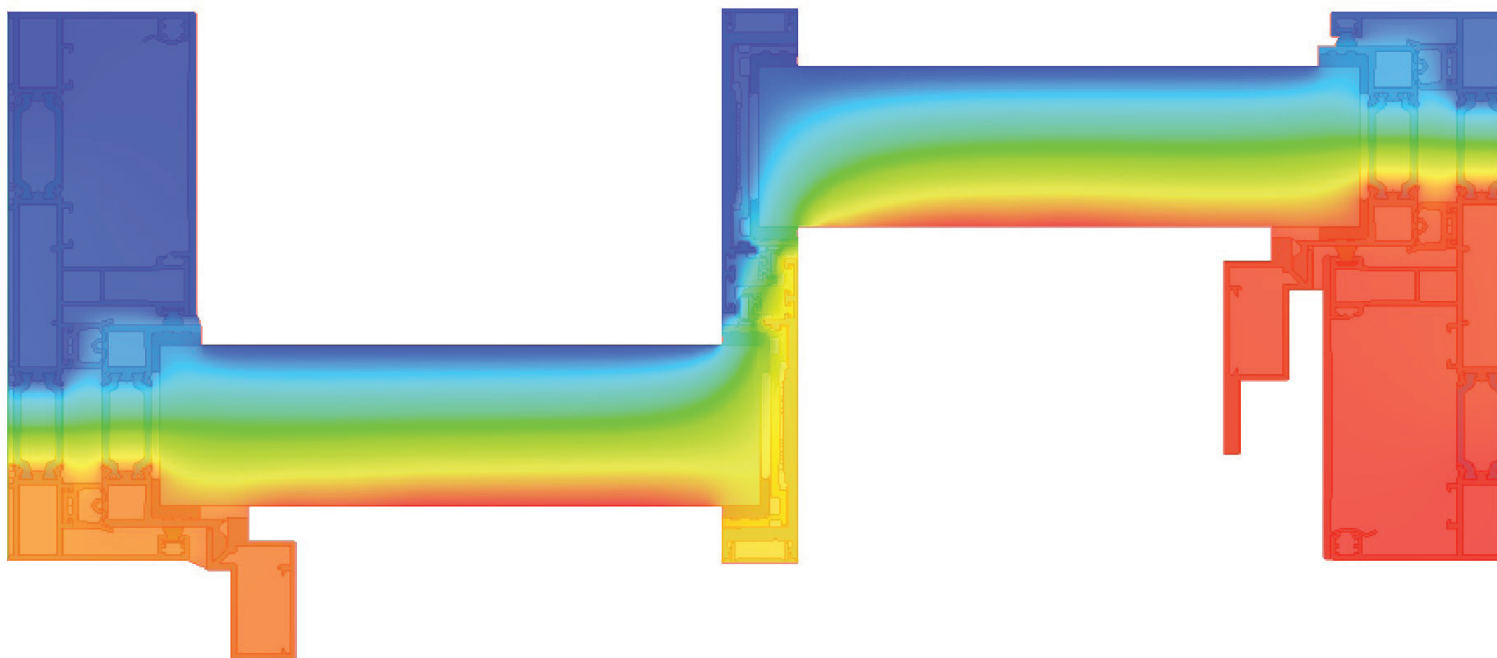


D





UW VALUES 0,7 - 1.7 W/M2K DEPENDING ON THE UG



UW VALUES 0,7 - 1.7 W/M2K DEPENDING ON THE UG

