

panoramah![®]

ah!38 TECHNICAL DOCUMENTATION



panoramah!® 38 | Technical Documentation
Development: panoramah!® R&D and Marketing
First Edition: 01 | 2018

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JA House | São Paulo, Brazil
Studio MK27 - Márcio Kogan | 2014
© Leka Mendes



1. INTRODUCTION



1. INTRODUCTION

ah!38 excels as an exterior opening system comprising a balanced combination of thermal and acoustic behaviour, suited to all climates. It offers great flexibility in the modular composition of openings, including opening corner solutions, pocket sliding configurations, curved layouts, tilted spans and retractable mosquito nets. The alternatives come in a wide range of formats such as sliding, sash, skylight, pivot and tilt-and-turn units. **ah!38** also includes a variety of add-ons, finishes and it can be completely automated. It is a system that allows double glazed surface areas of up to 19m², or triple glazed of up to 6m². Both options use 20mm vertical profiles.

USE

external partitions
offers excellent acoustic
and thermal insulation

OPENING SOLUTIONS

sliding
fixed
corner
pocket
vertical sash
pivot
tilt-and-turn

MAXIMUM AREA PANEL

19m²

MAXIMUM NO. RAILS

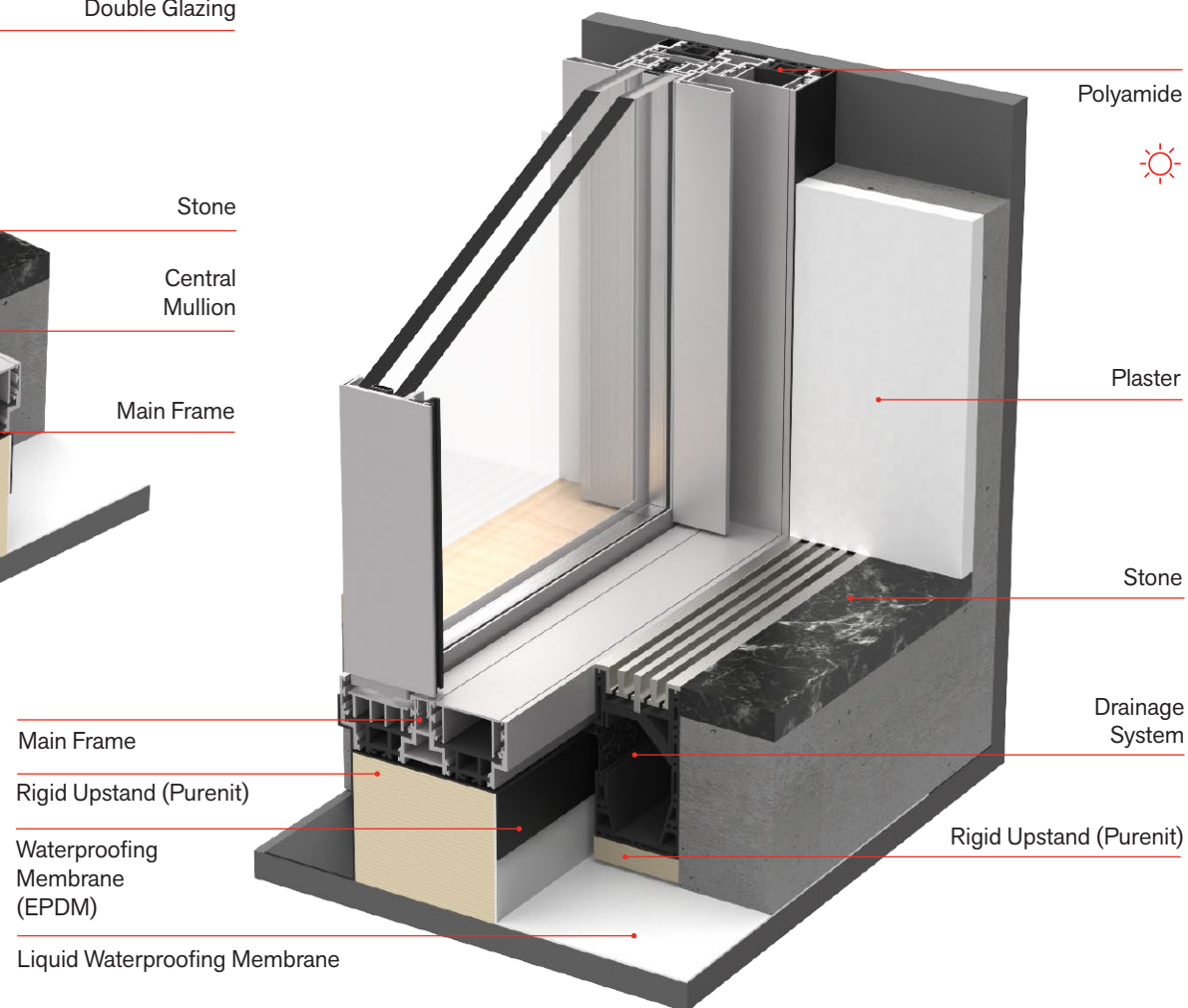
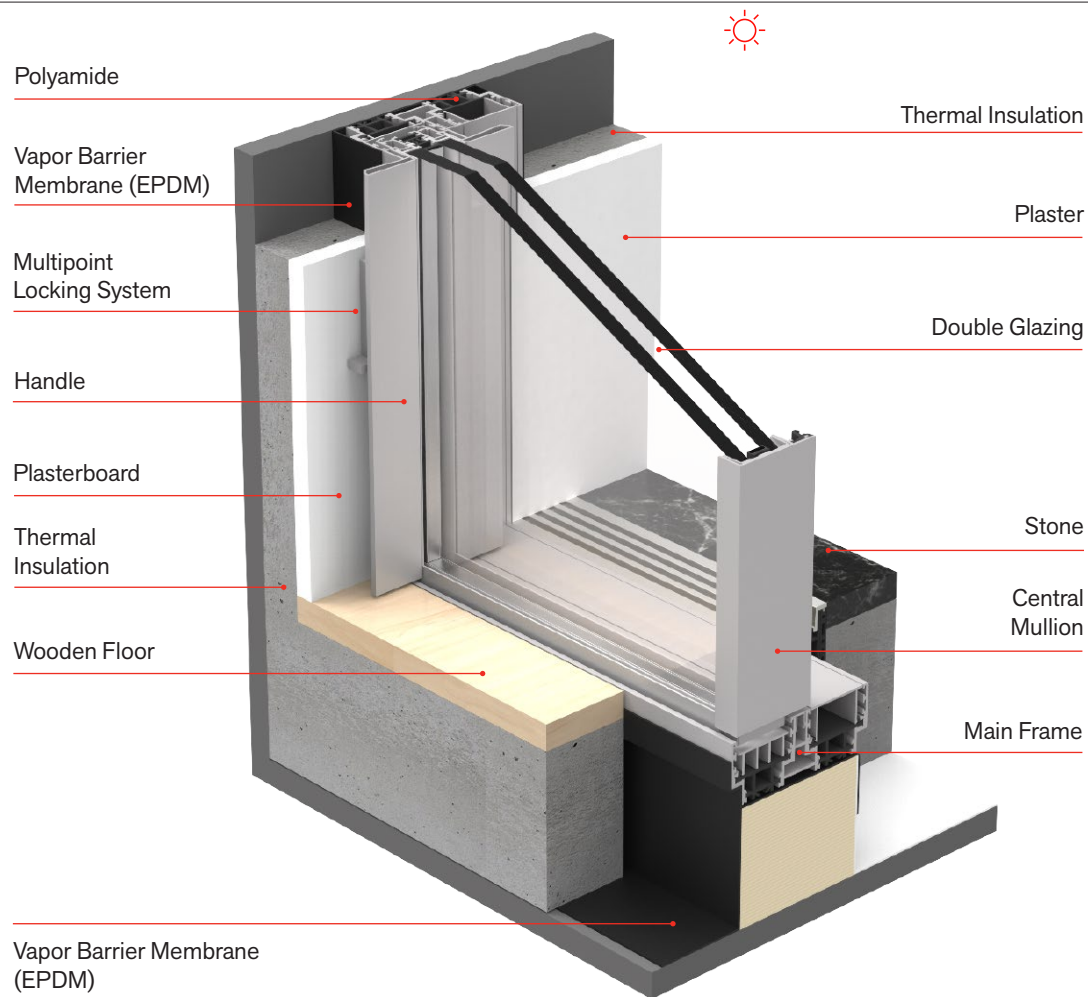
limitless

SOUND INSULATION

41dB

LOCKS

one point latch
multipoint locking system





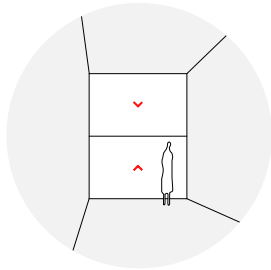
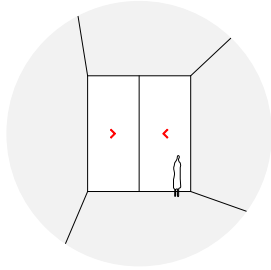
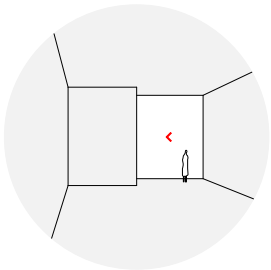
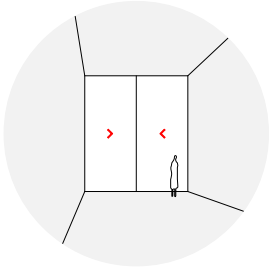
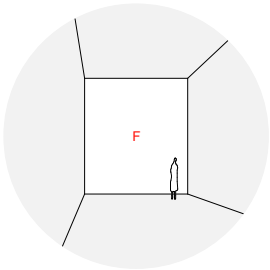
2. SLIDING SYSTEM



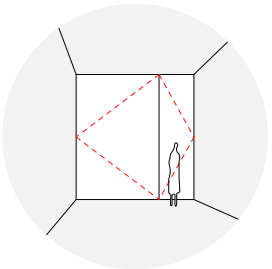
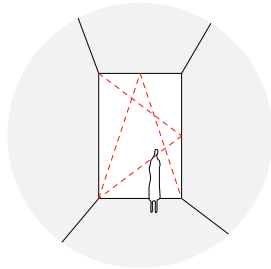
2.1 DATA SHEET

TYPES | SLIDING SYSTEM

	HORIZONTAL				VERTICAL
	FIXED	SLIDING	POCKET	CORNER	
MONORAIL	•	•	•	•	•
BIRAIL	•	•	•	•	•
MULTIRAIL	•	•	•	•	•



TYPES | OPENING SYSTEM

PIVOT	TILT-TURN
	

PANORAMAH!® 38

MAIN DIMENSIONS

VERTICAL PROFILE	20mm 3/4"	
MAX. LEAF HEIGHT	6000mm	
MAX. LEAF WIDTH	6000mm	
MAX. LEAF WEIGHT	1000kg	
MAX. GLAZED AREA	double glazing	19m ²
	triple glazing	6m ²
GLASS THICKNESS	38mm	

CONSTRUCTION

INSTALLATION FLUSH TO THE FLOOR	●
INSTALLATION FLUSH TO THE CEILING	●
MOTORIZATION (OPTIONAL)	●
INVISIBLE BASE (OPTIONAL)	●
FINISHES	All panoramah! ® System series guarantee that the following finishes are carried out by duly certified entities, according to QUALICOAT and QUALANOD directives: Lacquered RAL, Lacquered PVDS, Anodized, Satin, Polished and Repellent.
EXTRAS	mosquito nets / guard-rails / shades / heated glazing / privacy glass / electro chromatic

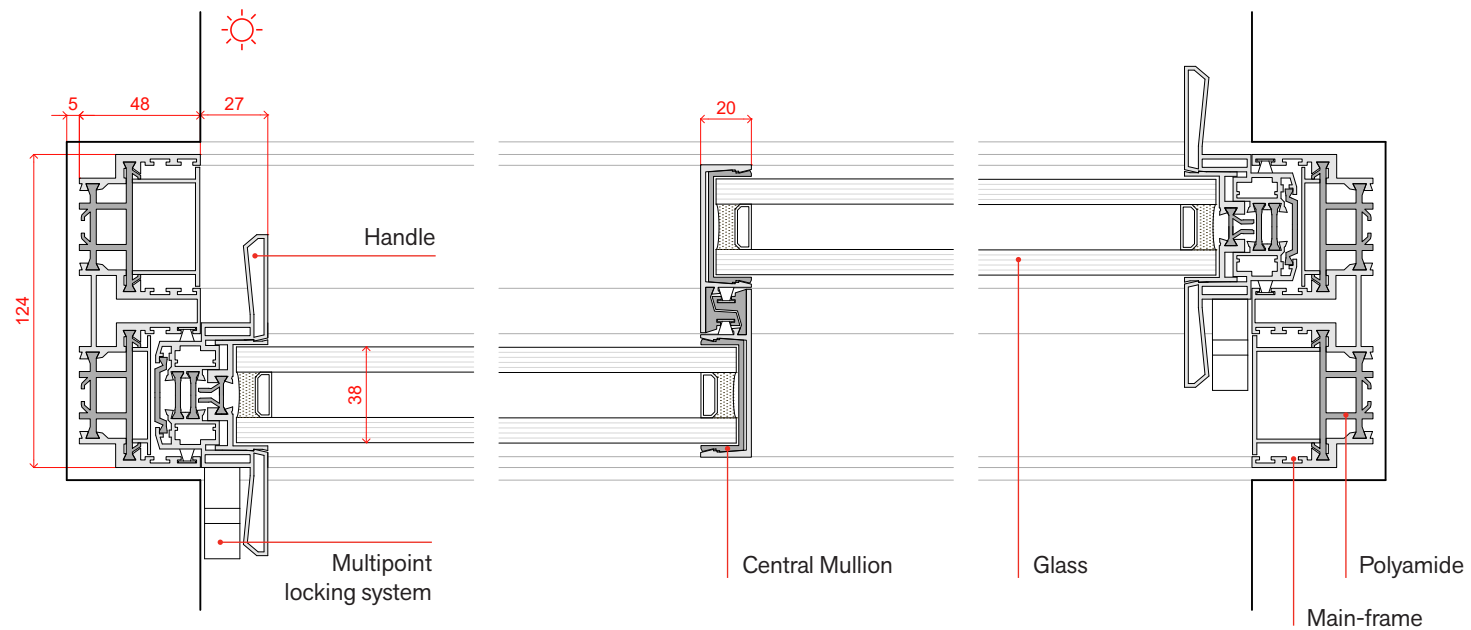
PERFORMANCES

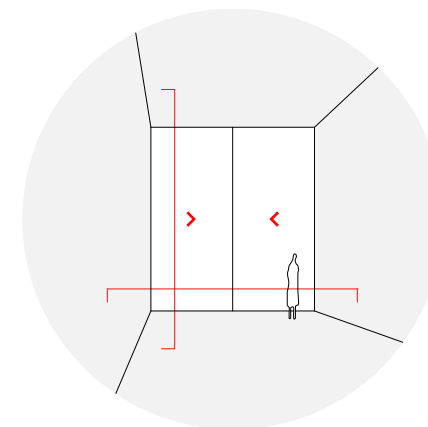
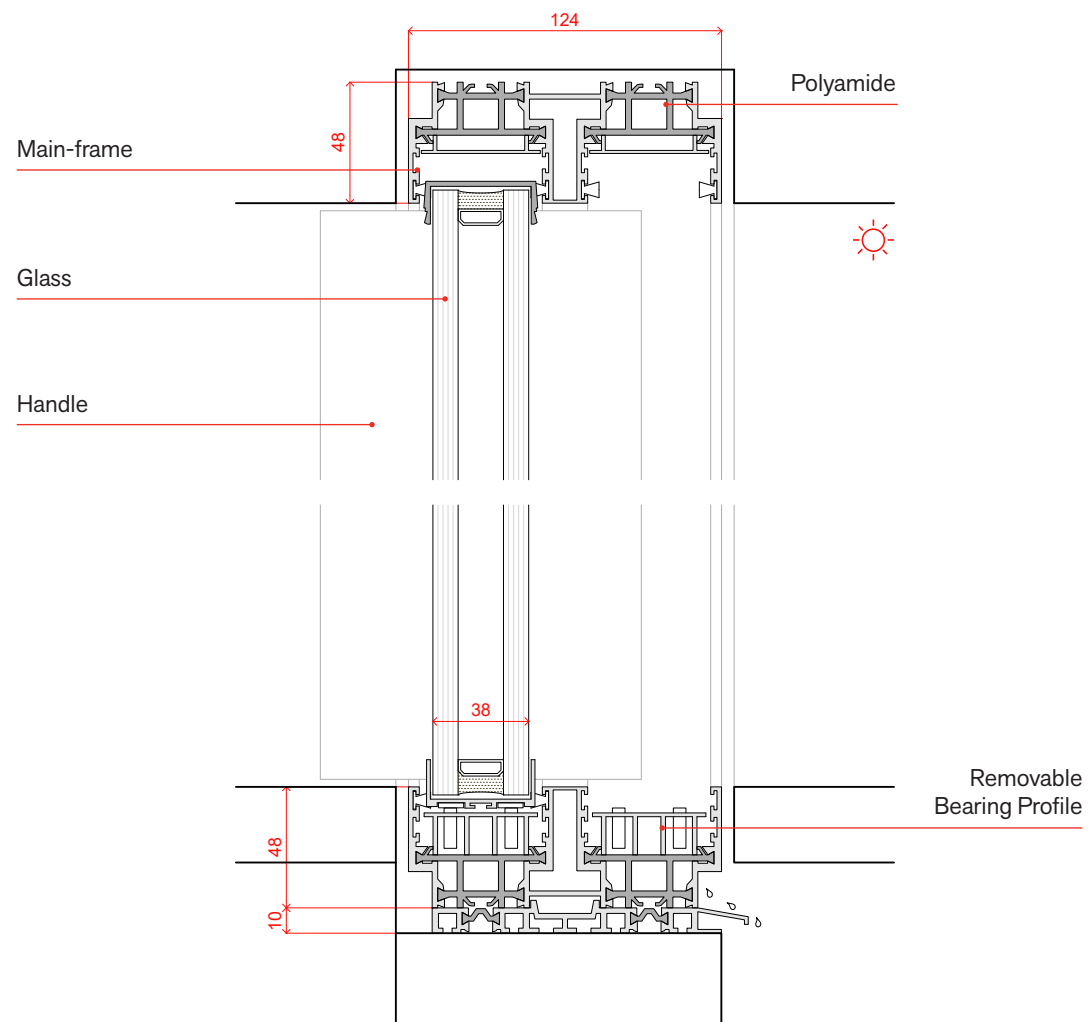
LIGHT TRASMISSION	98%
THERMAL COEFFICIENT (EN 10077)	Uw = 1.165 W/m ² .K (Ug = 0.7 W/m ² .K) Uw = 0.21 BTU / (h.ft ² .K) (Ug = 0.12 BTU / (h.ft ² .K)
SECURITY (ENV 1627)	RC2
SOUND INSULATION (EN ISO 717-1)	41dB
WATER TIGHTNESS (EN 12208)	Class E900
AIR TIGHTNESS (EN 12207)	Class 4
WIND TIGHTNESS (EN 12210)	Class C5

* Sample submitted to tests for a 4600mm (15ft)x 3600mm (11.8ft) dimension.

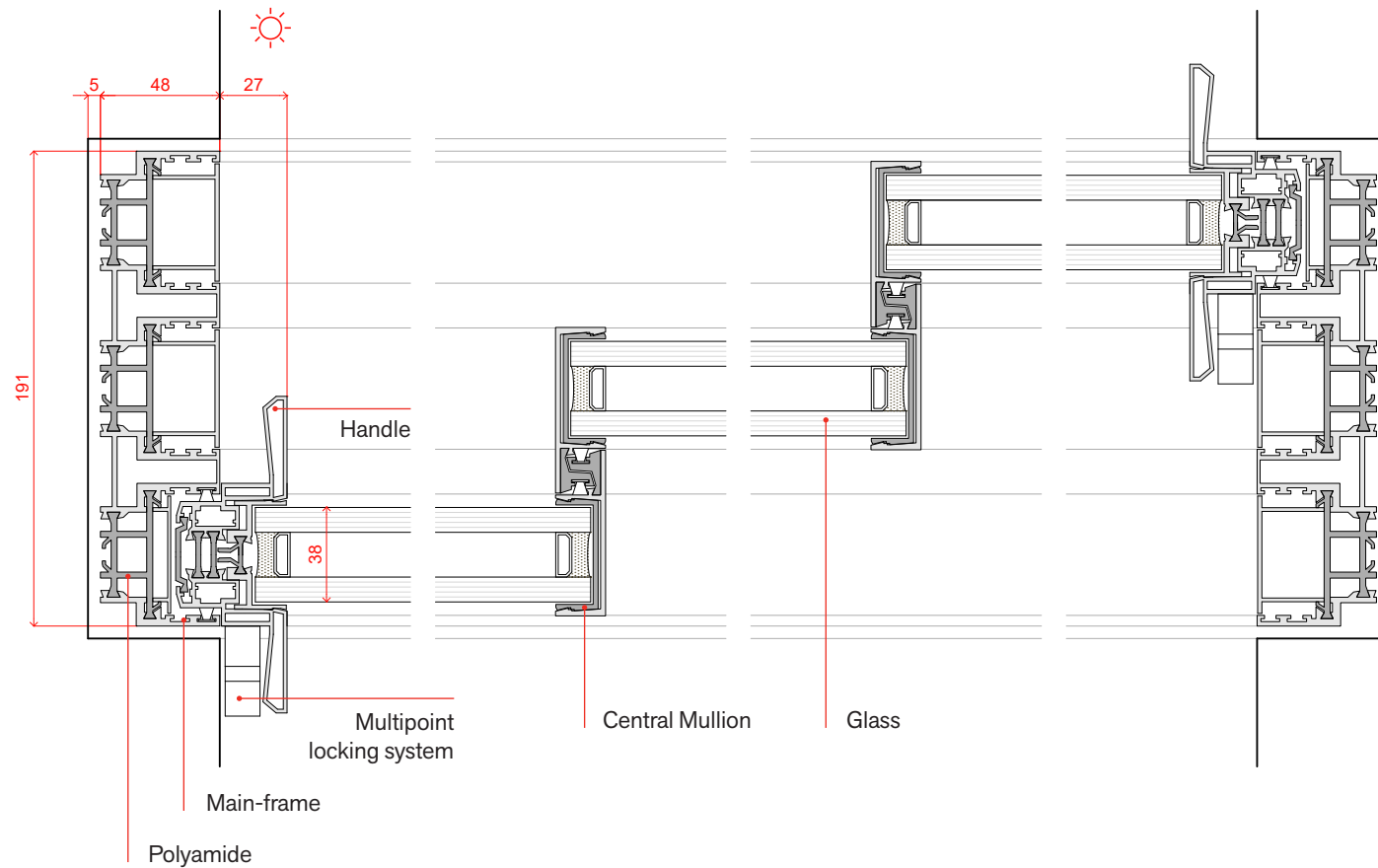
2.2 PRODUCT OVERVIEW

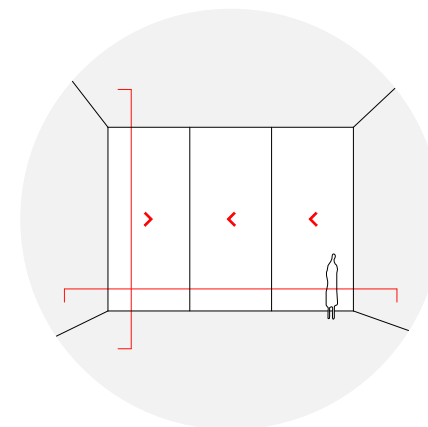
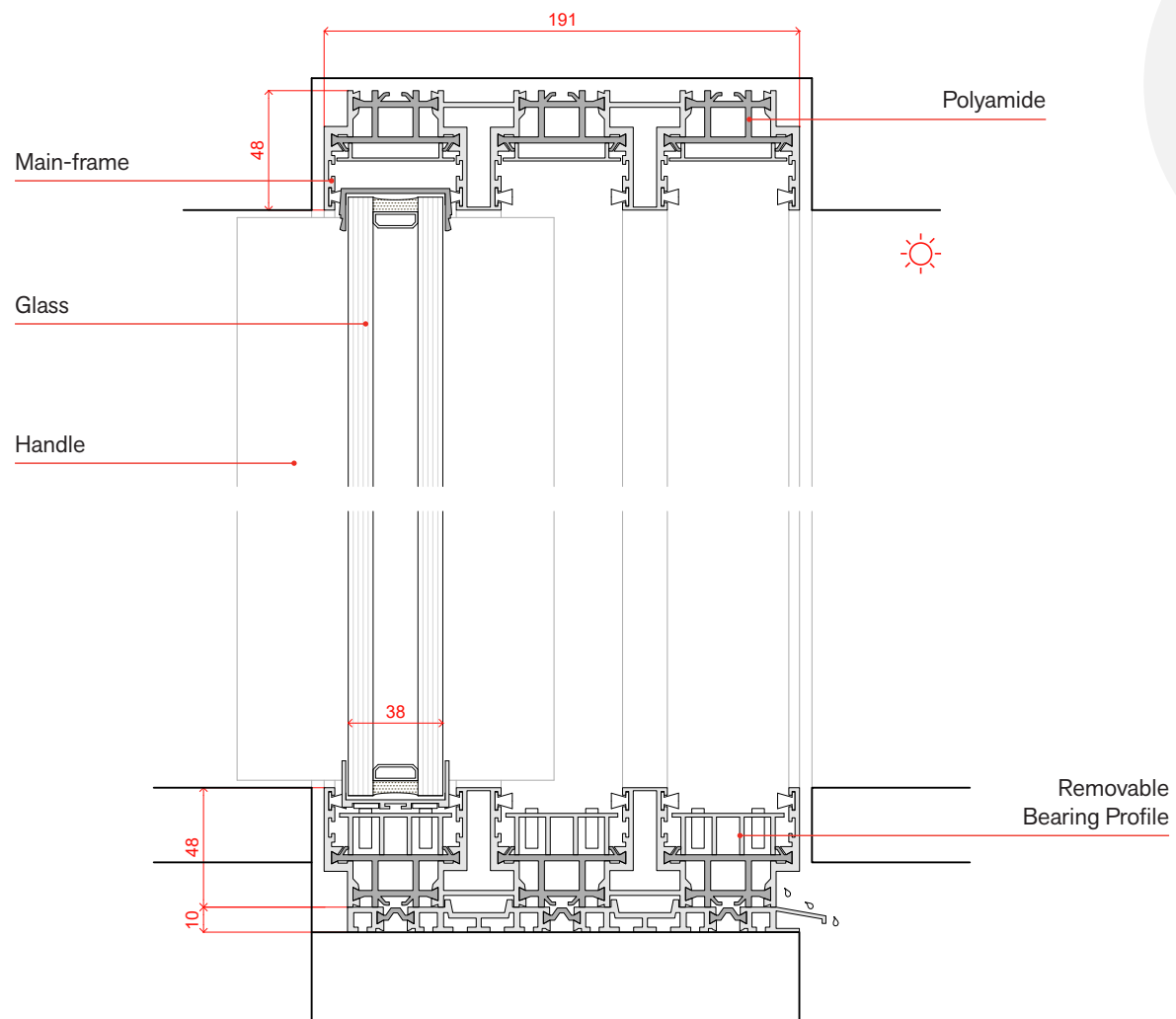
2.2.1 TYPICAL SECTIONS



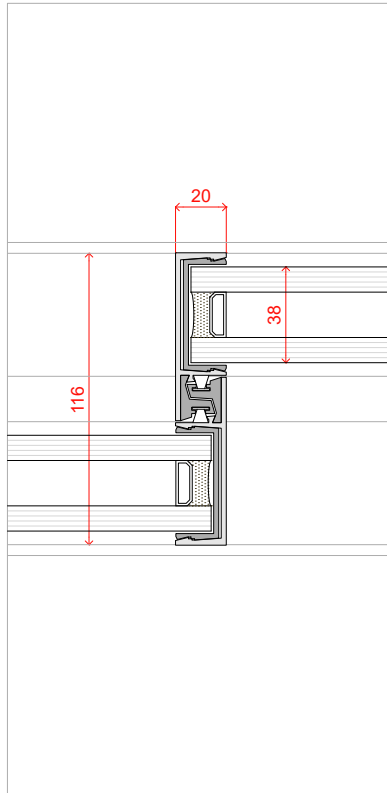


2.2.2 MULTIRAIL FRAMES

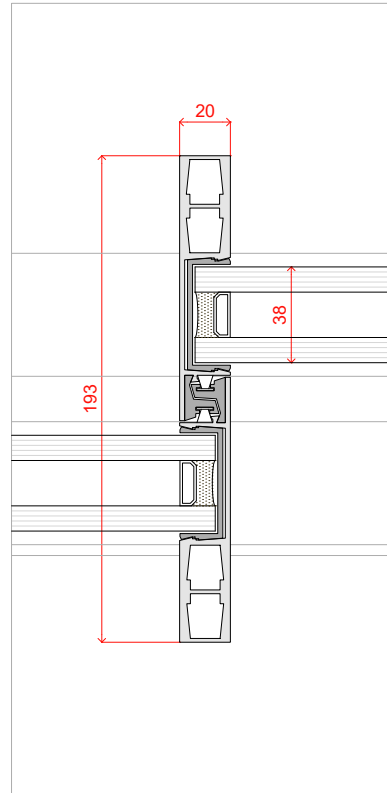




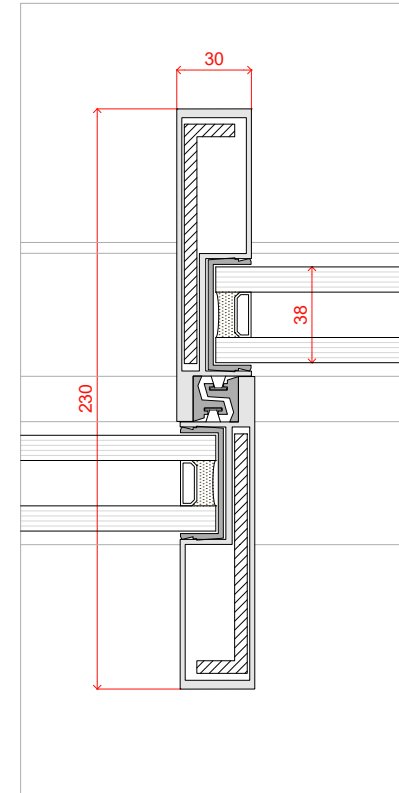
2.2.3 CENTRAL MULLION OPTIONS



Standard
20 N

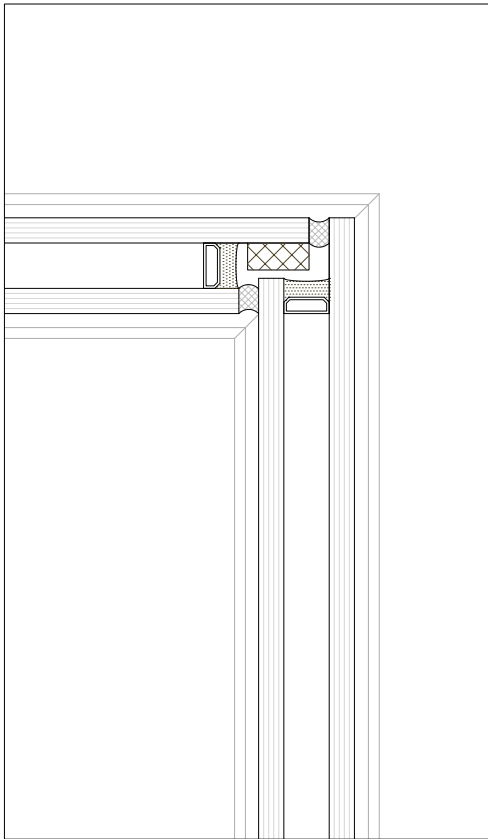


Reinforced
20 R

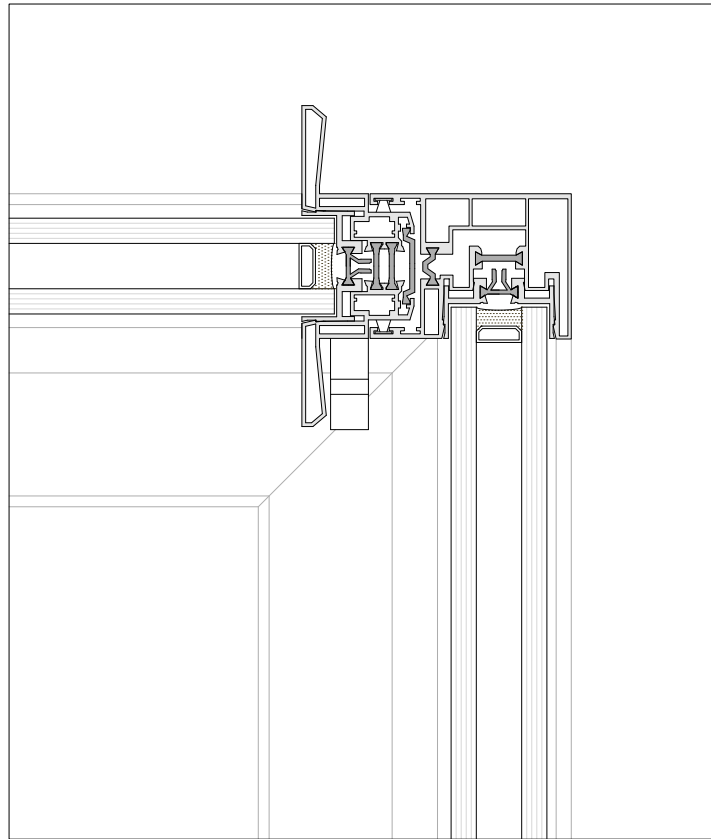


Extra-reinforced with stainless steel
"L" profiles 30RiL

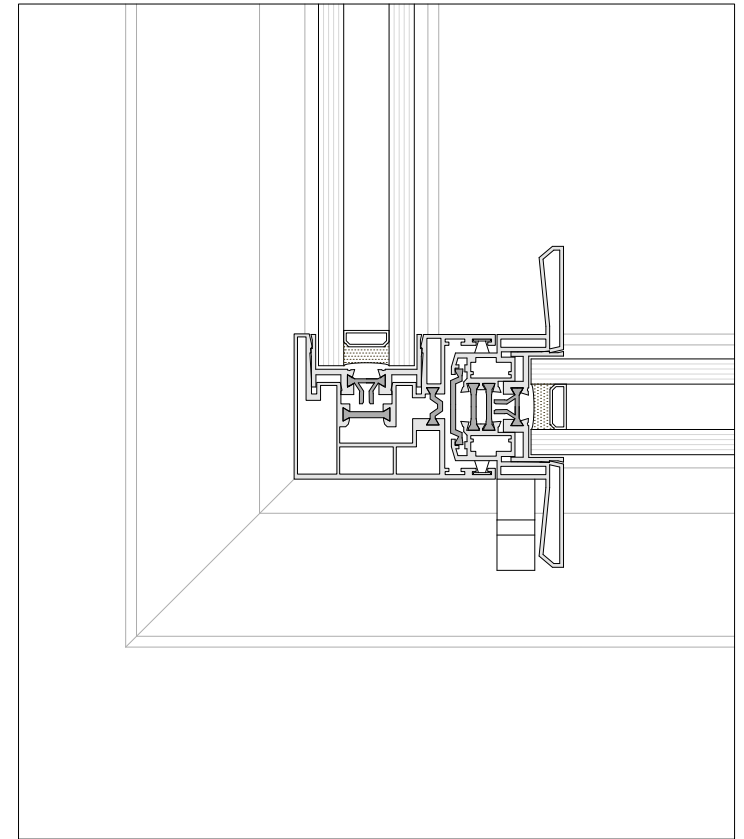
2.2.4 CORNER OPTIONS



[a] Fixed corner with glass bonding (90°)

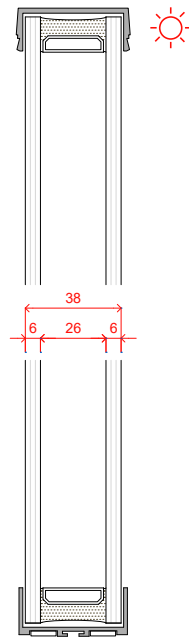


[b] Opening corner (90°)

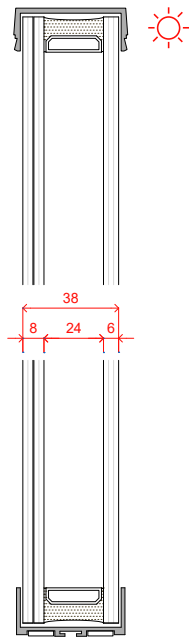


[c] Opening corner (270°)

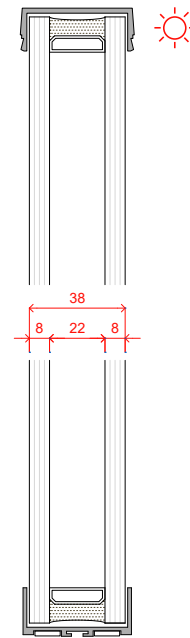
2.2.5 GLASS COMBINATIONS



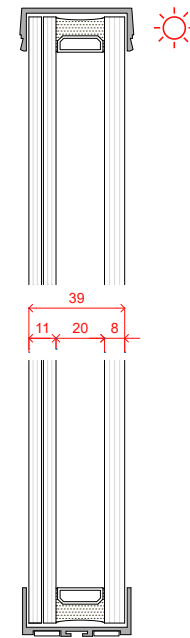
6 • 26 • 6



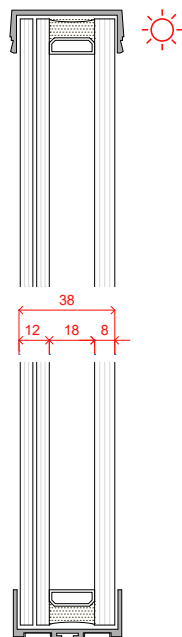
44.1 • 24 • 6



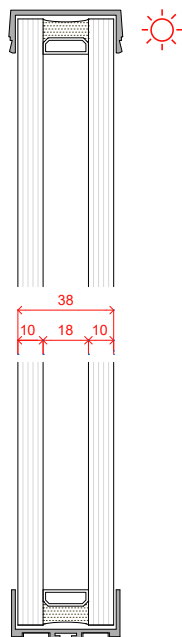
8 • 22 • 8



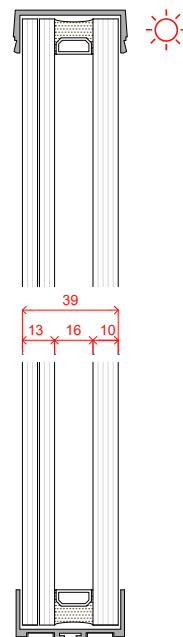
55.2 • 20 • 8



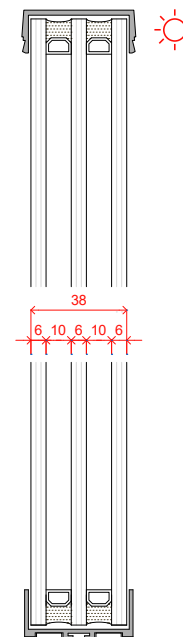
55.4 • 18 • 8



10 • 18 • 10

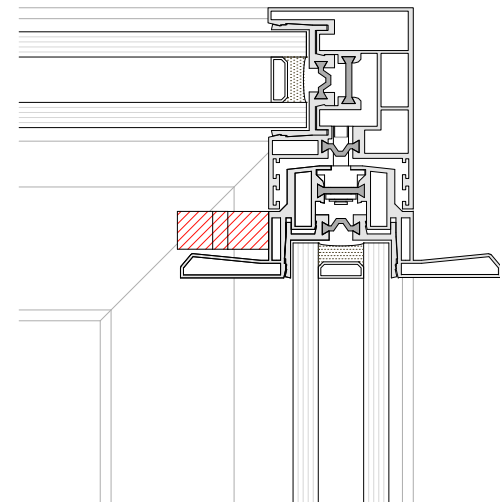
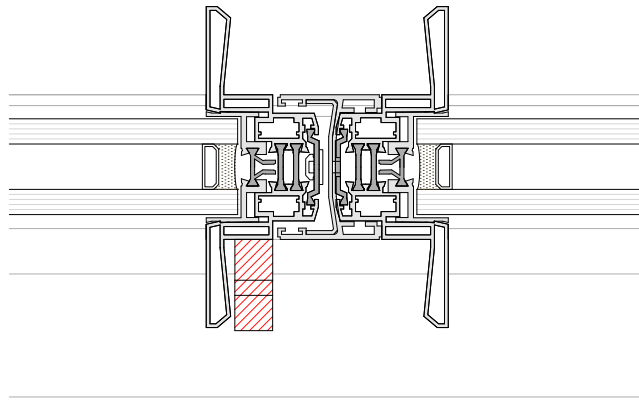
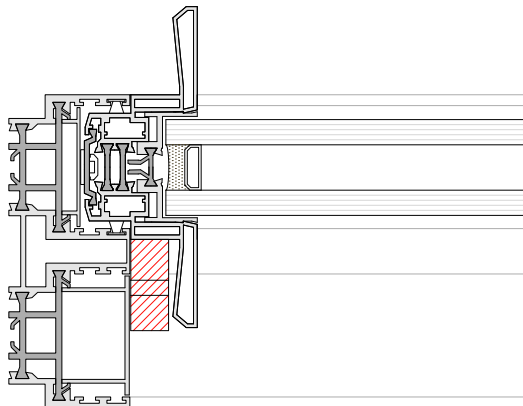
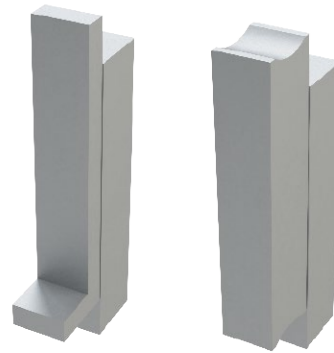


66.2 • 16 • 10



6 • 10 • 6 • 10 • 6

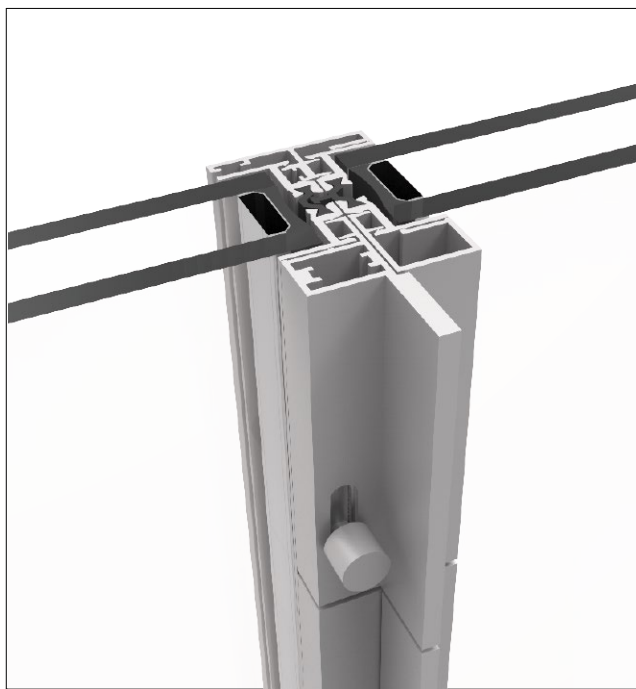
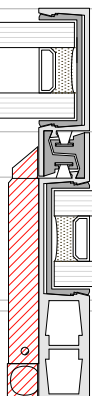
2.2.6 HANDLES AND LOCKING DEVICES



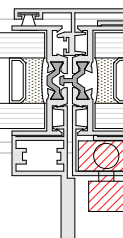
[a] Three point key lock



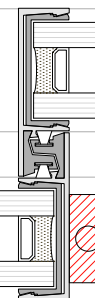
[b] Inverted central mullion



[c] Minimalist central mullion

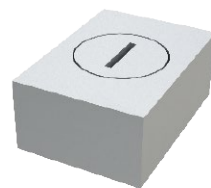
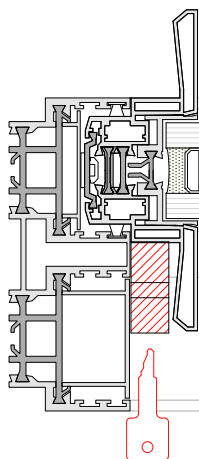


[d] Interlocker floor pin lock

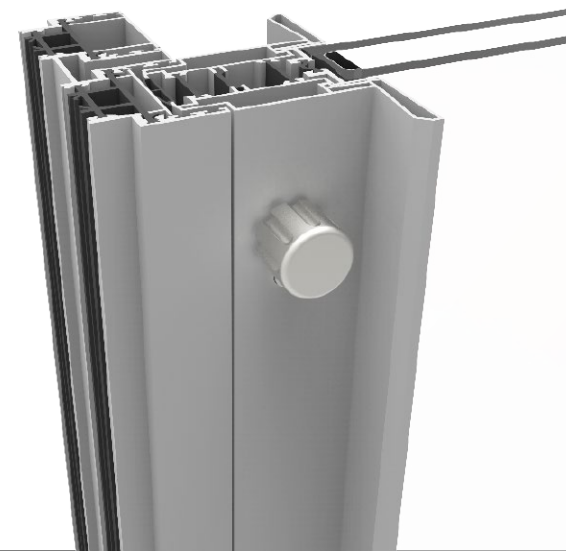
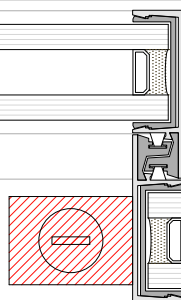




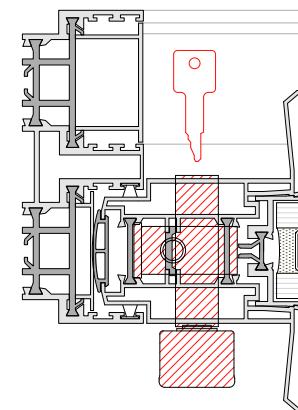
[e] Three point key lock



[e] Interlocker floor key lock

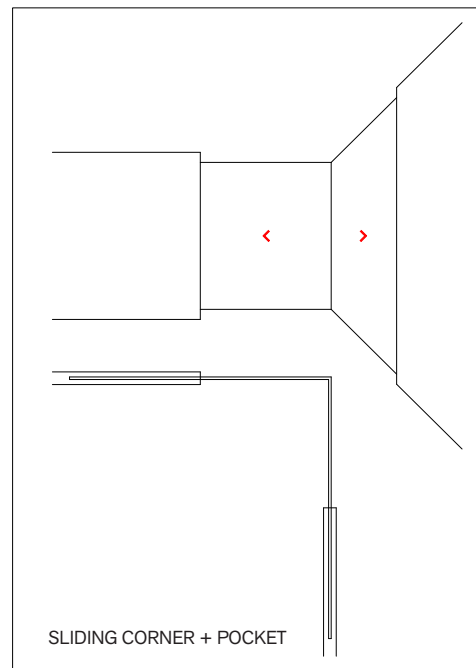
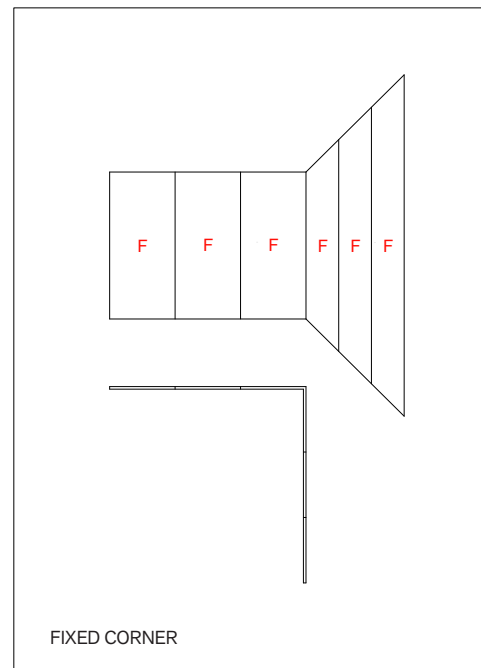
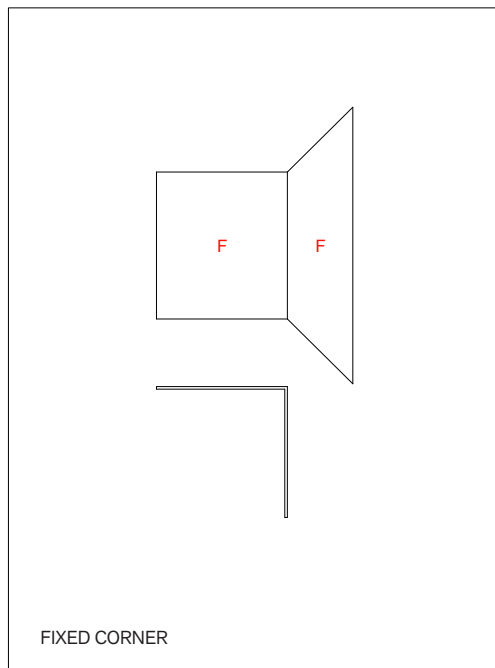
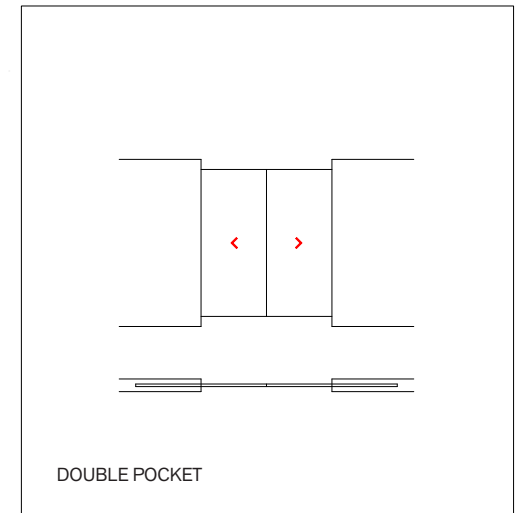
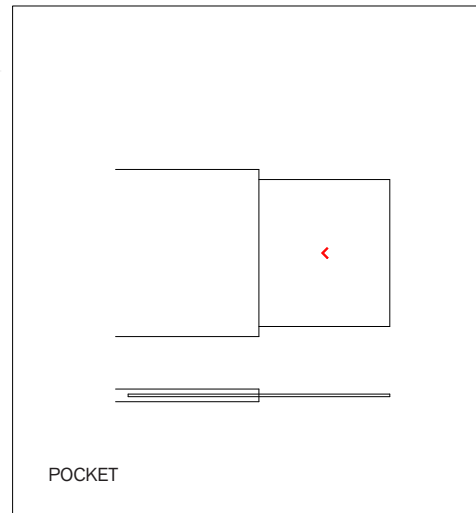
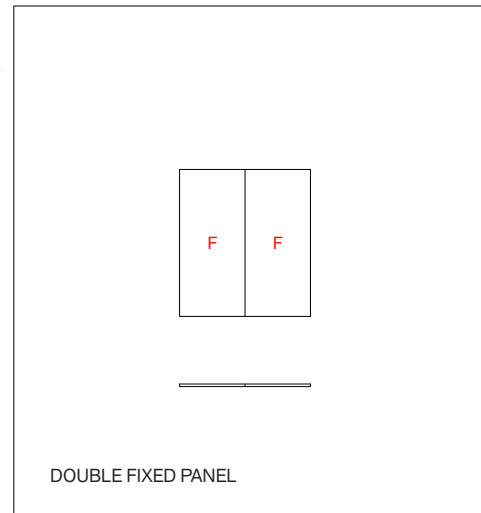
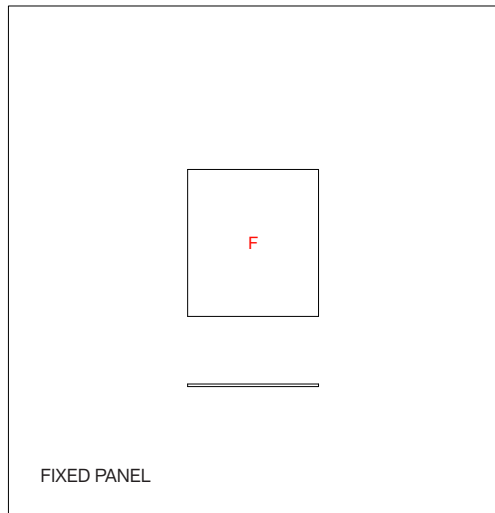


[e] Interlocker floor key lock

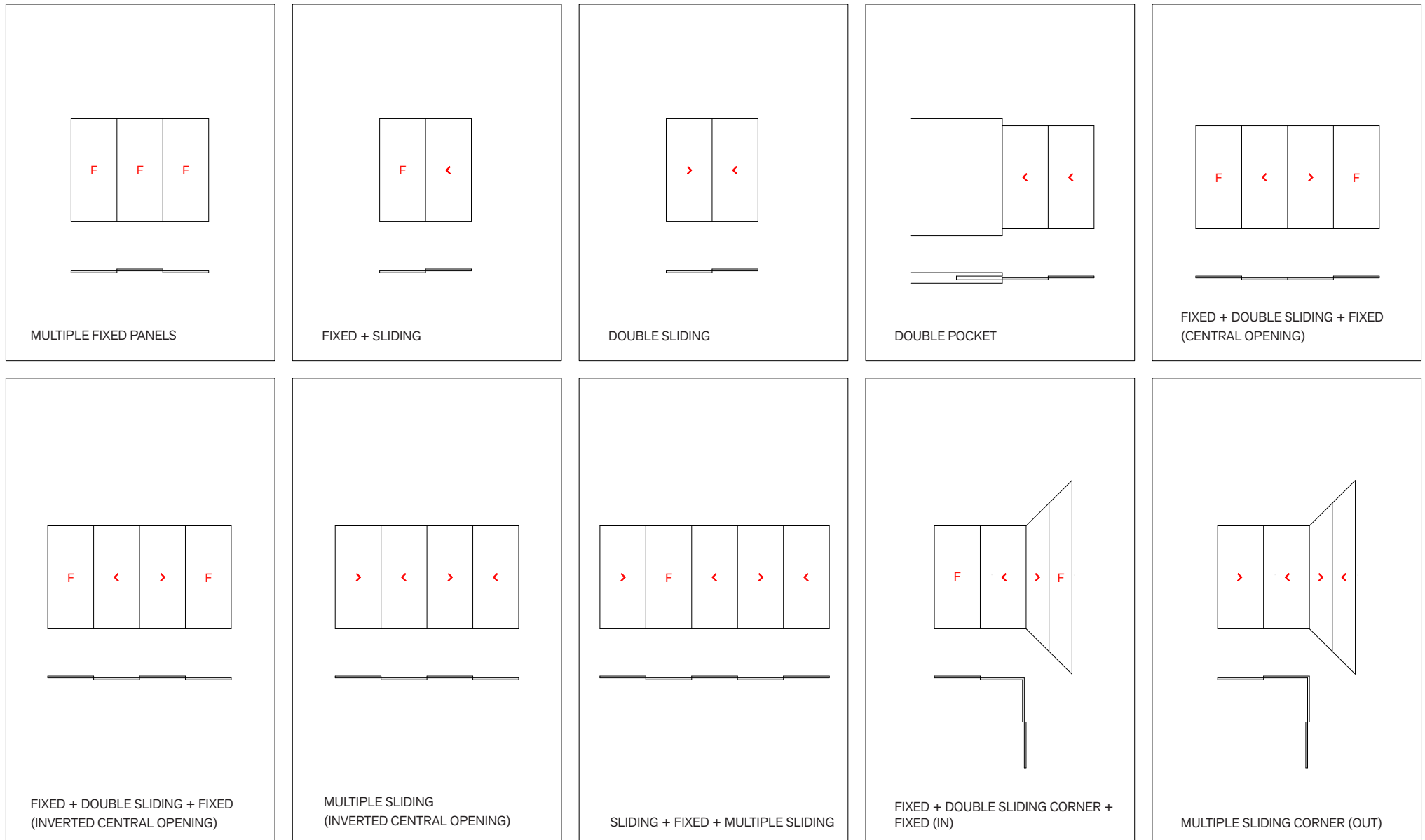


2.3 TYPOLOGIES

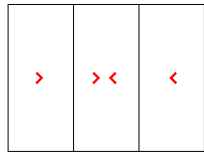
2.3.1 HORIZONTAL - MONORAIL



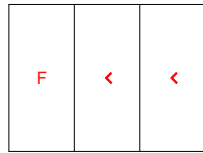
2.3.1 HORIZONTAL - BIRAIL



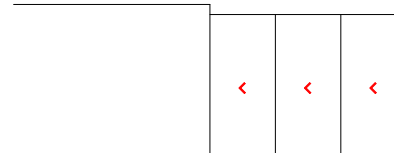
2.3.1 HORIZONTAL - TRIRAIL



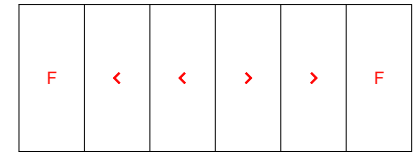
MULTIPLE SLIDING



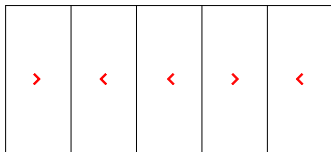
FIXED + DOUBLE SLIDING



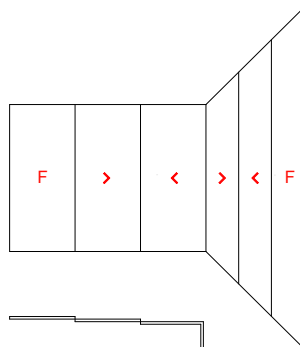
MULTIPLE POCKET



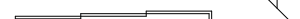
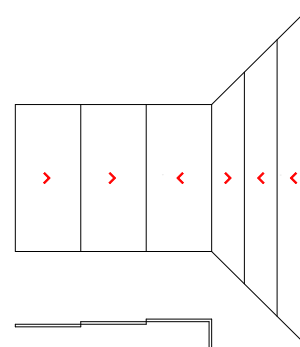
FIXED + MULTIPLE SLIDING + FIXED
(CENTRAL OPENING)



MULTIPLE SLIDING
(INVERTED CENTRAL OPENING)

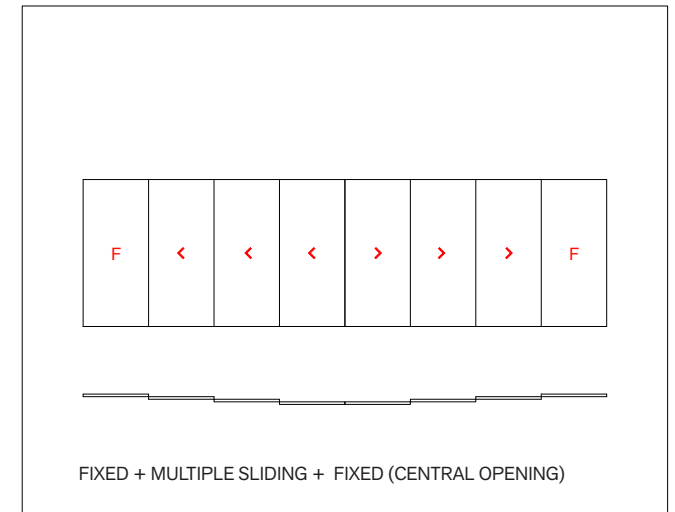
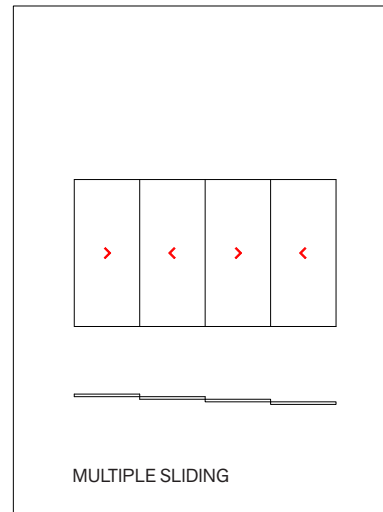
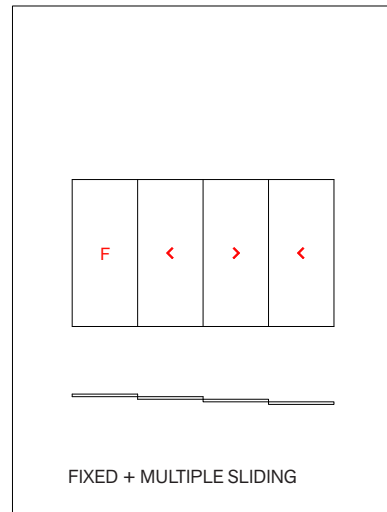


FIXED +
MULTIPLE SLIDING CORNER + FIXED (IN)

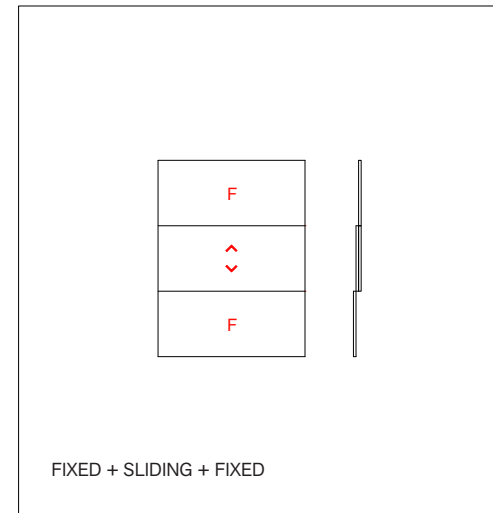
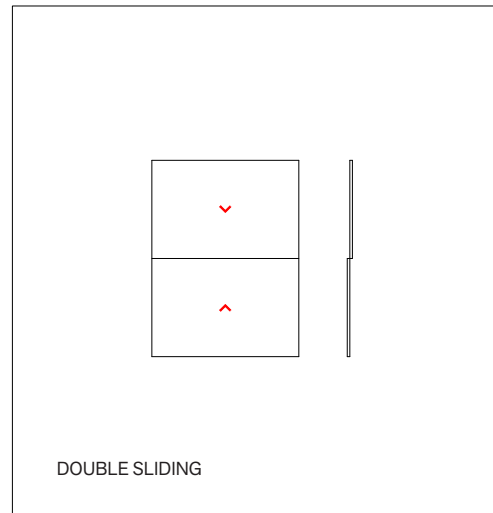
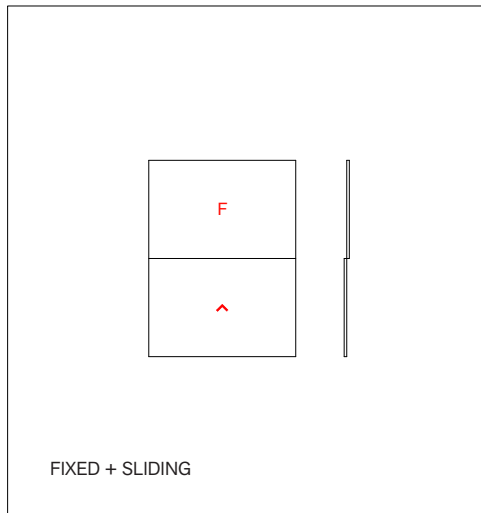


MULTIPLE SLIDING CORNER (OUT)

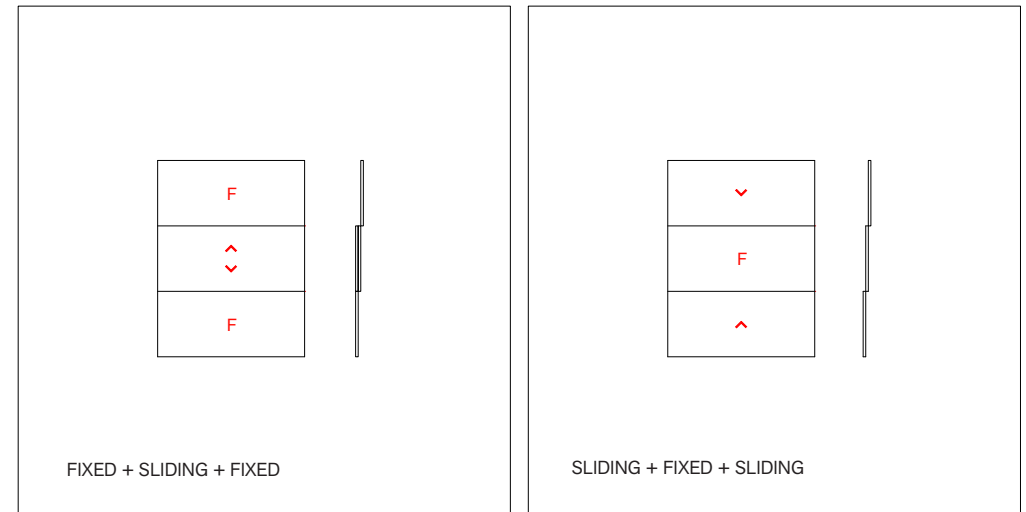
2.3.1 HORIZONTAL - MULTIRAIL



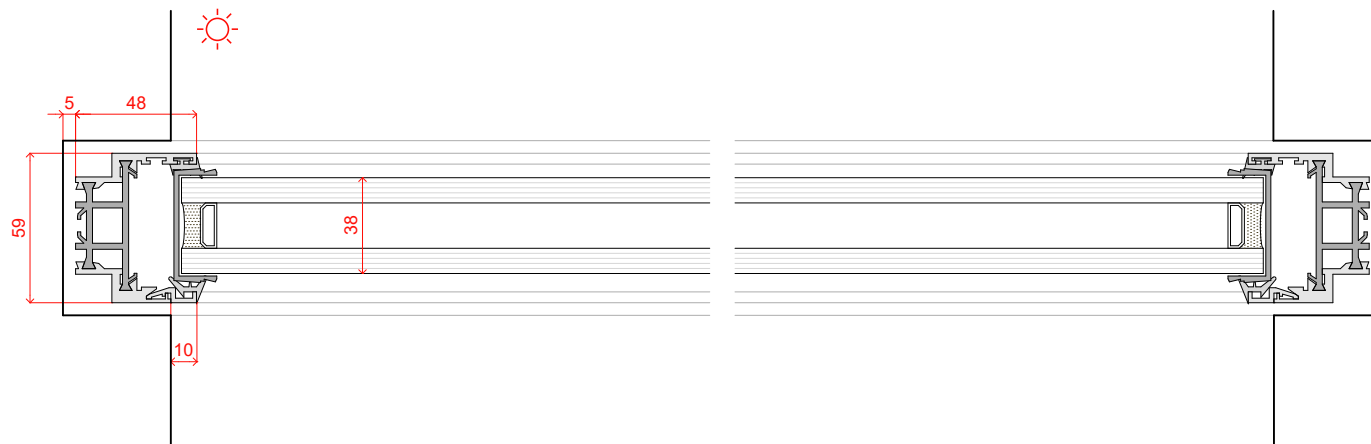
2.3.2 VERTICAL - BIRAIL

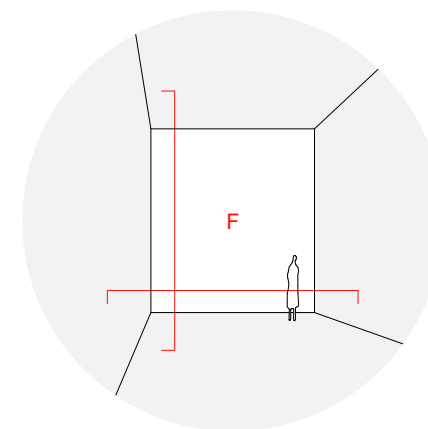
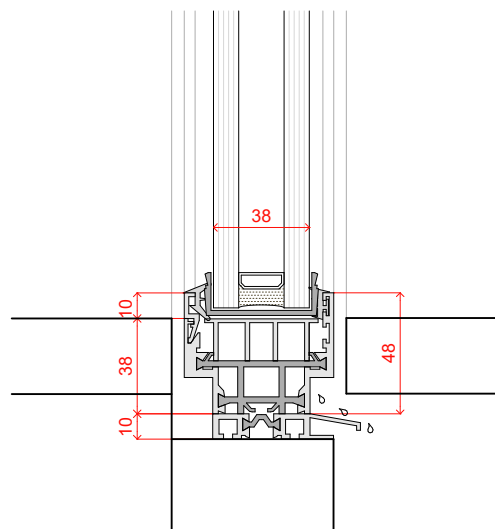
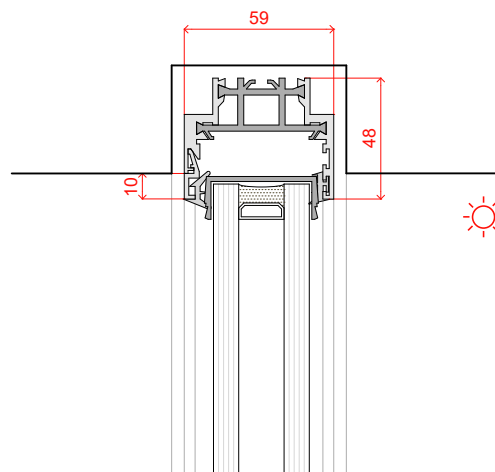


2.3.2 VERTICAL - TRIRAIL



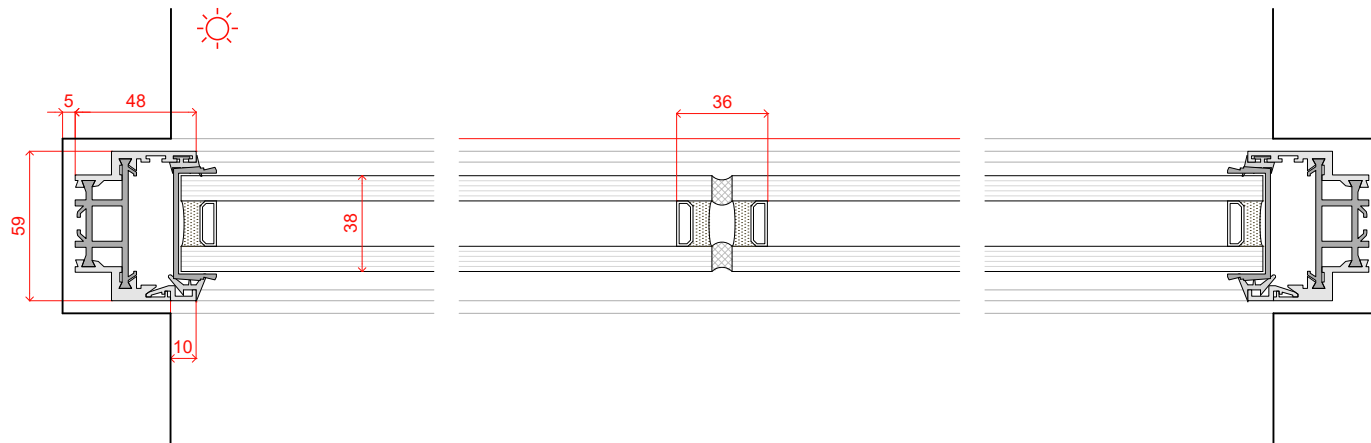
2.3.1 HORIZONTAL - MONORAIL

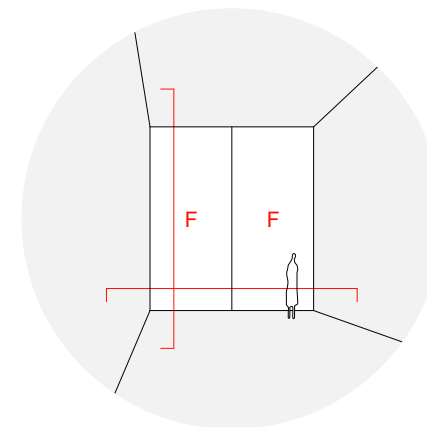
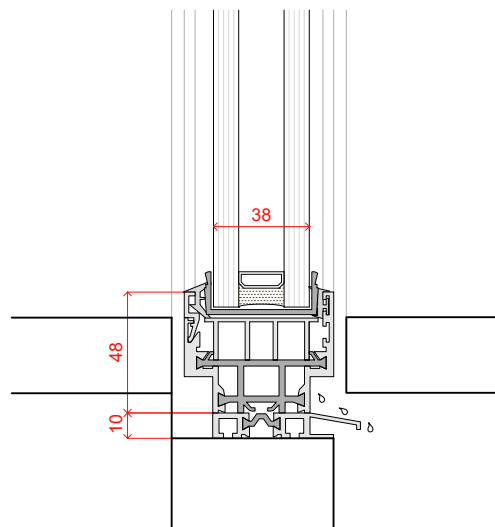
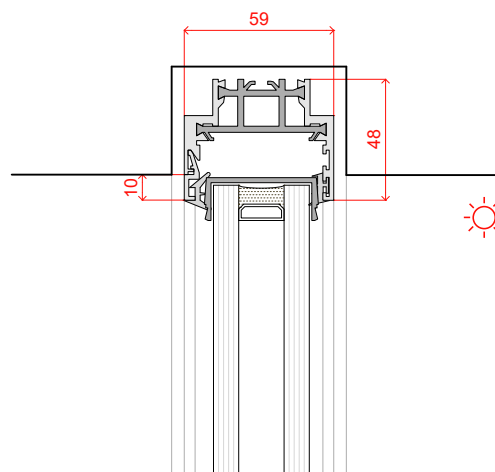




FIXED PANEL

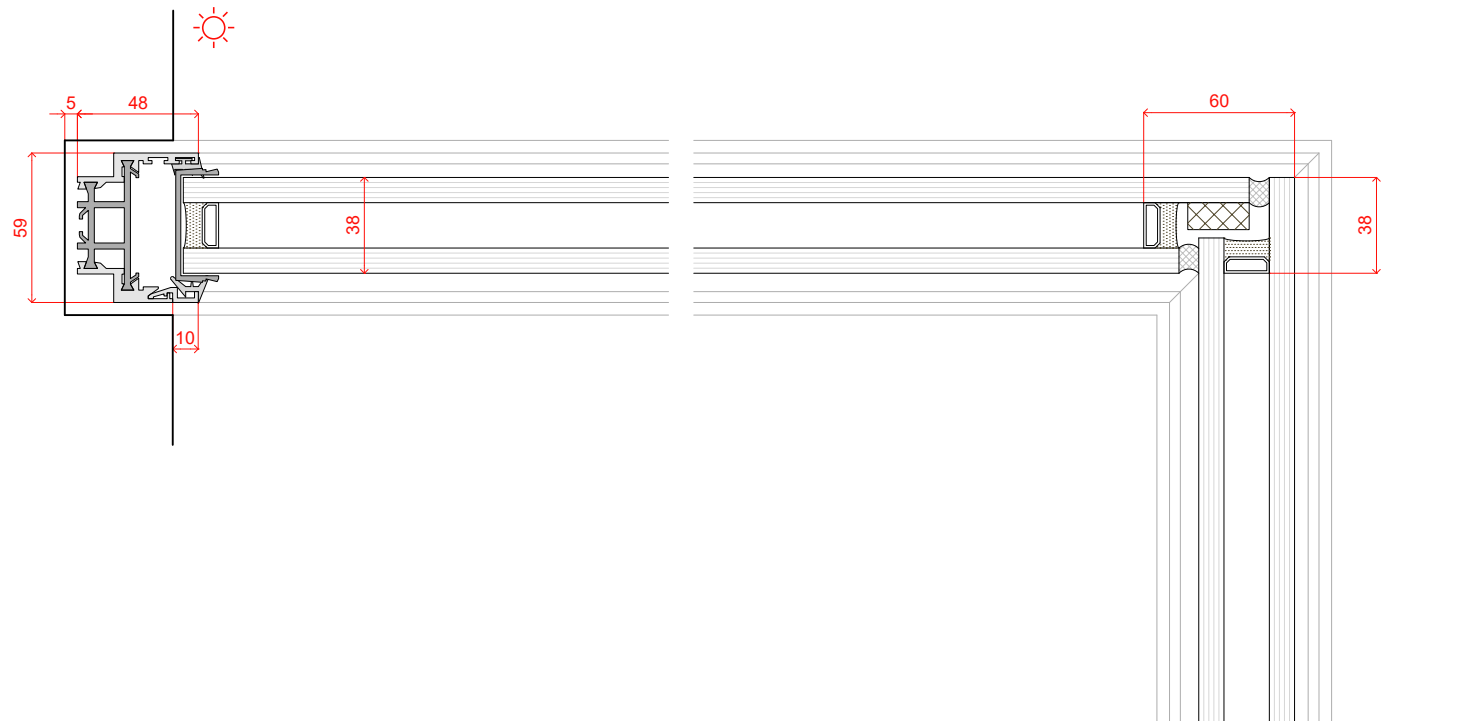
2.3.1 HORIZONTAL - MONORAIL

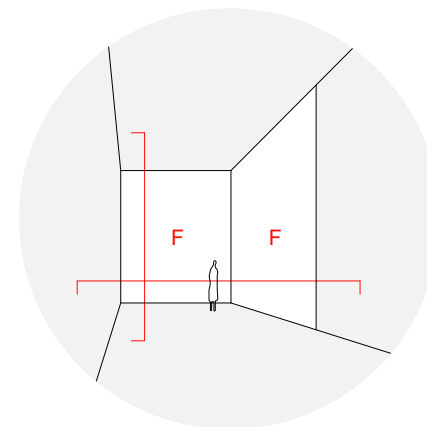
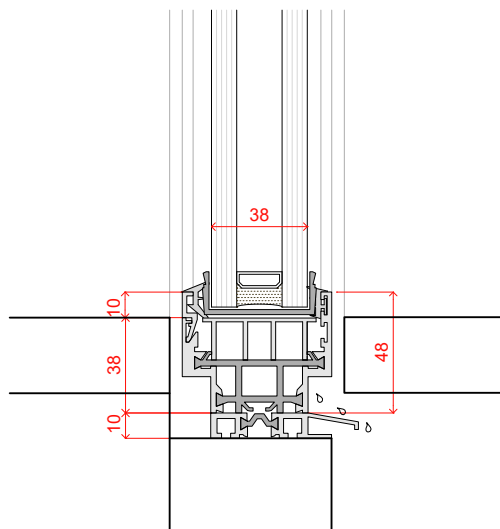
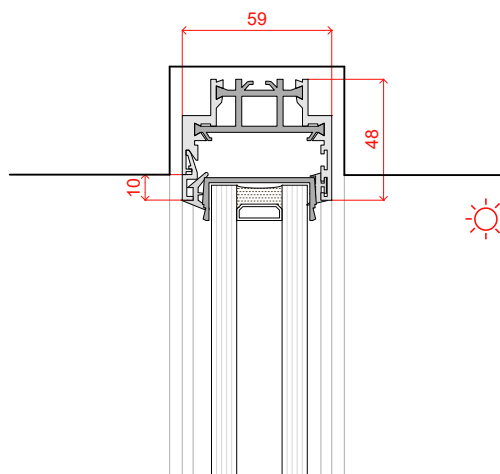




DOUBLE FIXED PANEL

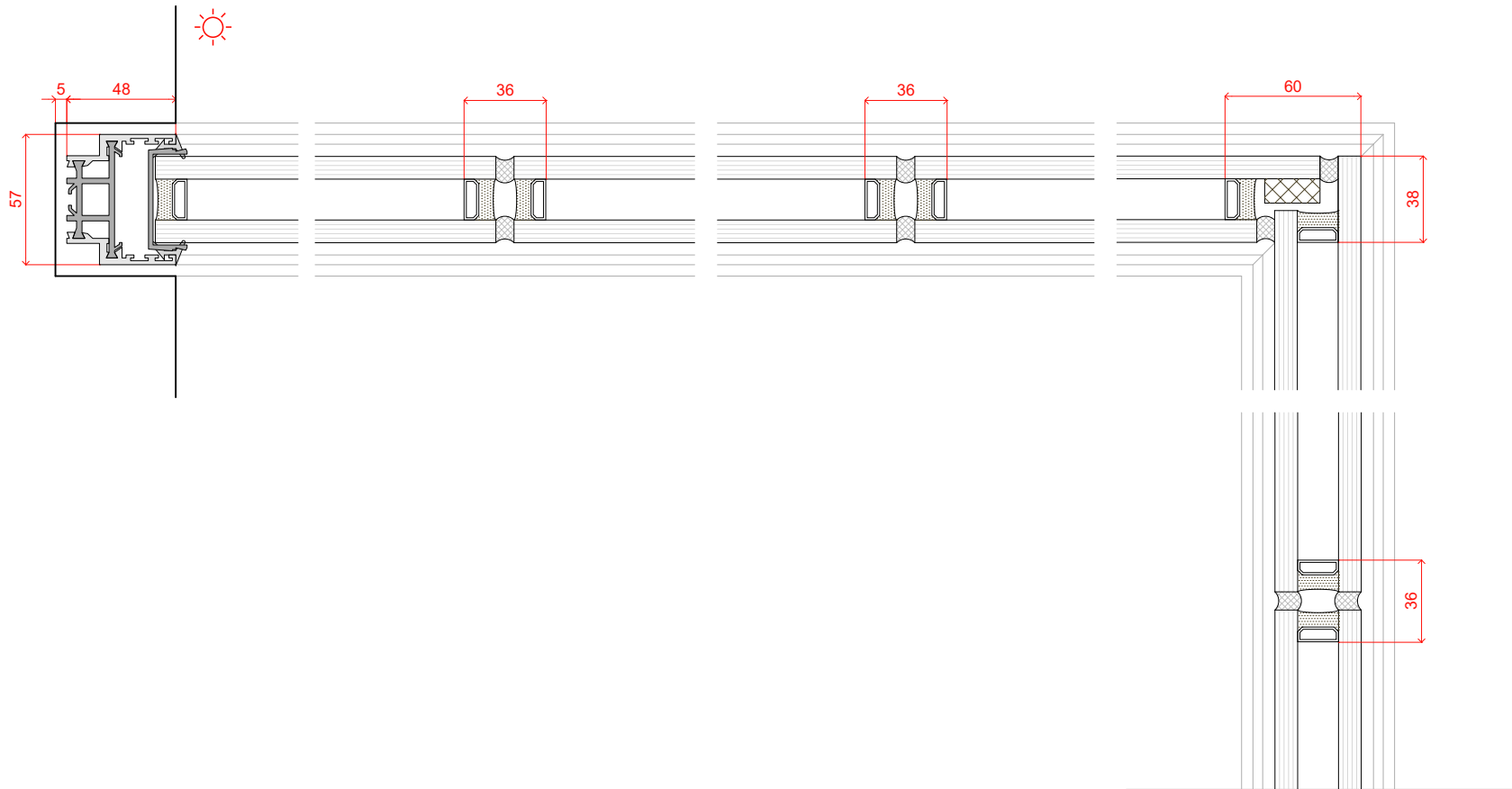
2.3.1 HORIZONTAL - MONORAIL

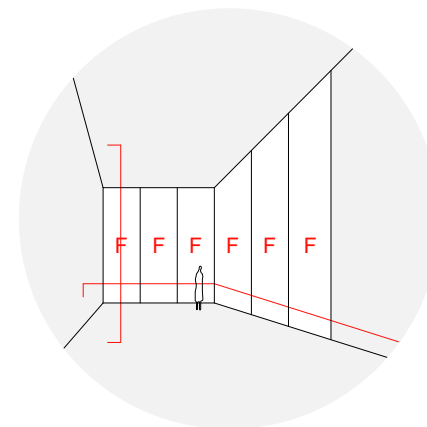
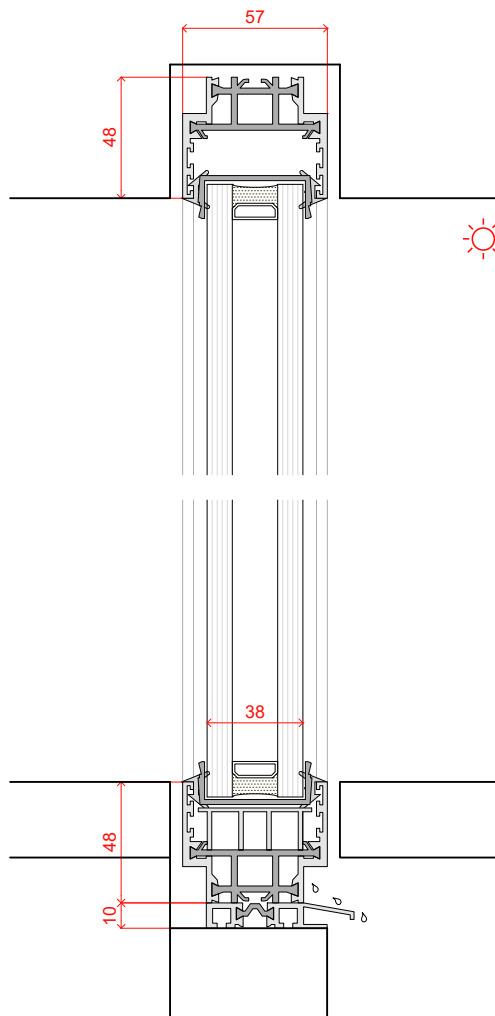




FIXED CORNER

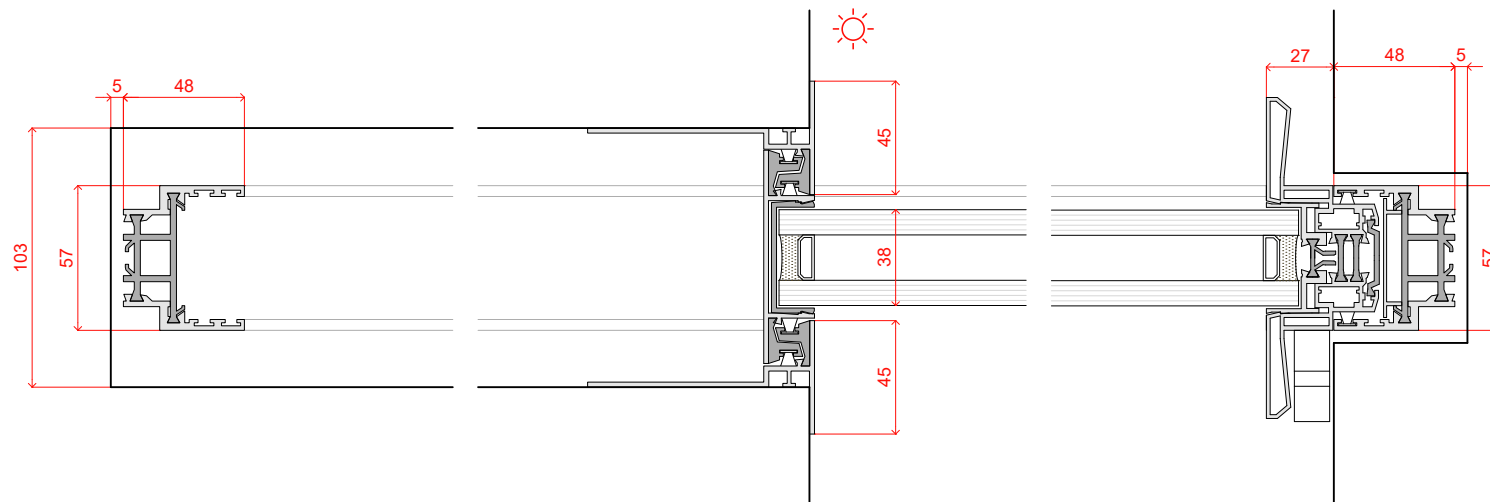
2.3.1 HORIZONTAL - MONORAIL

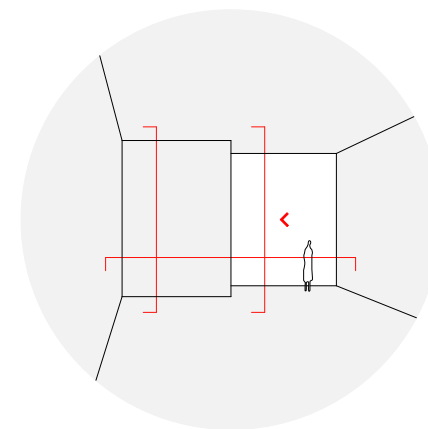
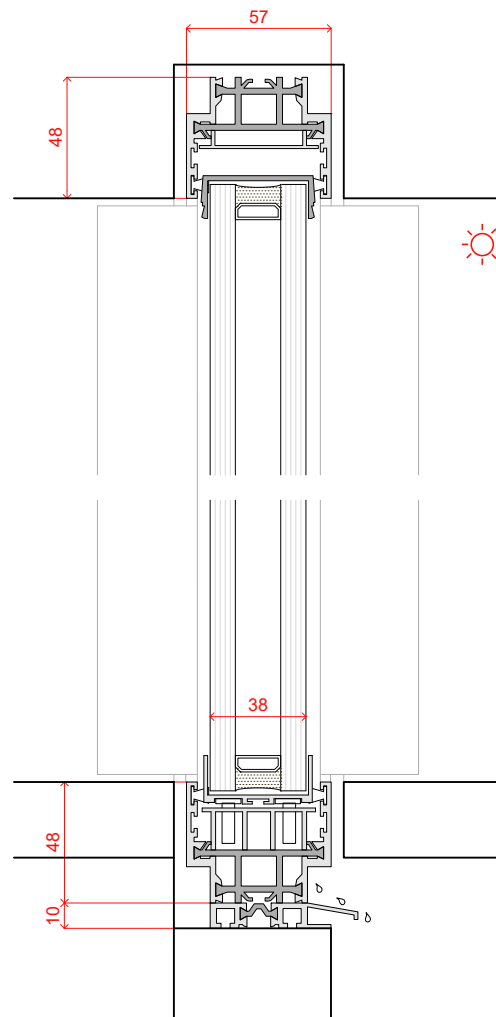
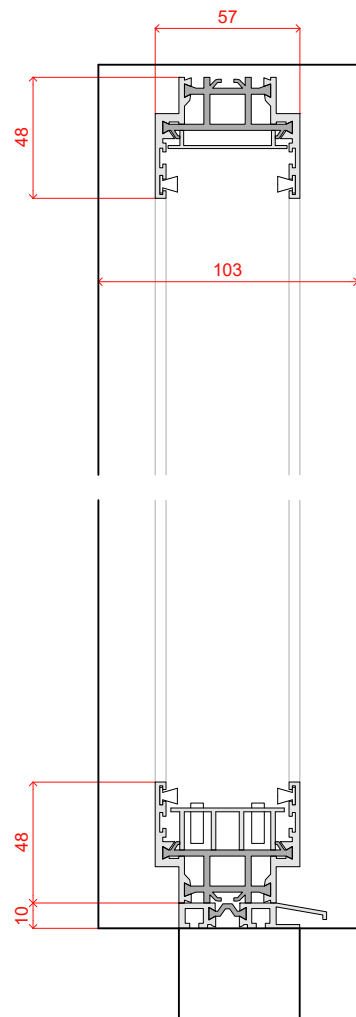




FIXED CORNER

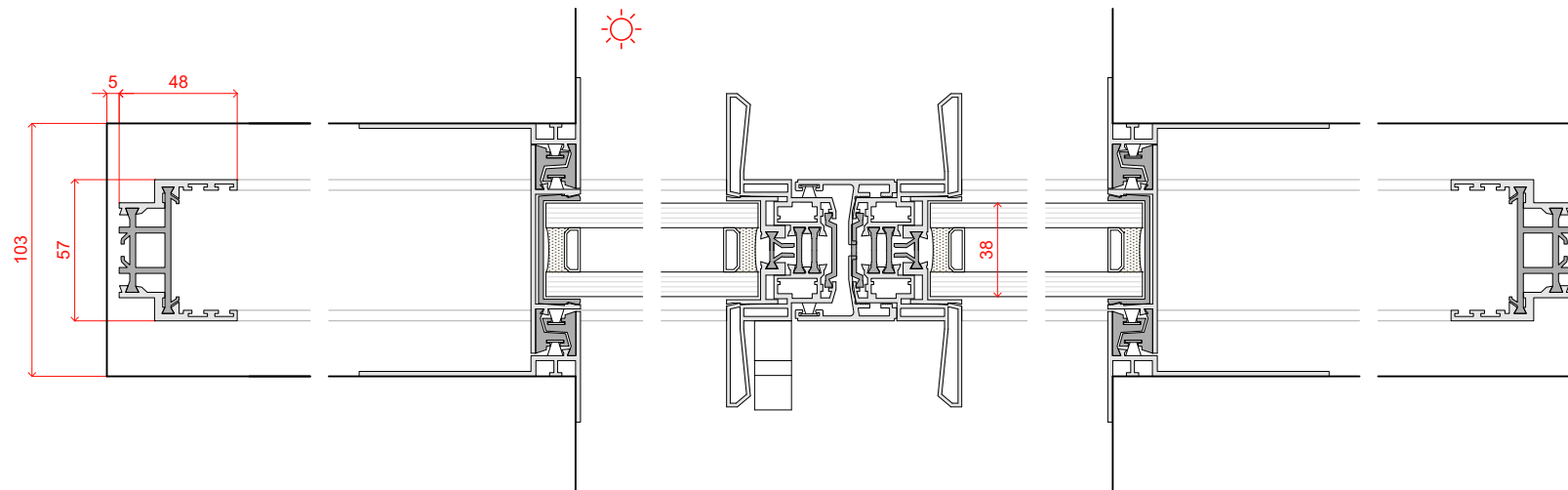
2.3.1 HORIZONTAL - MONORAIL

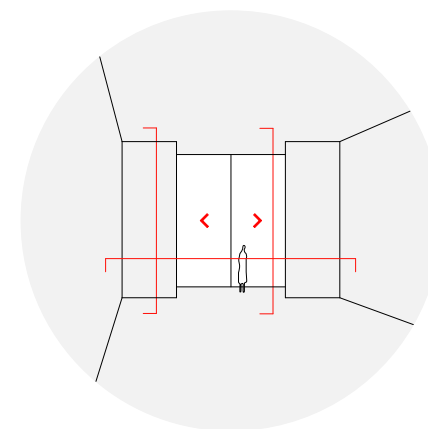
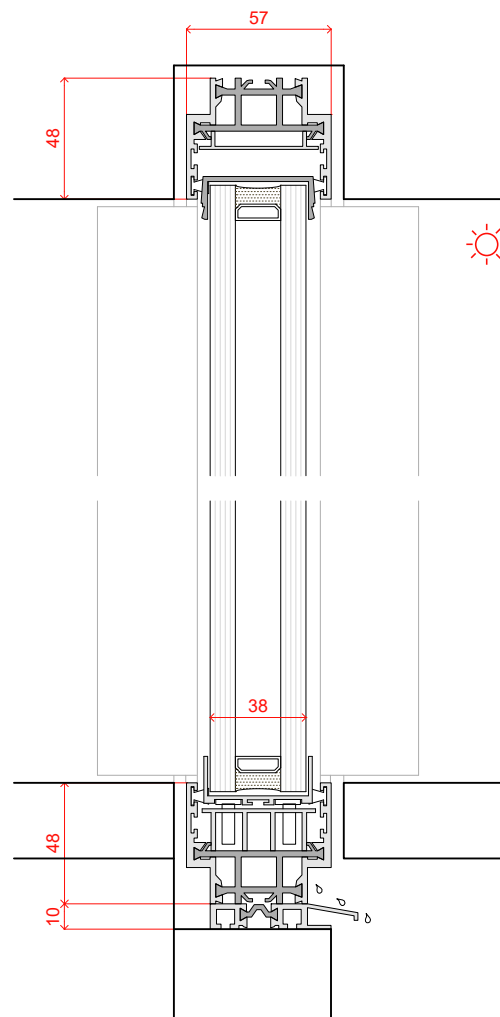
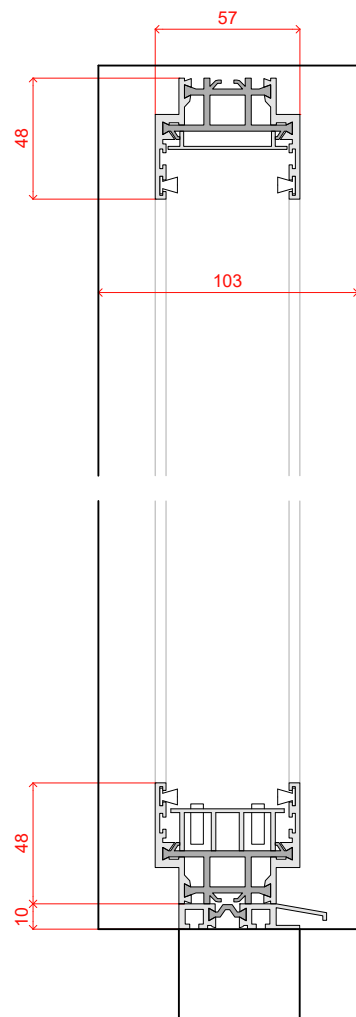




POCKET

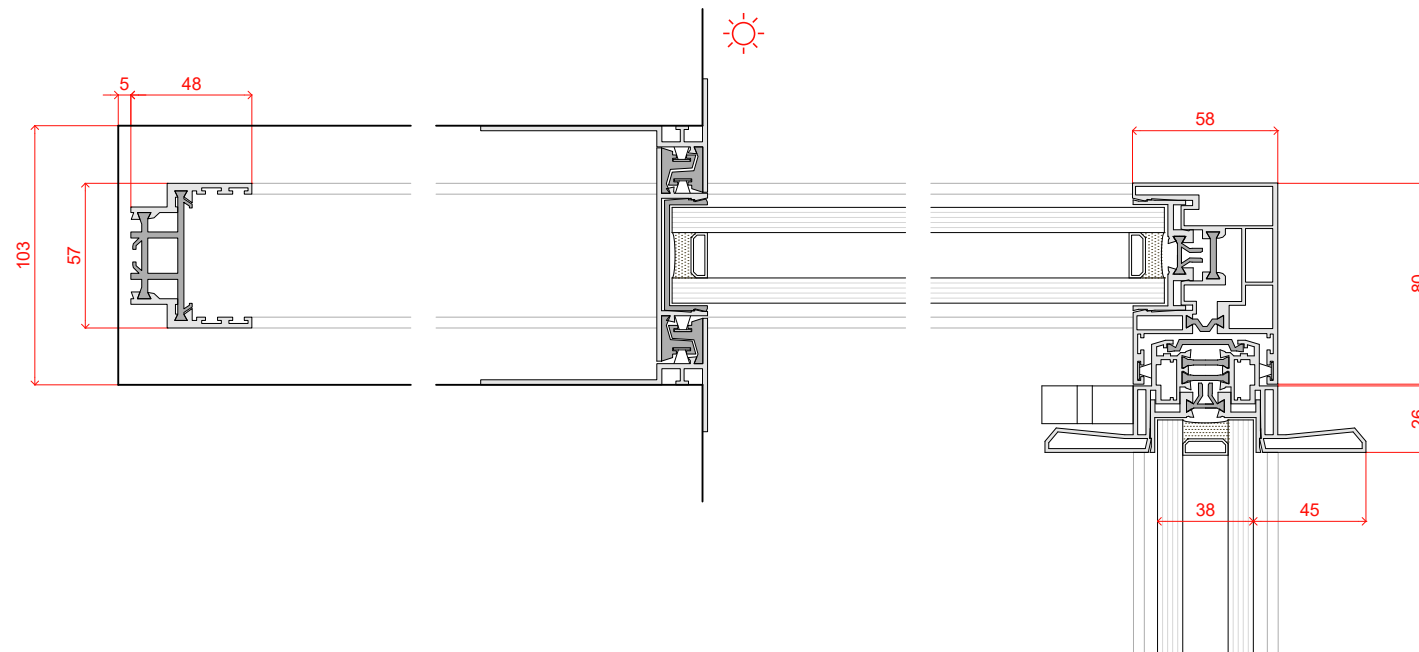
2.3.1 HORIZONTAL - MONORAIL

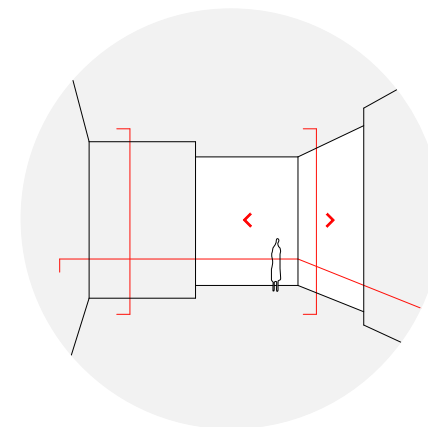
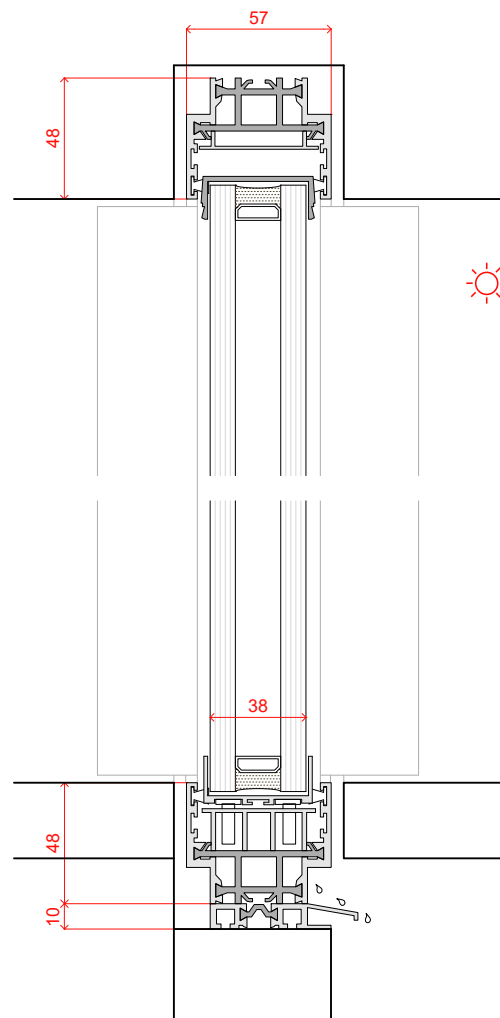
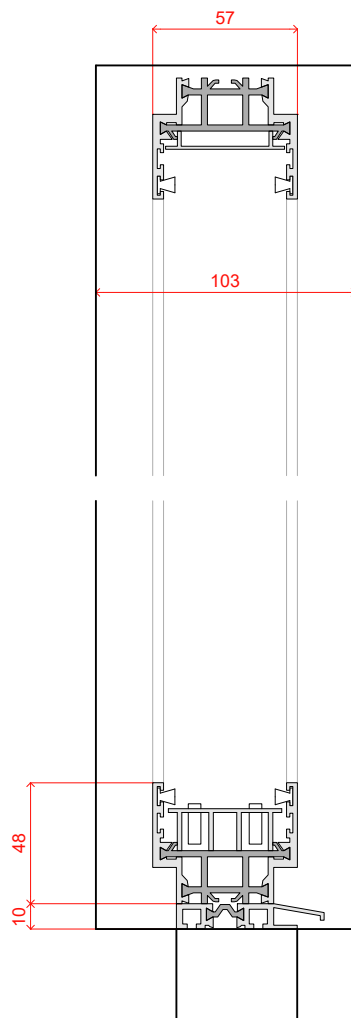




DOUBLE POCKET

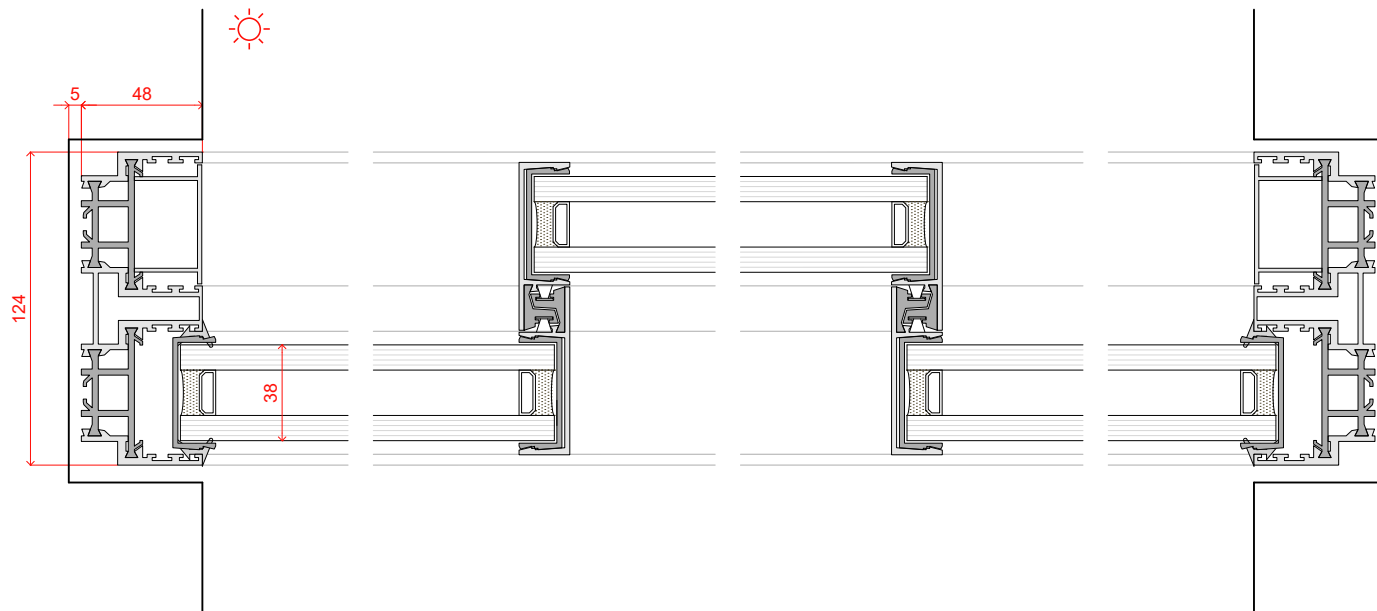
2.3.1 HORIZONTAL - MONORAIL

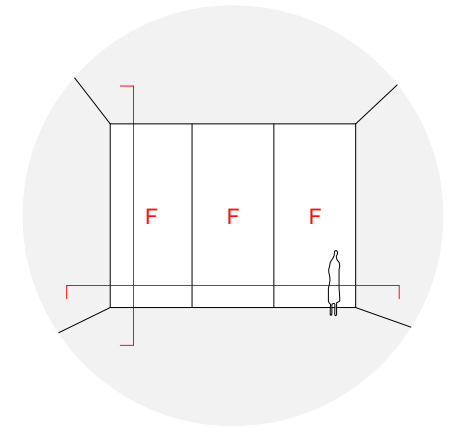
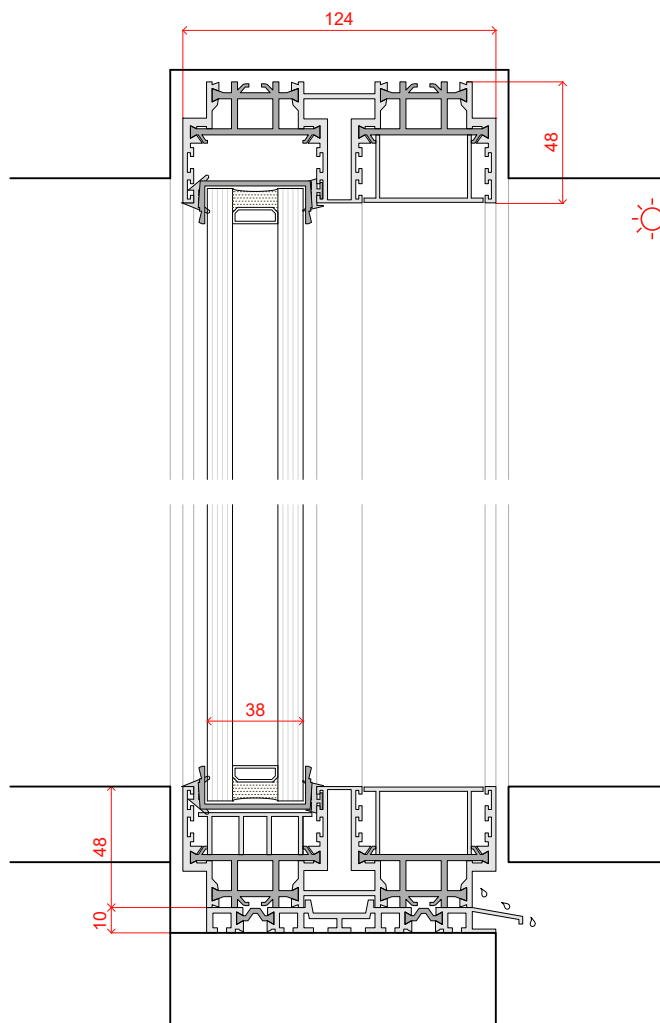




SLIDING CORNER + POCKET

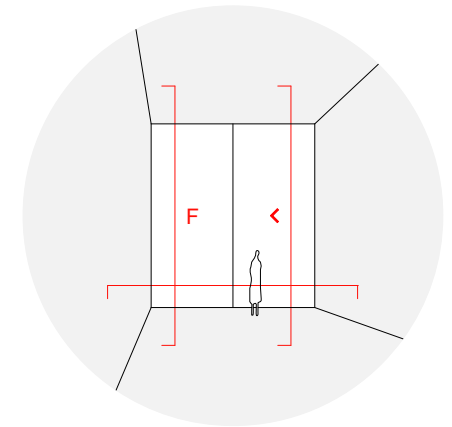
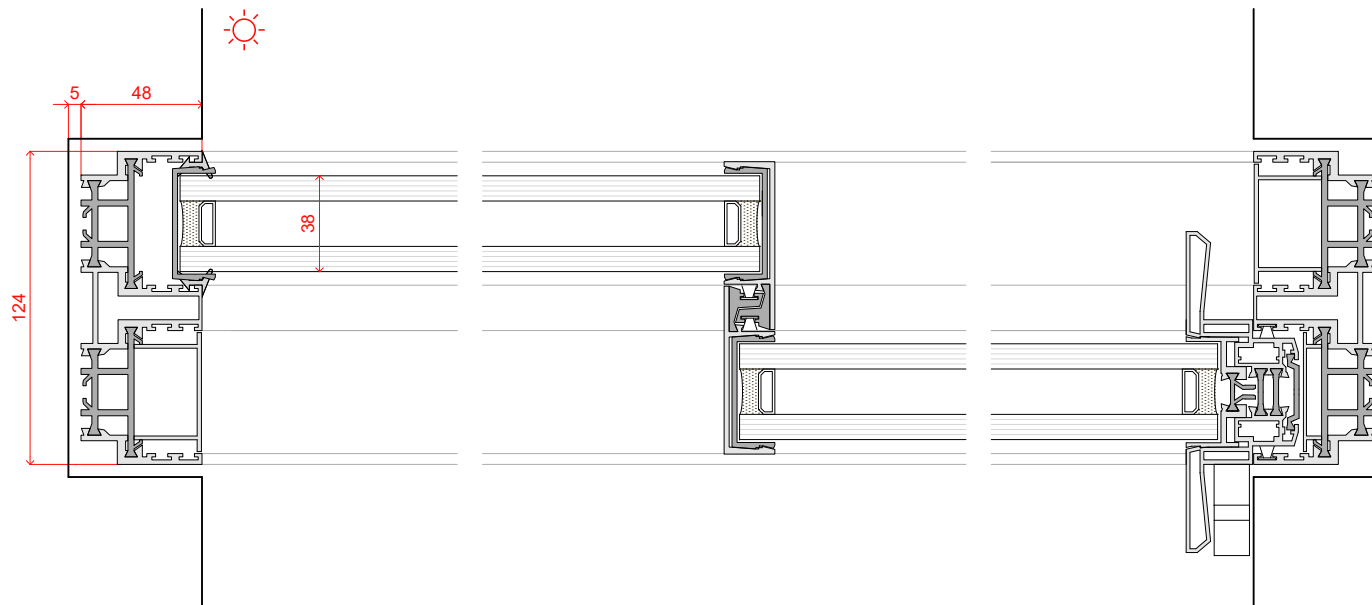
2.3.1 HORIZONTAL - BIRAIL



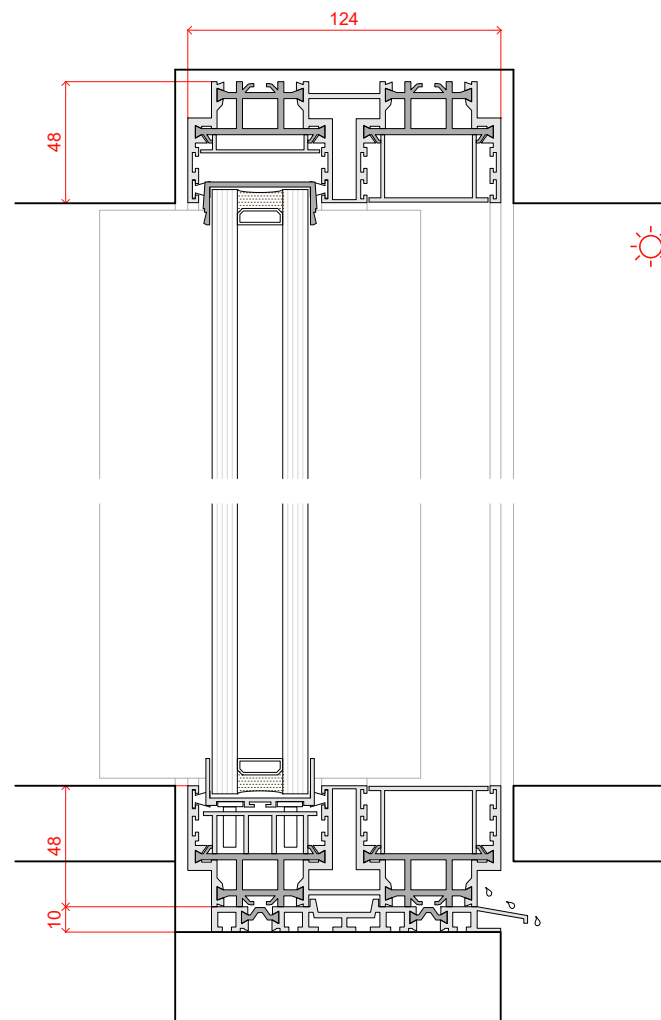
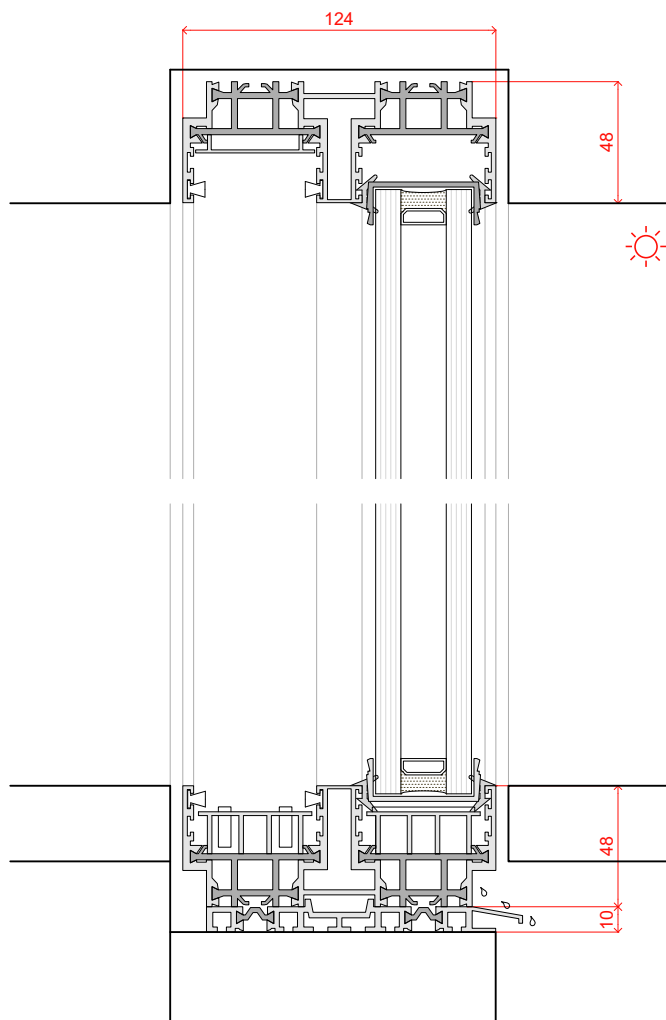


MULTIPLE FIXED PANEL

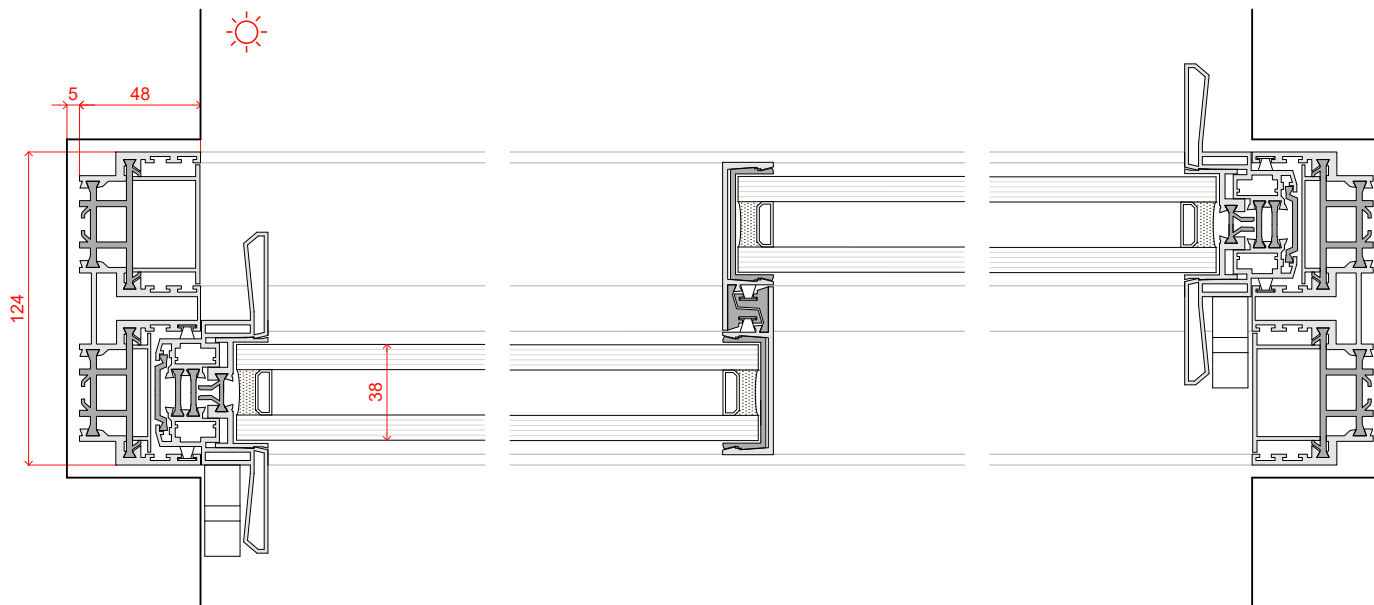
2.3.1 HORIZONTAL - BIRAIL

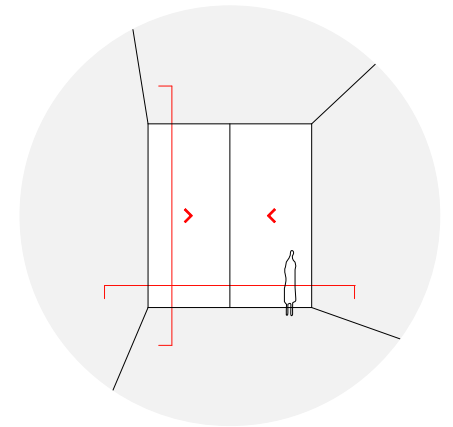
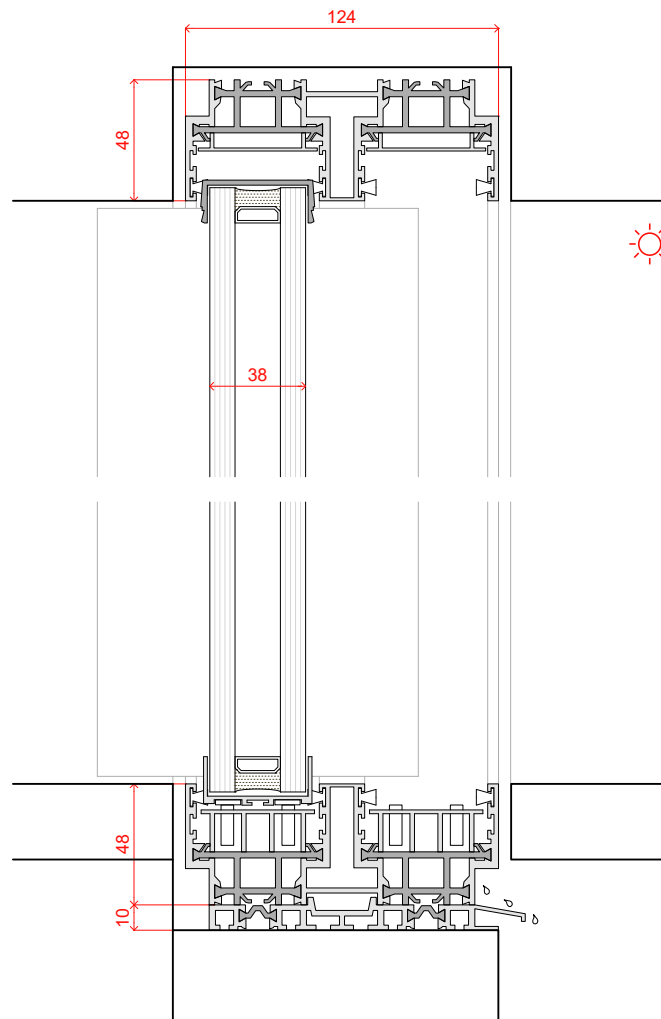


FIXED + SLIDING



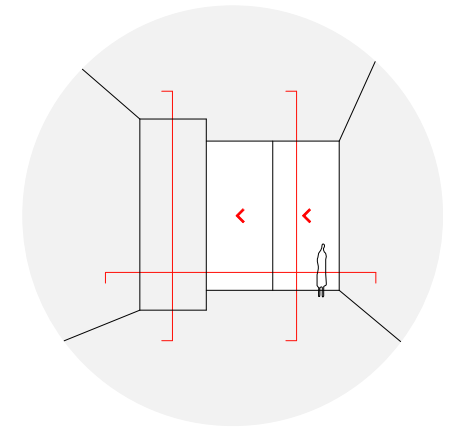
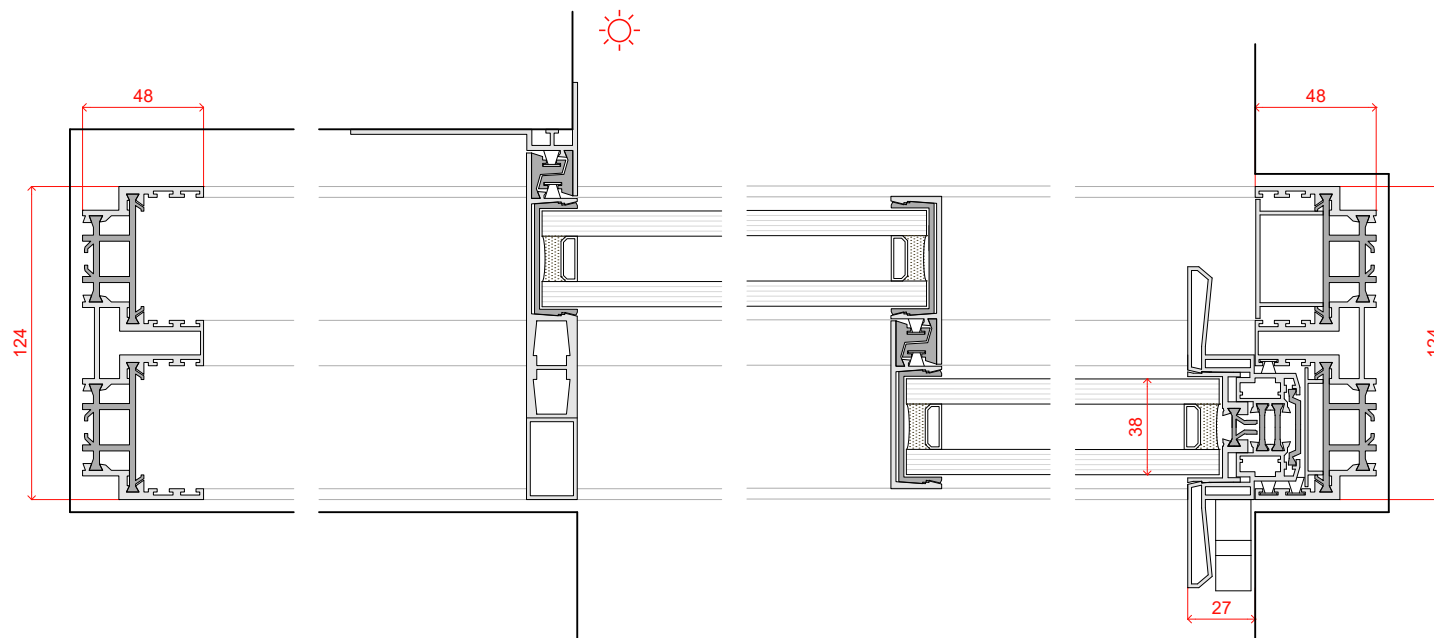
2.3.1 HORIZONTAL - BIRAIL



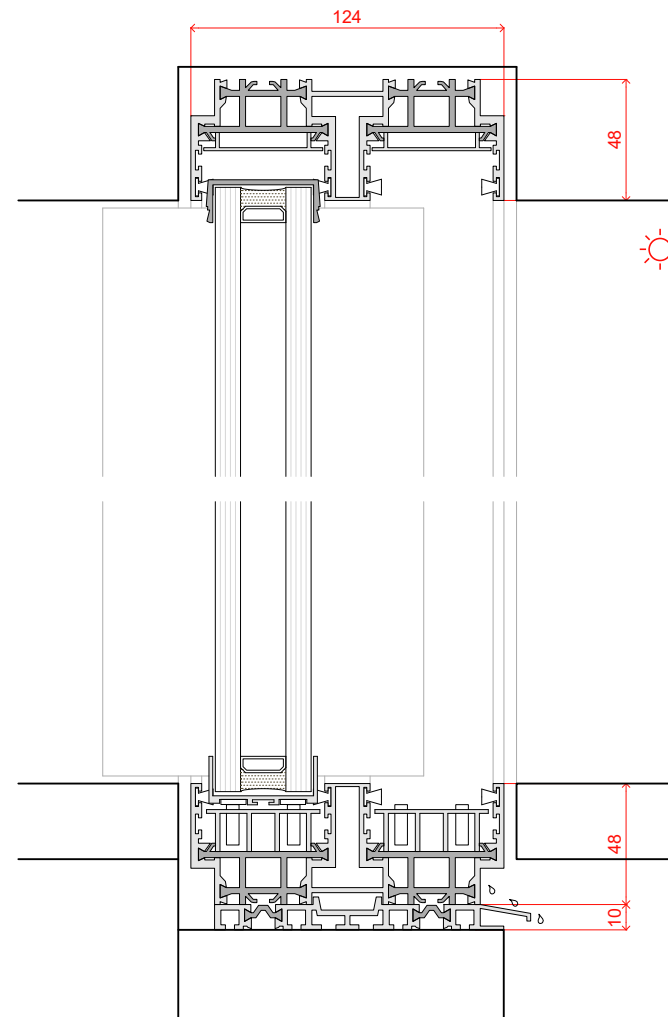
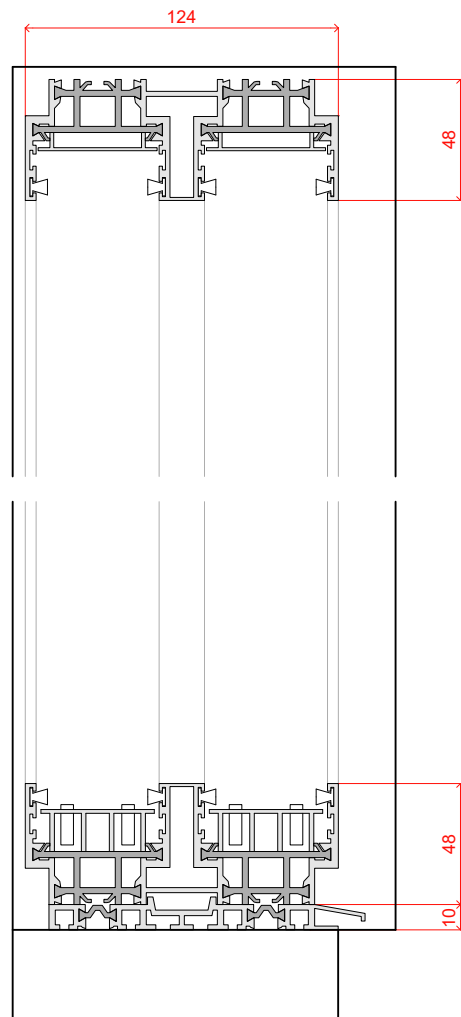


DOUBLE SLIDING

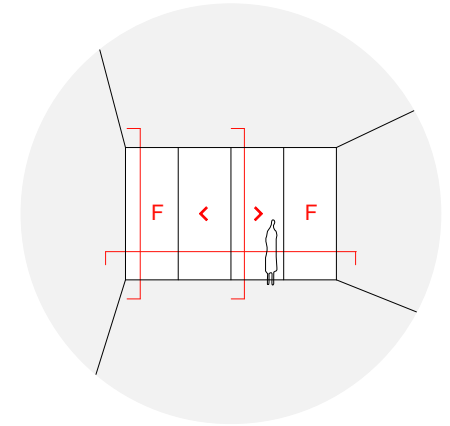
2.3.1 HORIZONTAL - BIRAIL



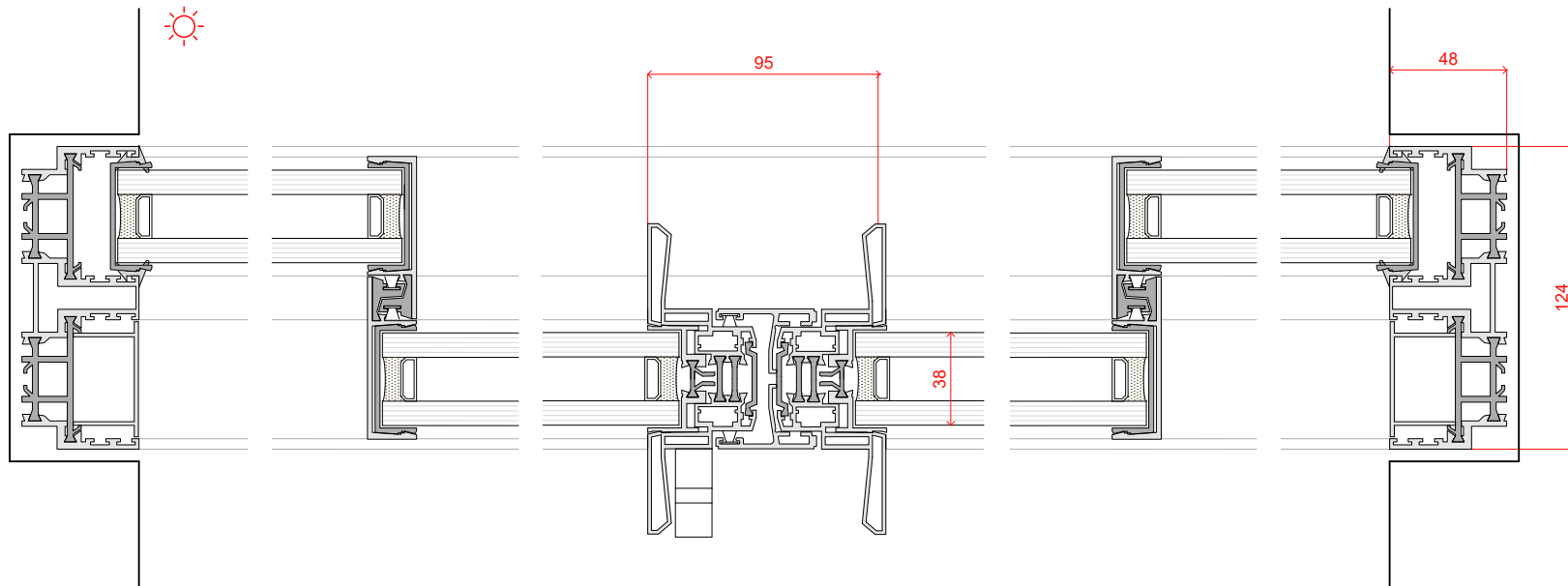
POCKET

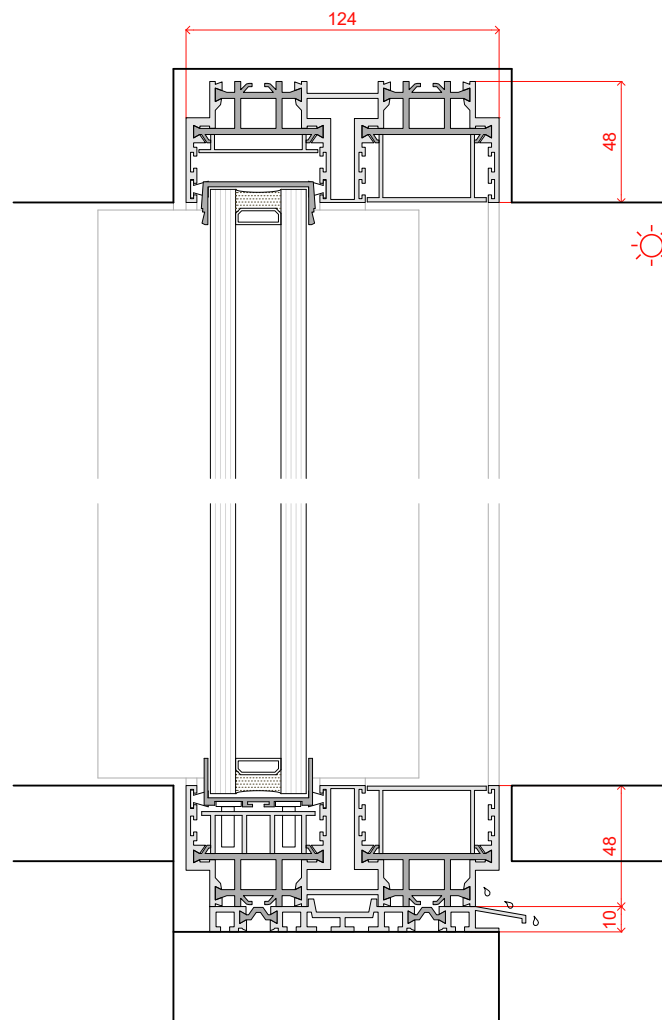
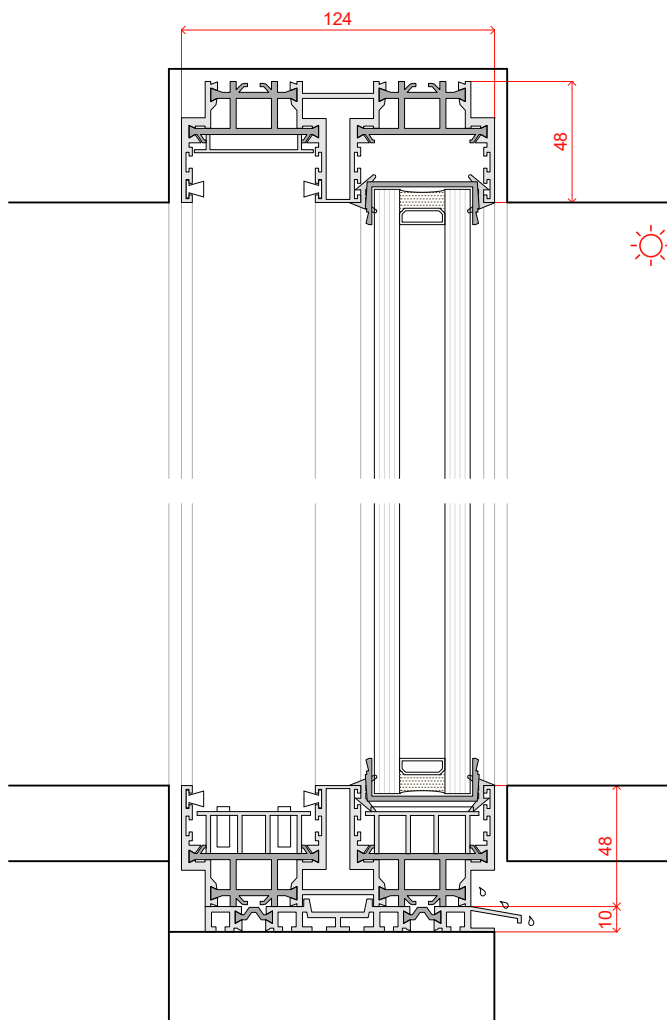


2.3.1 HORIZONTAL - BIRAIL

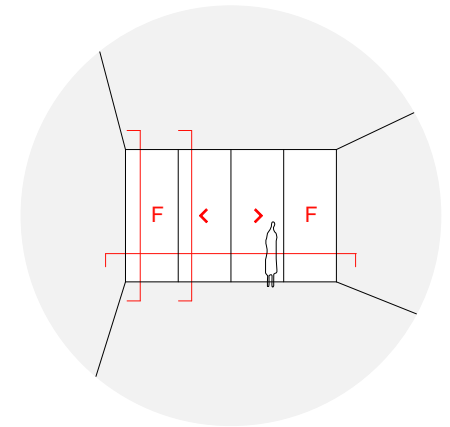


FIXED + DOUBLE SLIDING + FIXED
(CENTRAL OPENING)

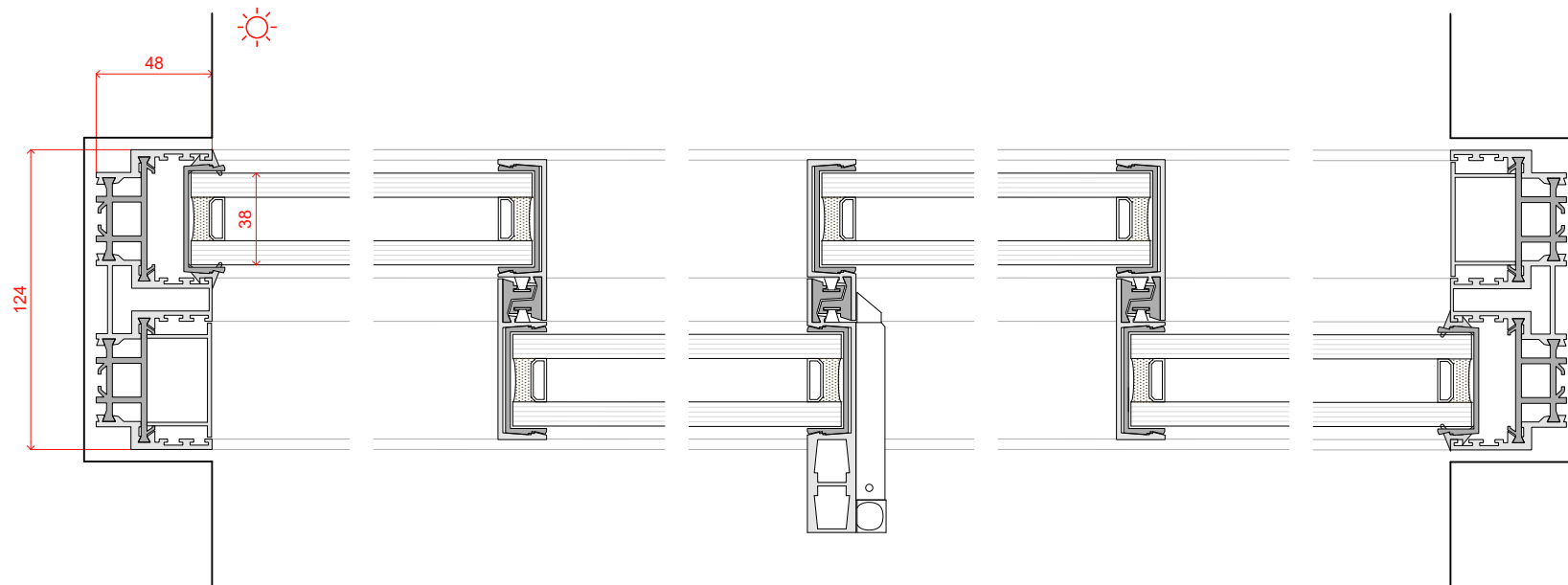


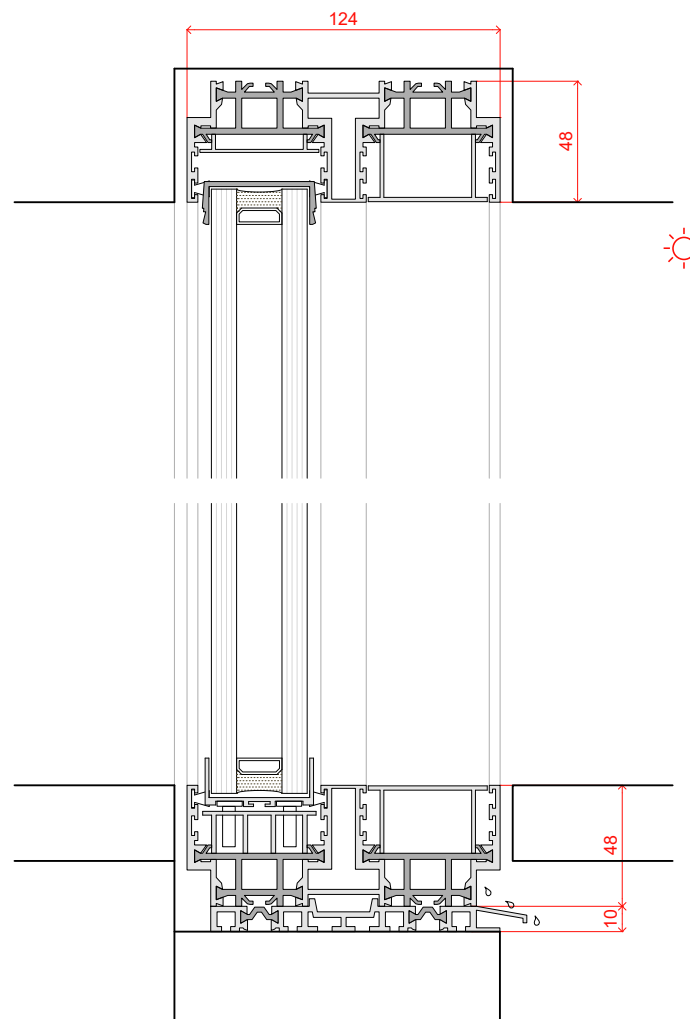
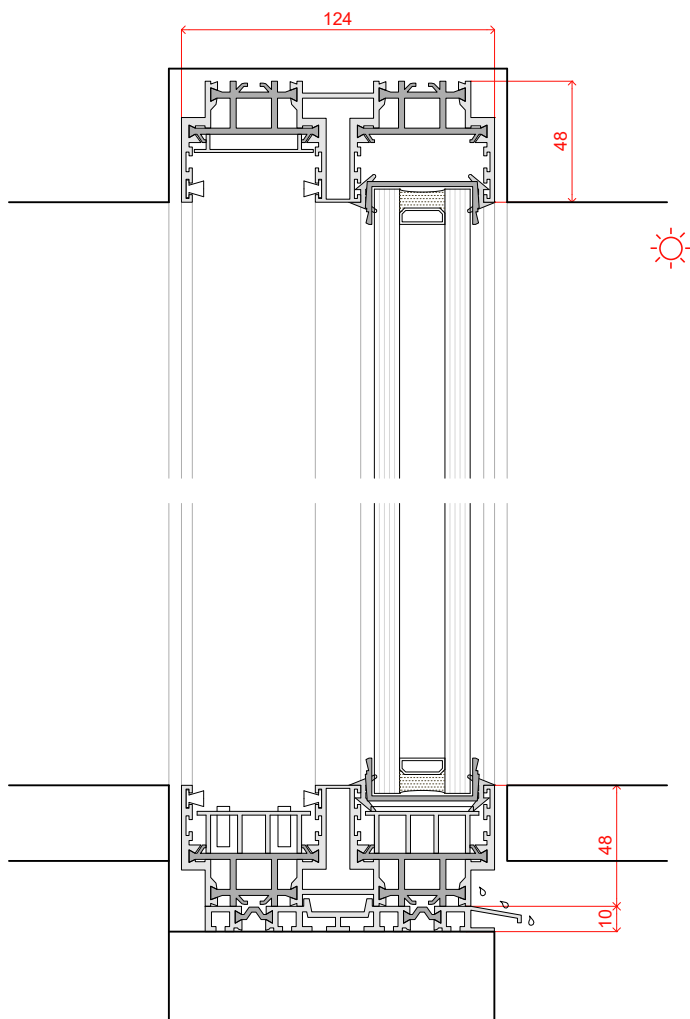


2.3.1 HORIZONTAL - BIRAIL

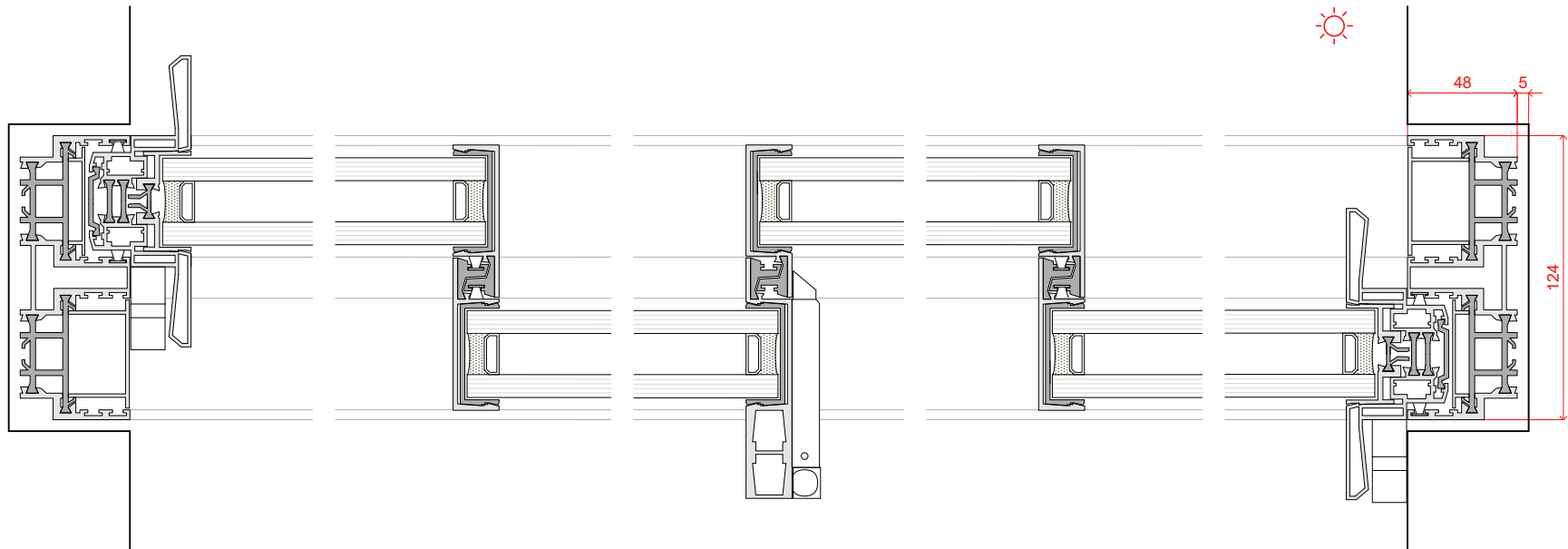


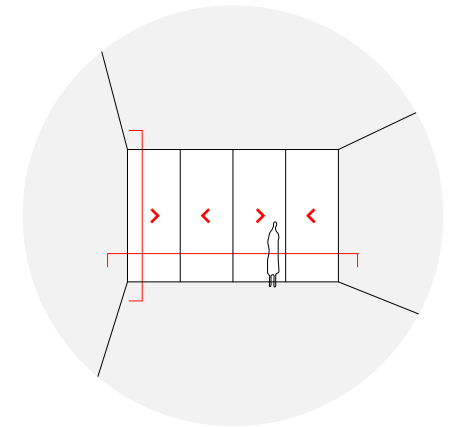
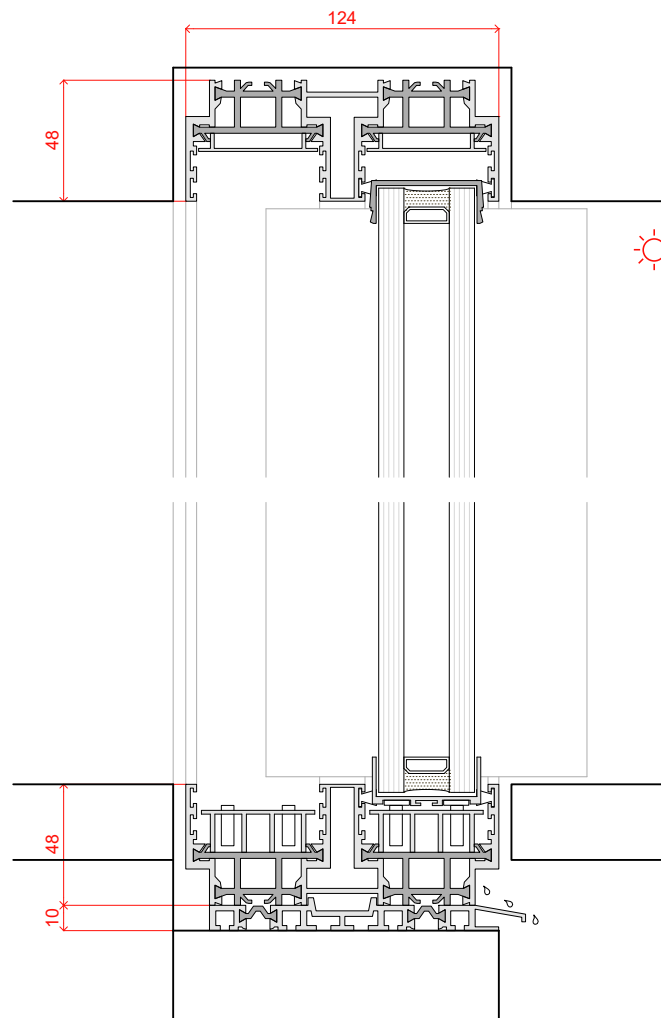
FIXED + DOUBLE SLIDING + FIXED
(INVERTED CENTRAL OPENING)





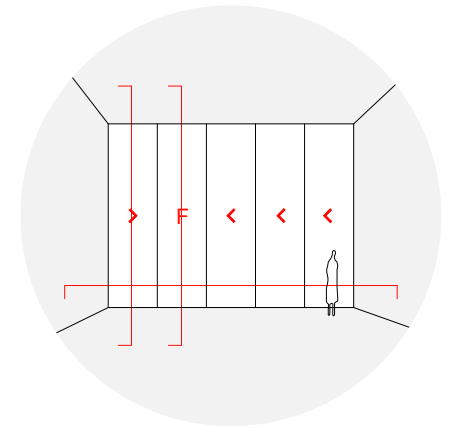
2.3.1 HORIZONTAL - BIRAIL



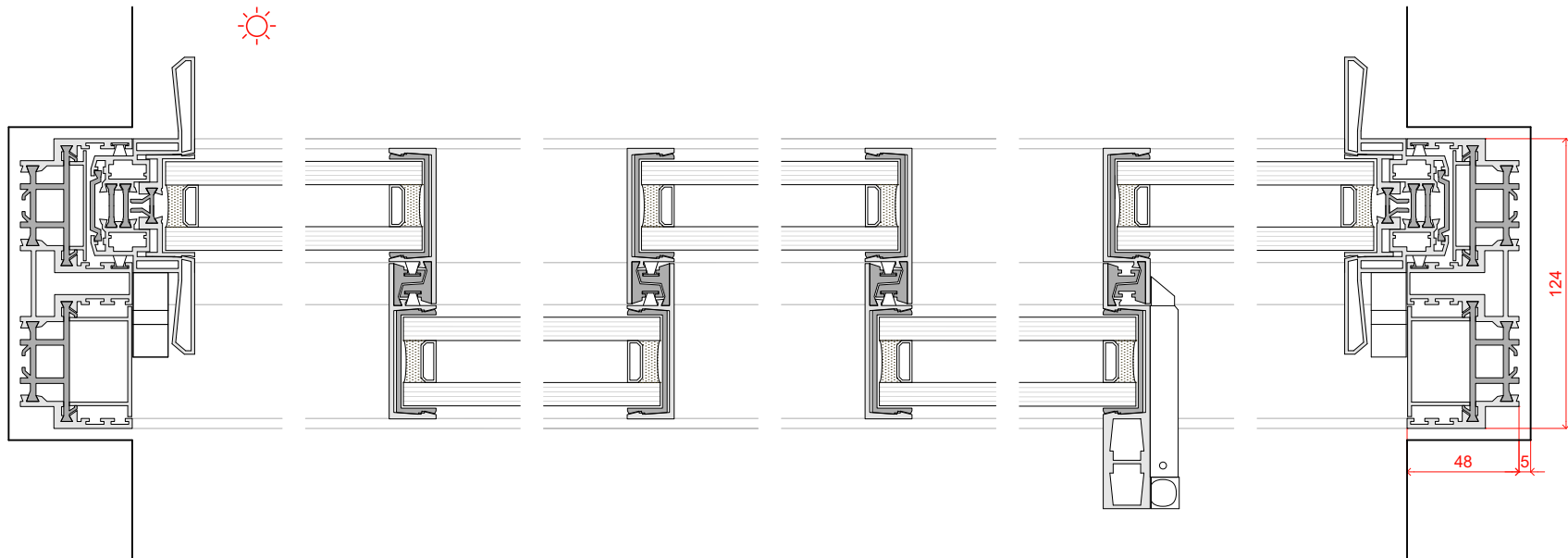


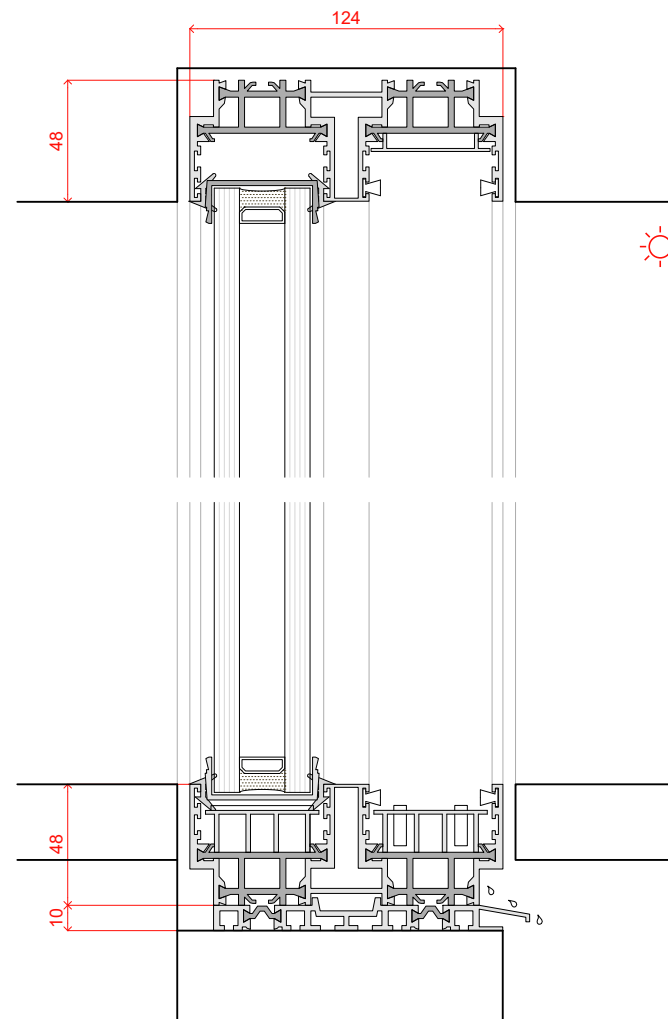
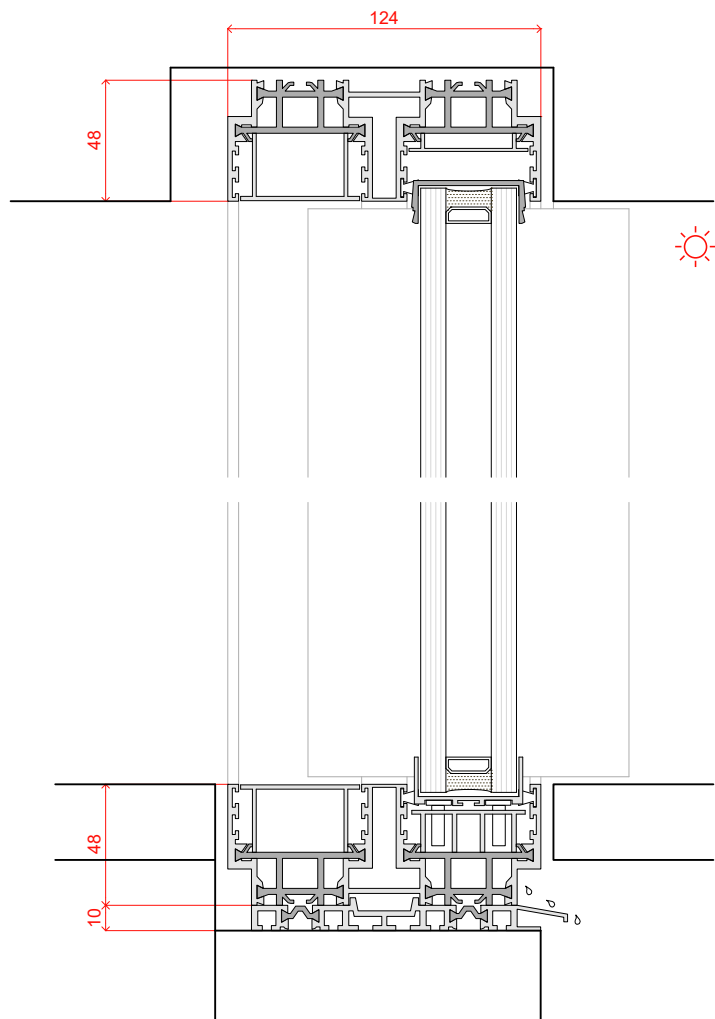
MULTIPLE SLIDING

2.3.1 HORIZONTAL - BIRAIL

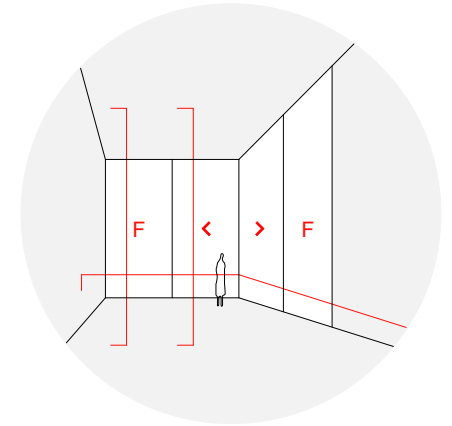
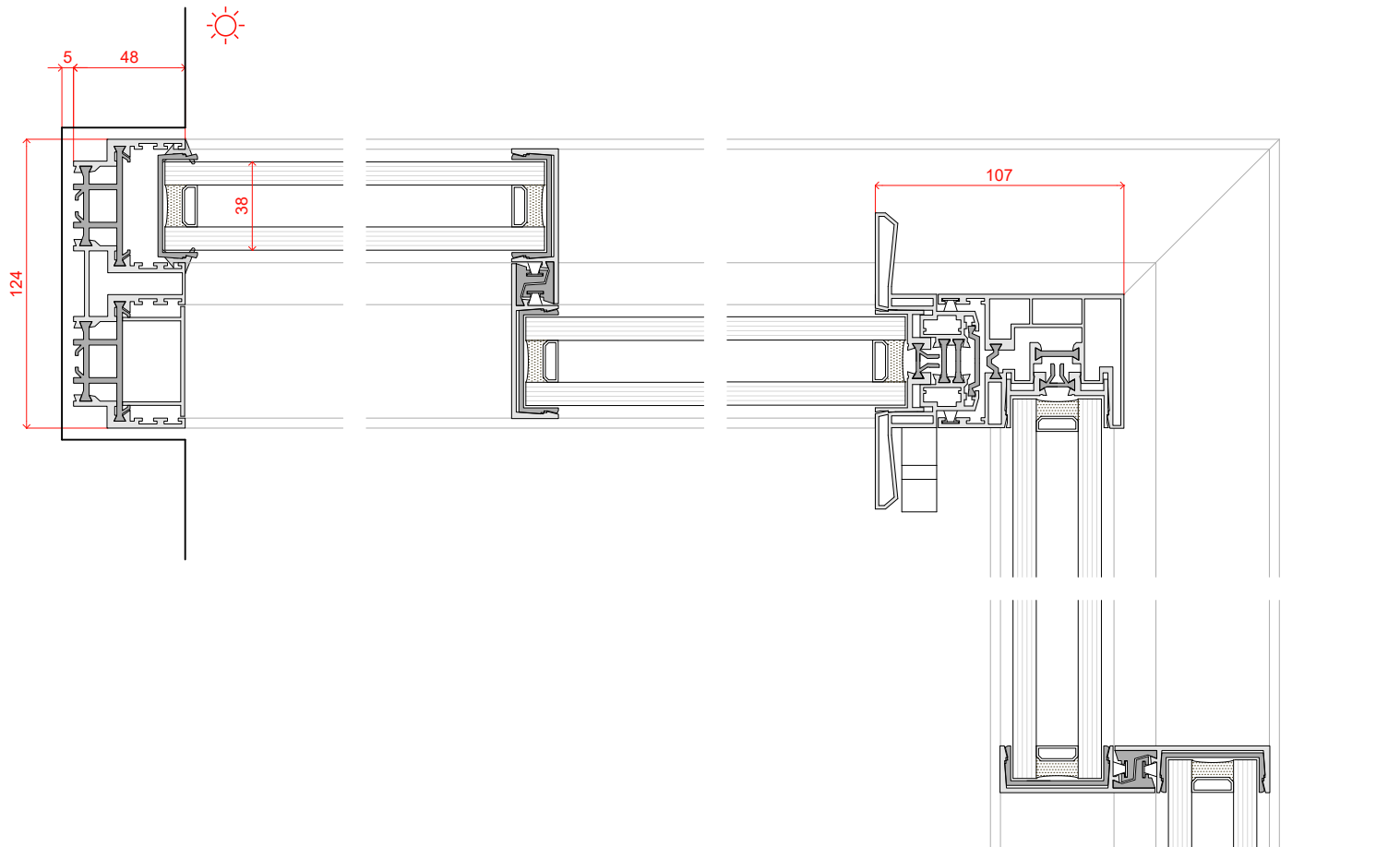


SLIDING + FIXED + MULTIPLE SLIDING

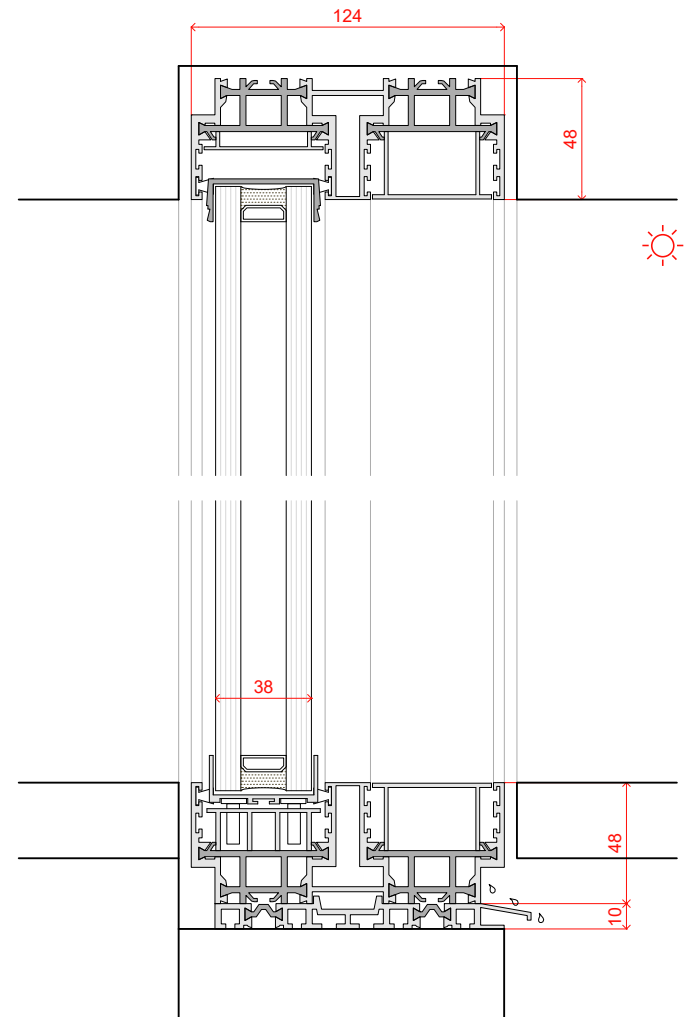
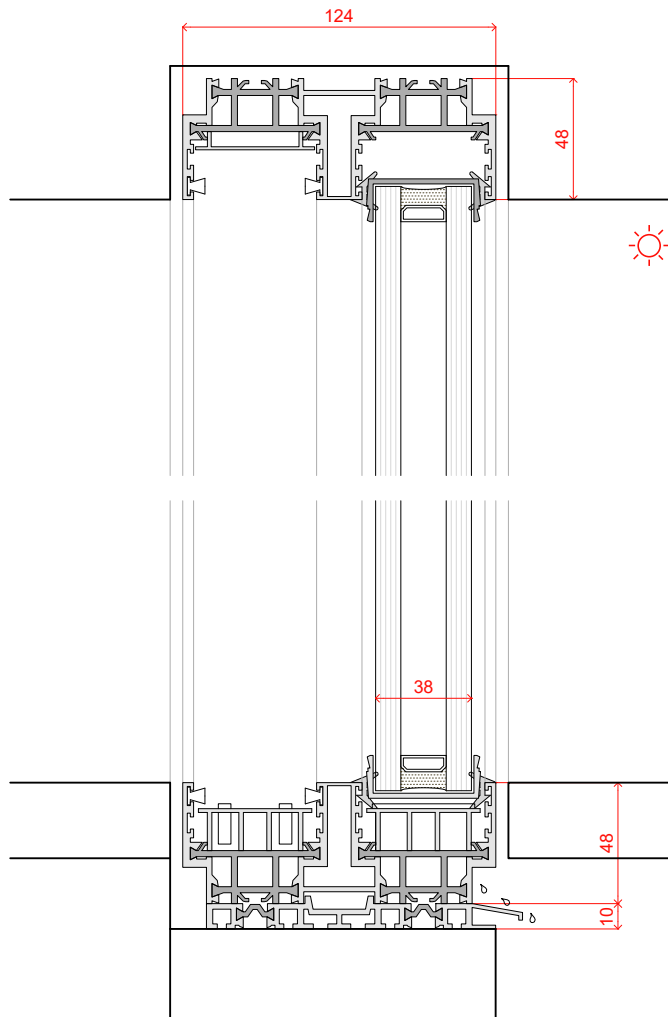




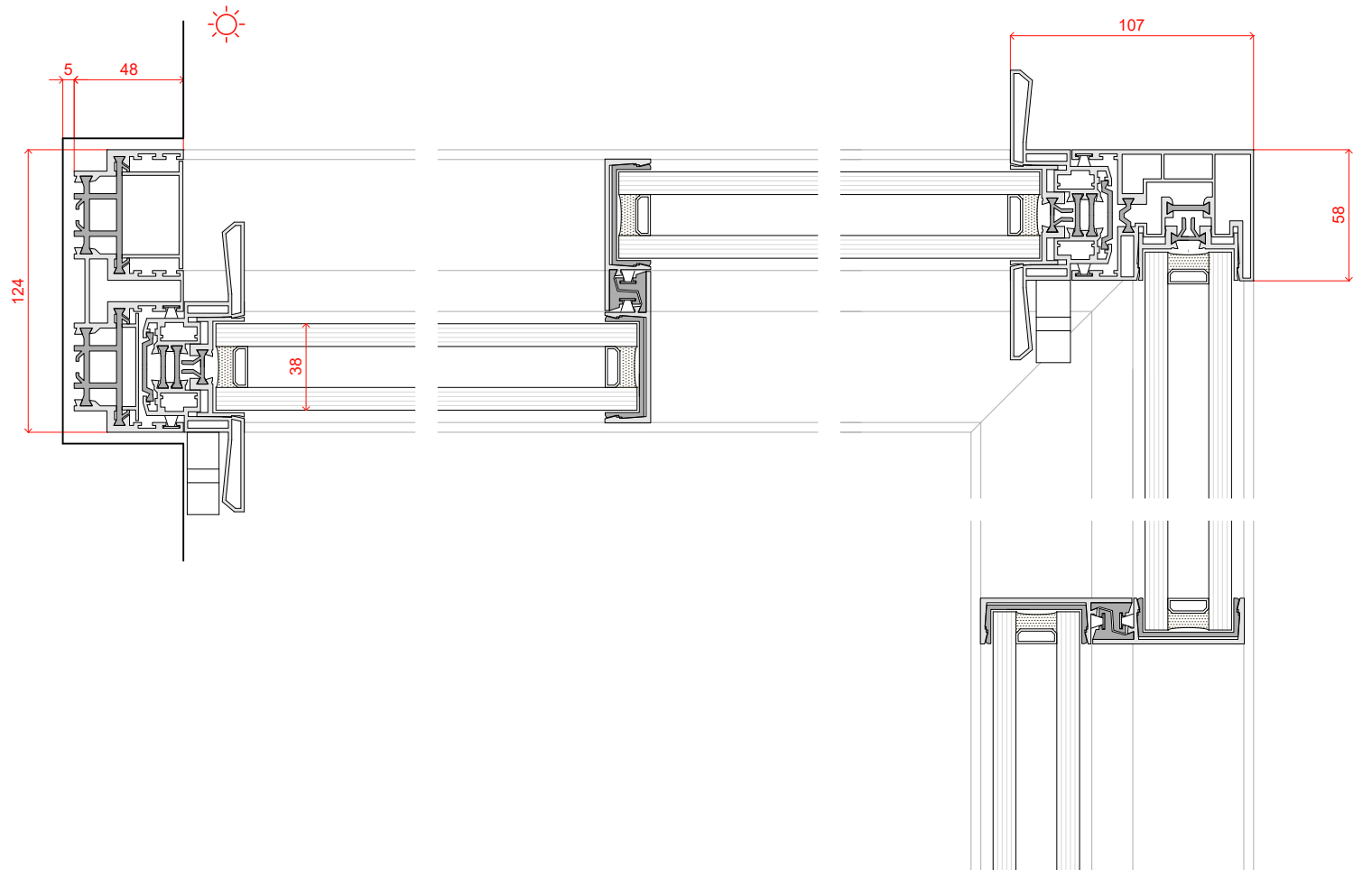
2.3.1 HORIZONTAL - BIRAIL

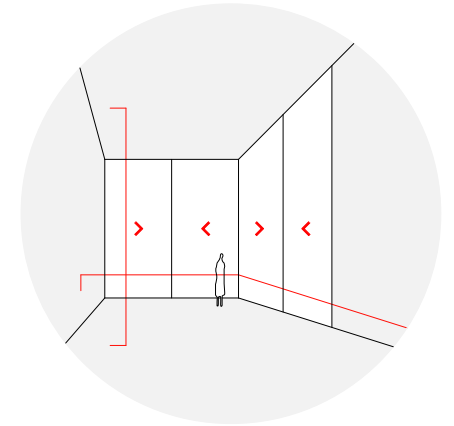
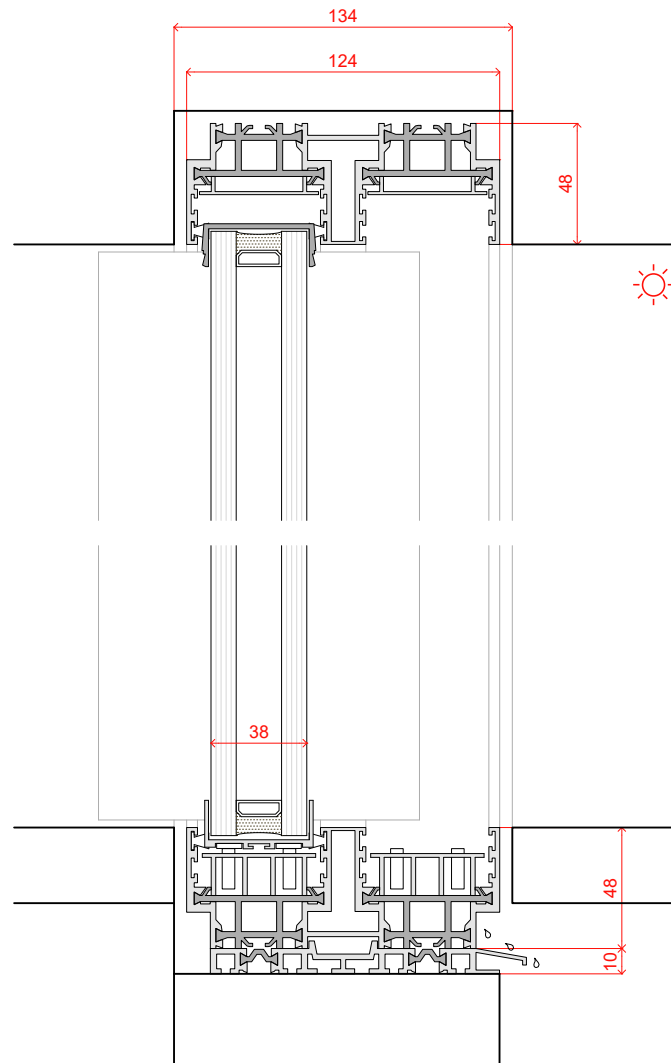


FIXED + DOUBLE SLIDING CORNER + FIXED (IN)



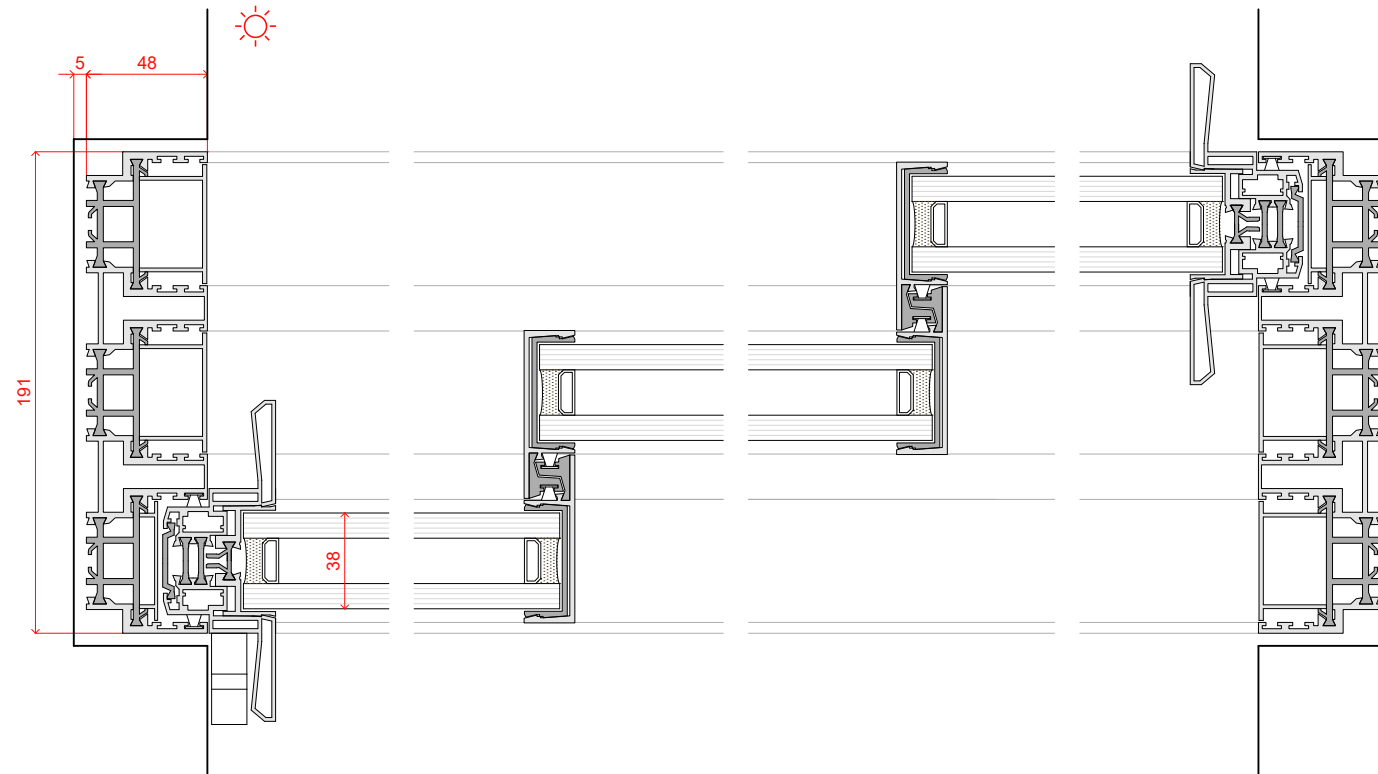
2.3.1 HORIZONTAL - BIRAIL

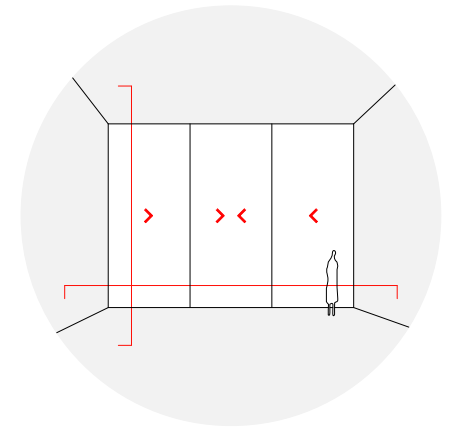
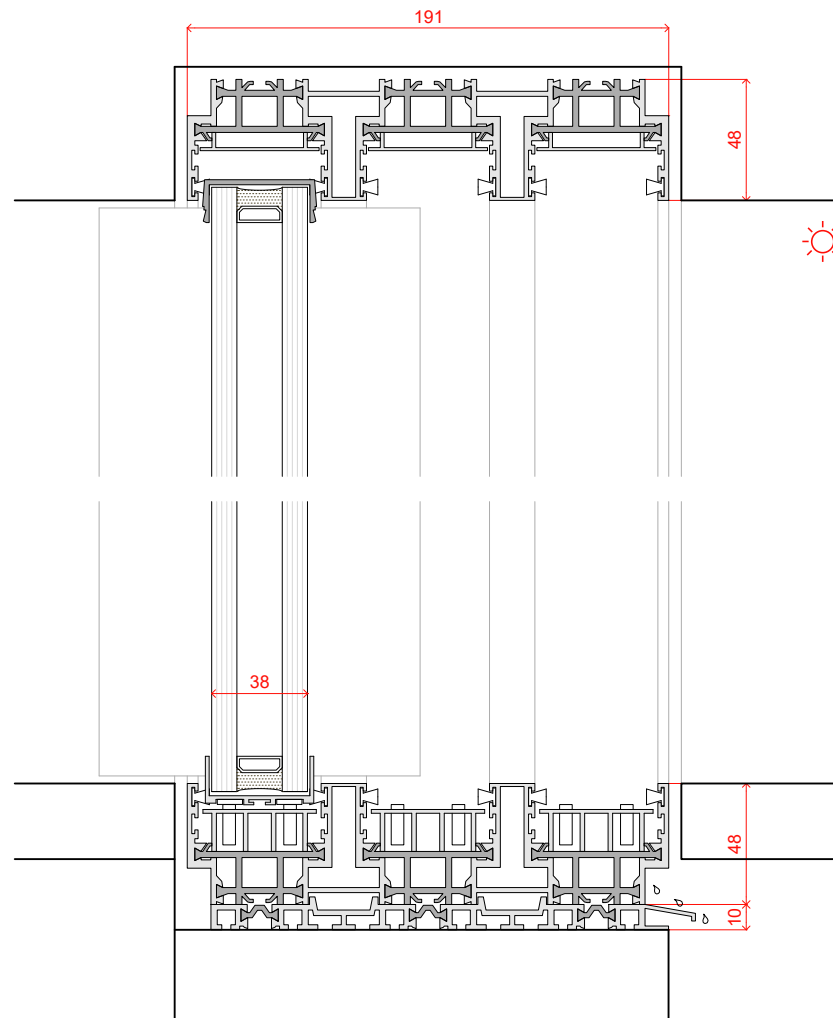




MULTIPLE SLIDING CORNER (OUT)

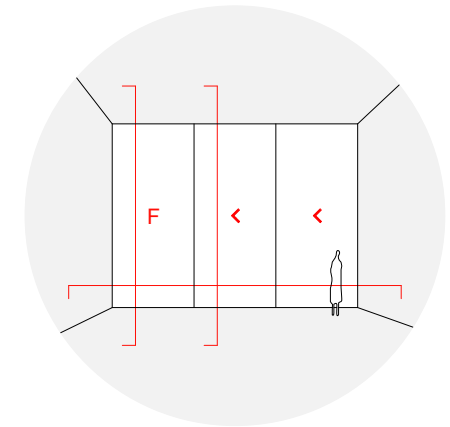
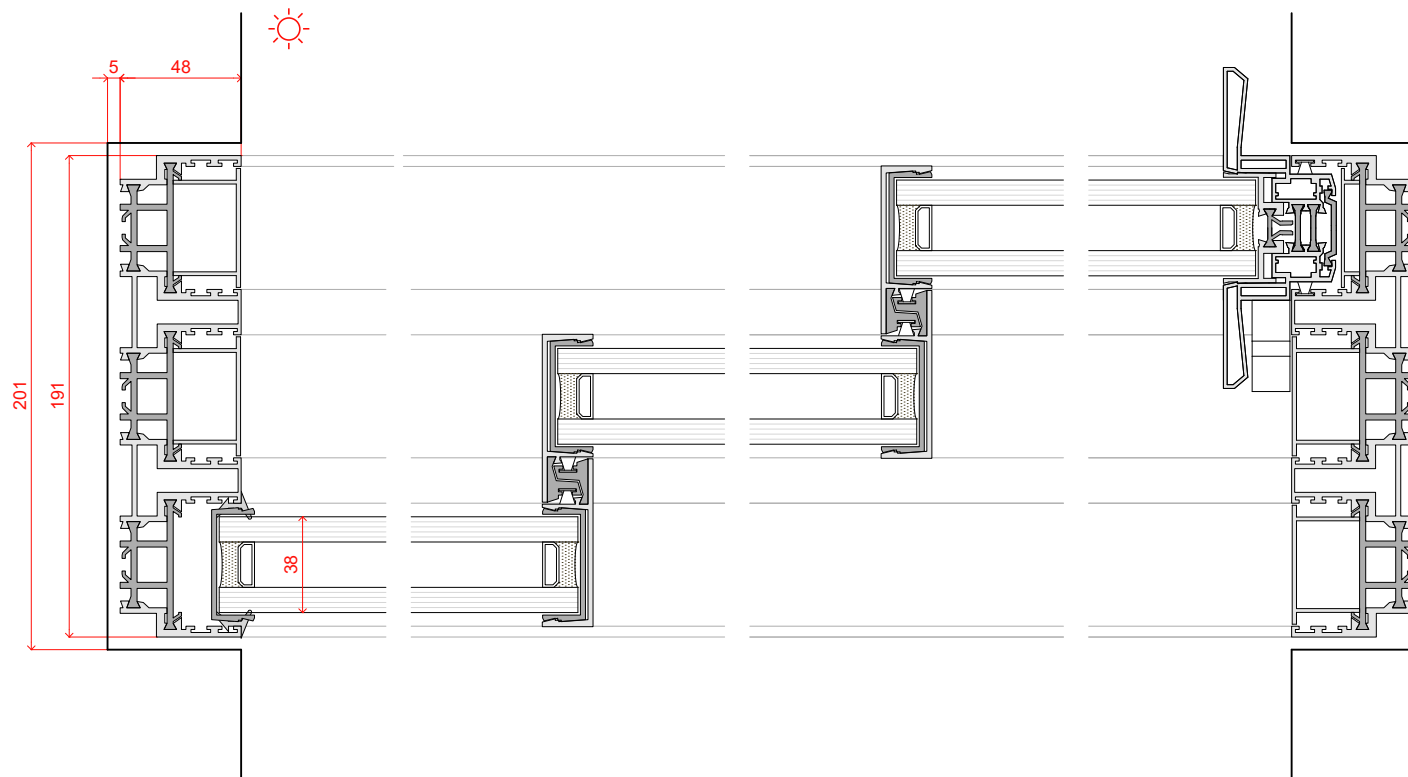
2.3.1 HORIZONTAL - TRIRAIL



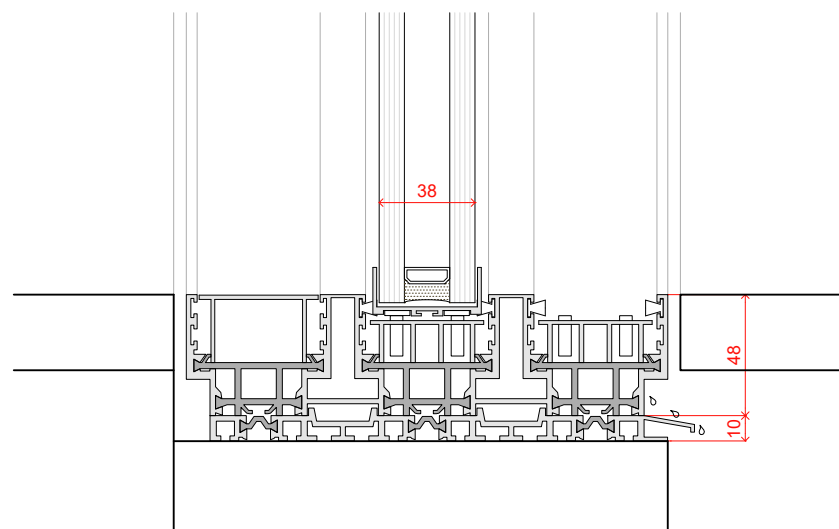
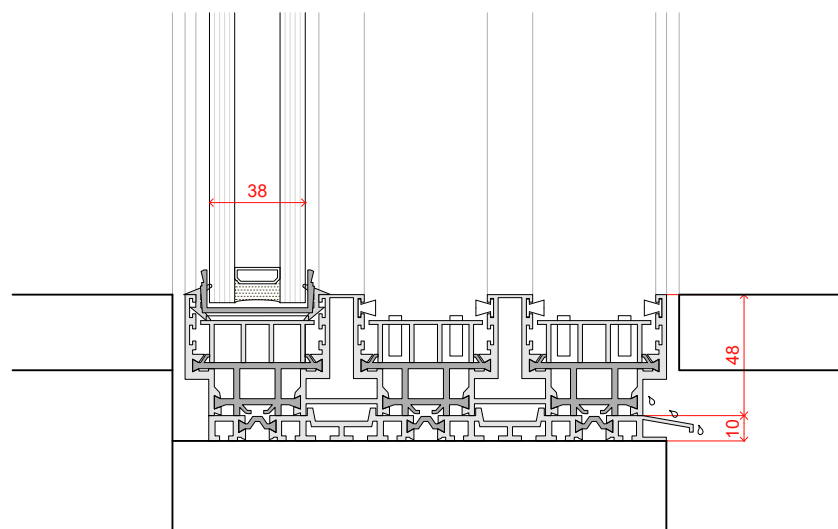
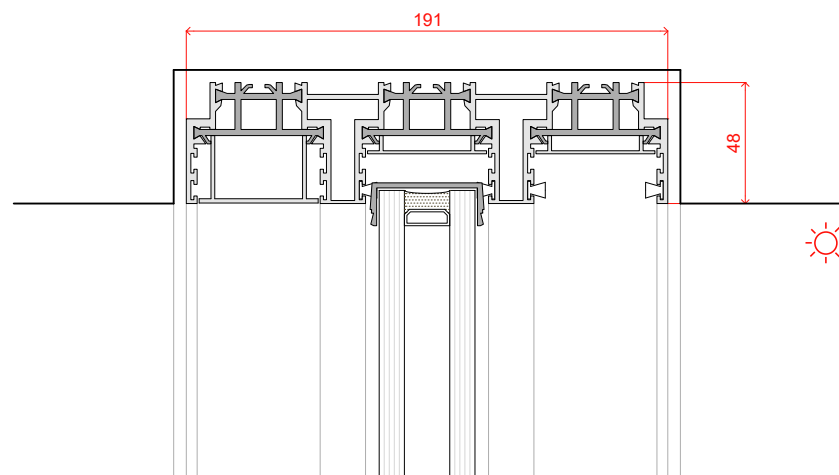
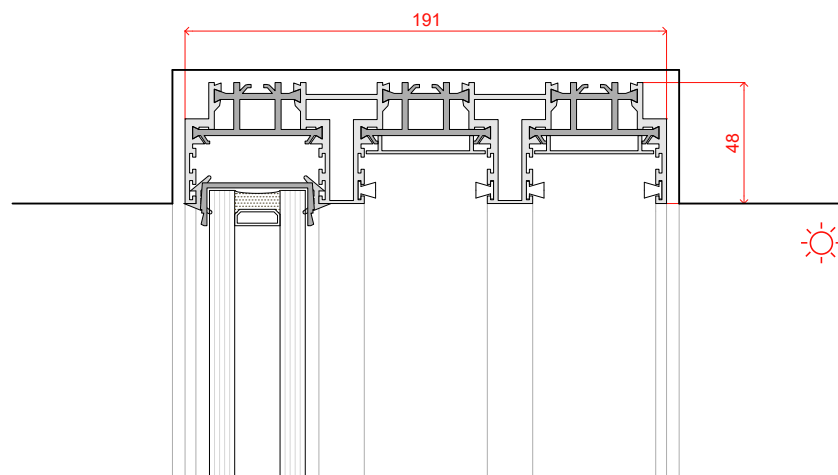


MULTIPLE SLIDING

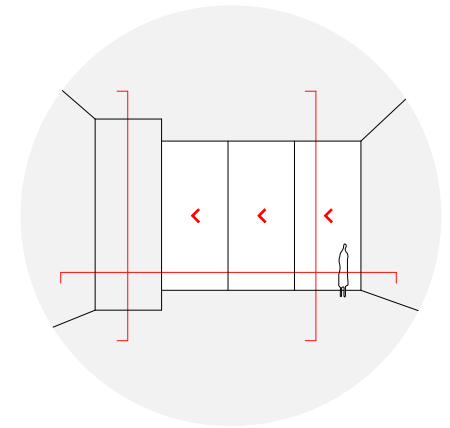
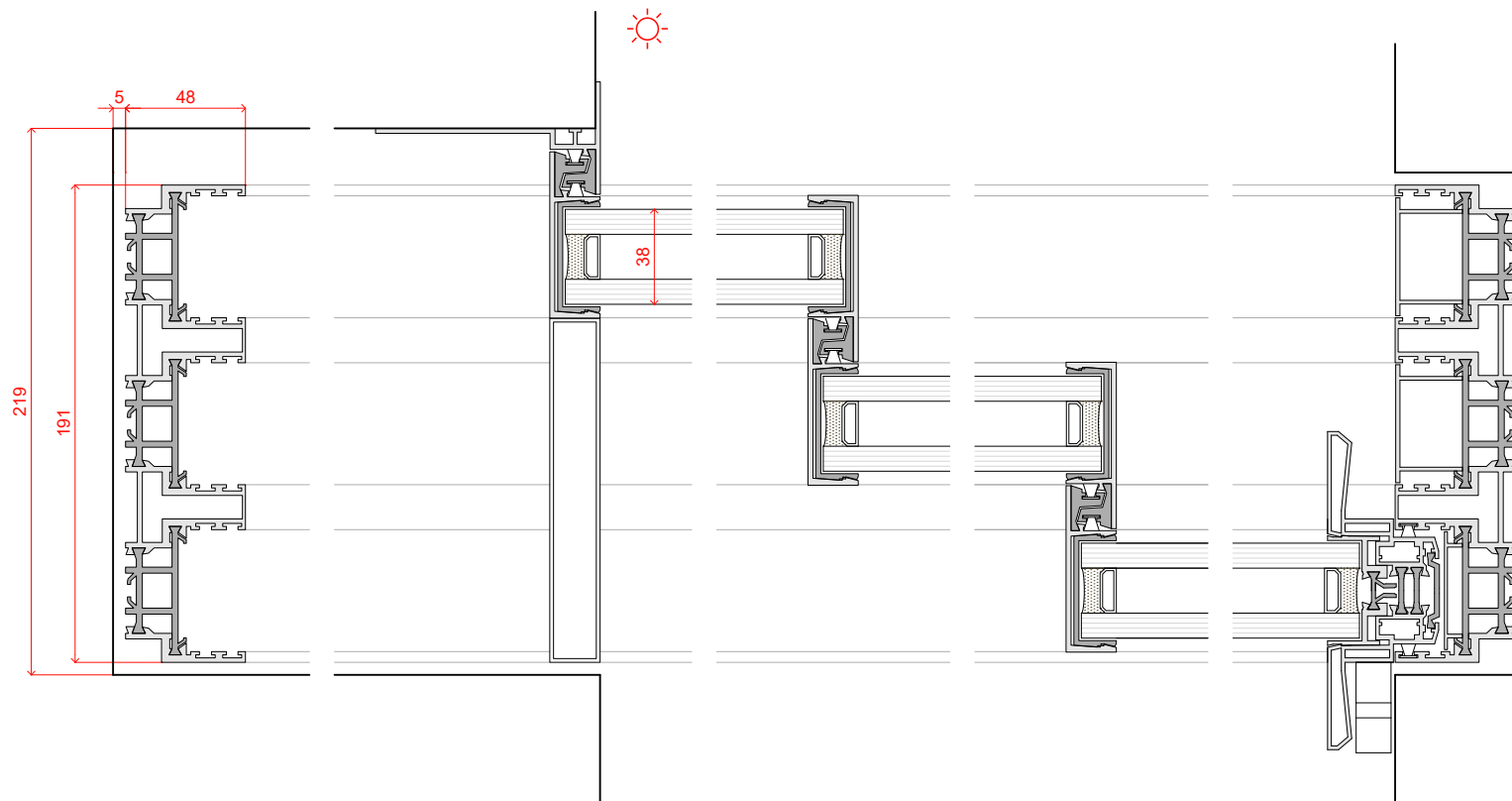
2.3.1 HORIZONTAL - TRIRAIL



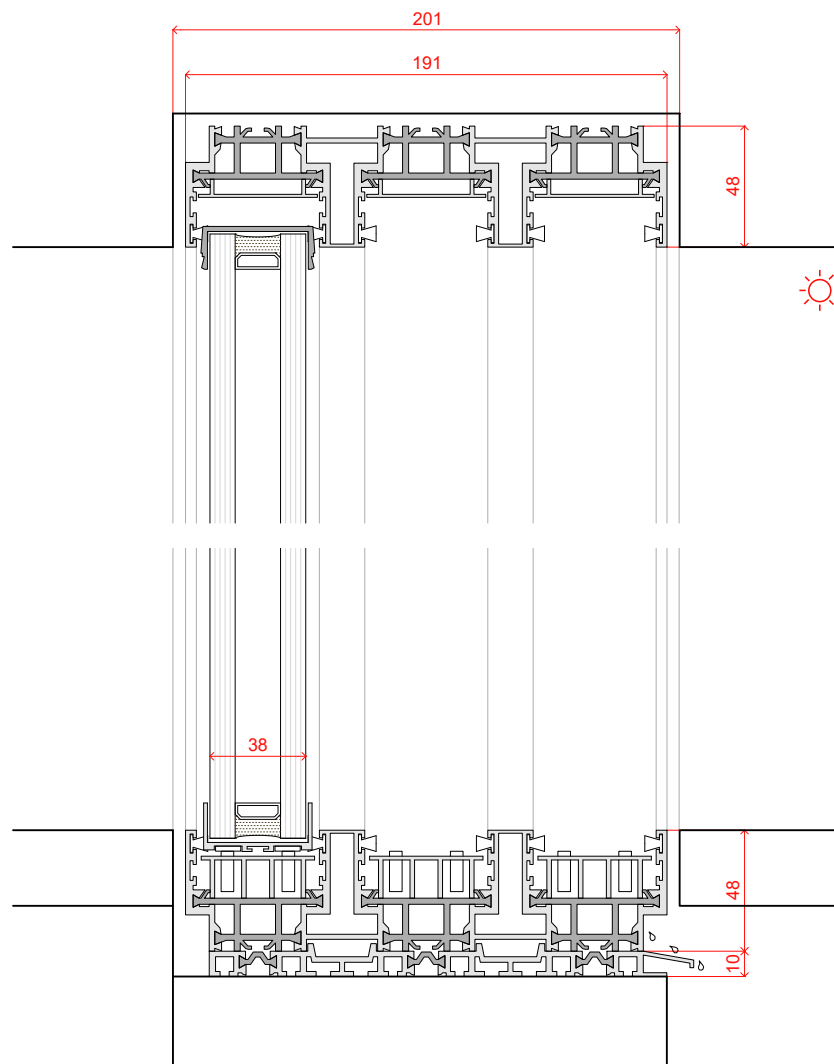
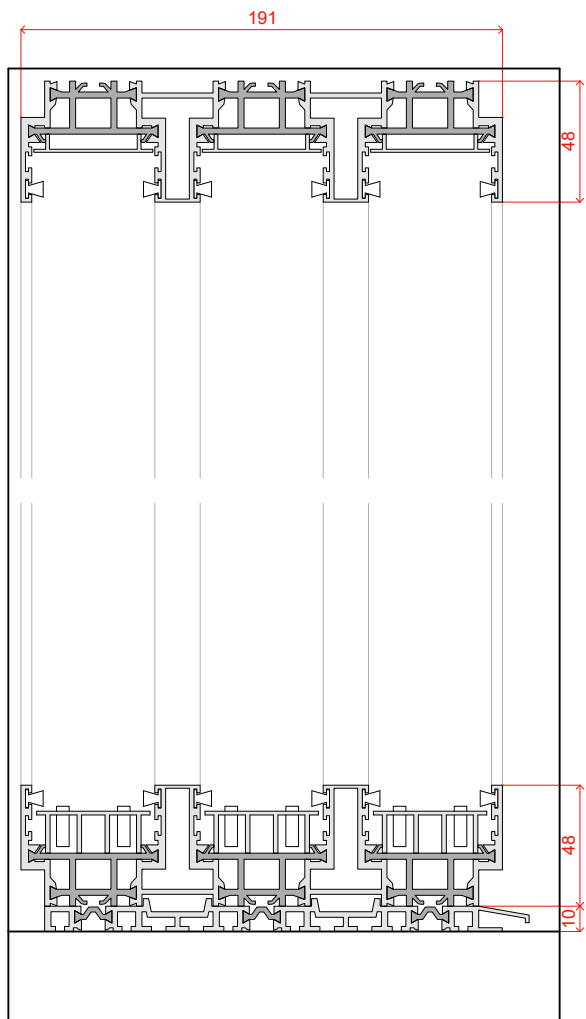
FIXED + DOUBLE SLIDING



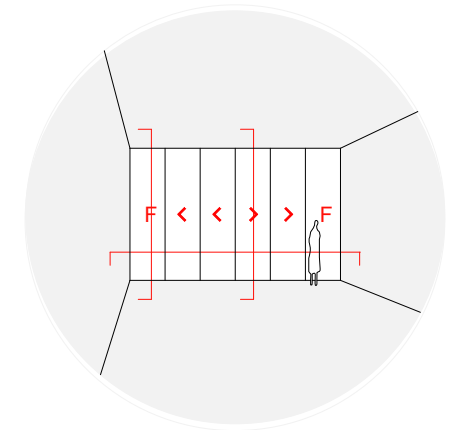
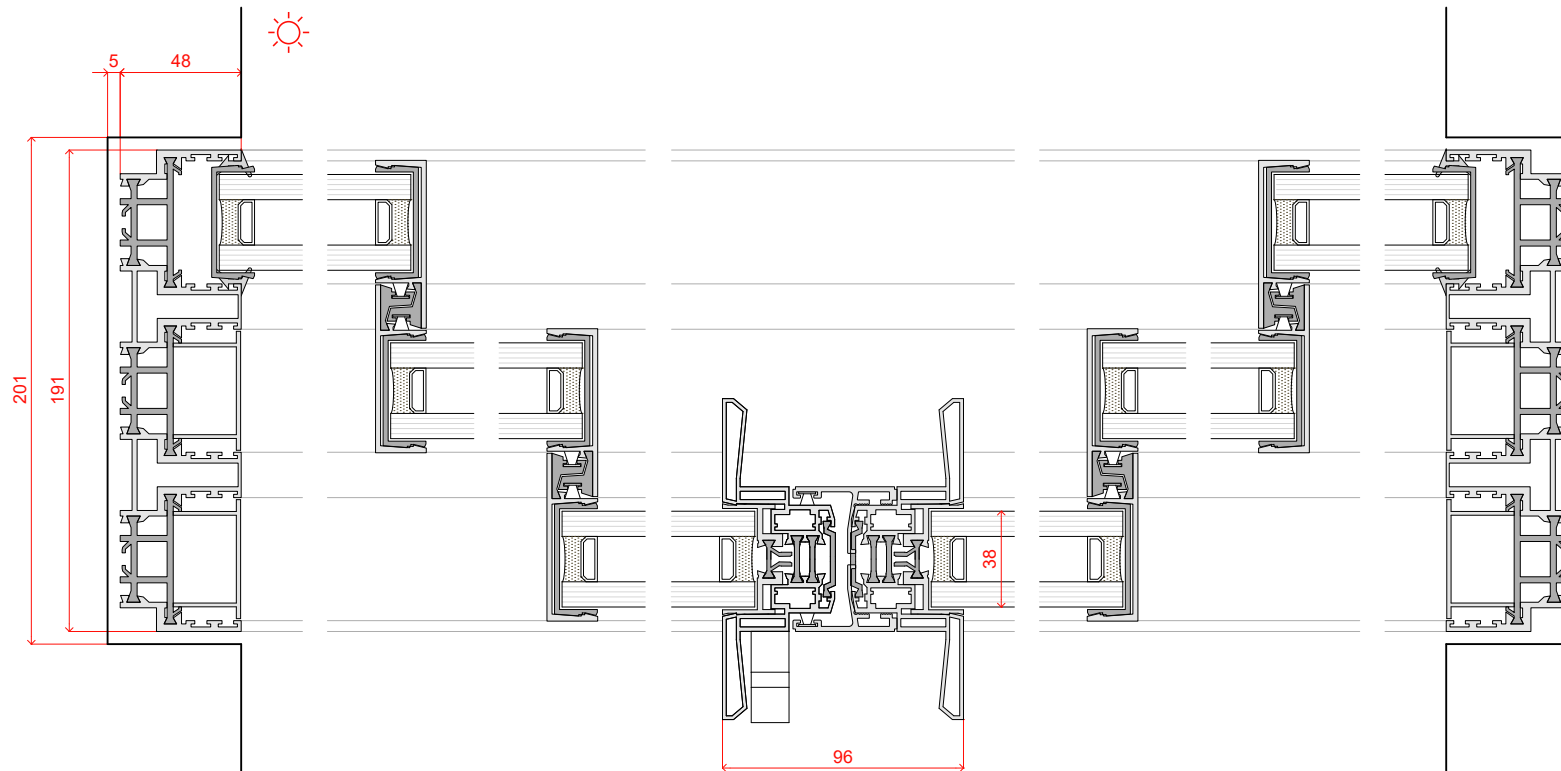
2.3.1 HORIZONTAL - TRIRAIL



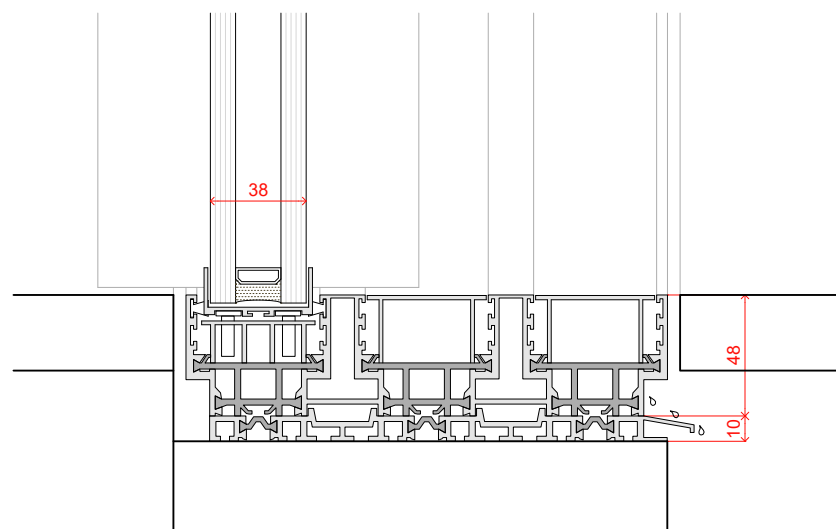
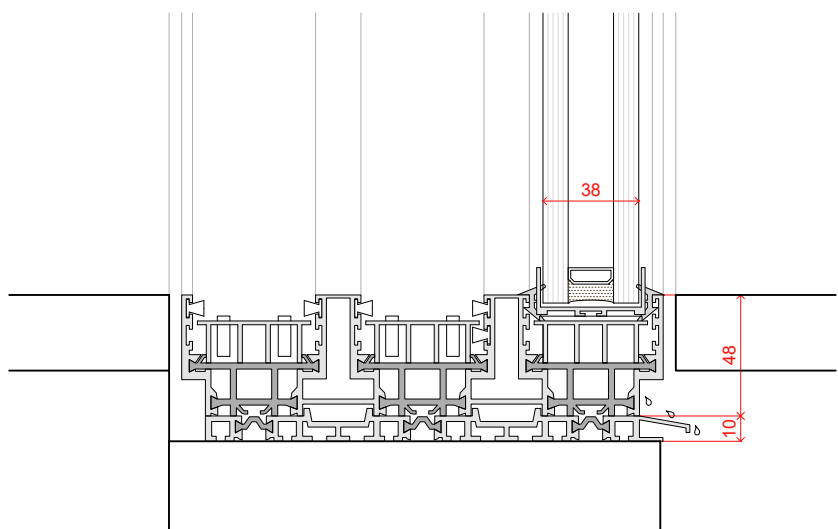
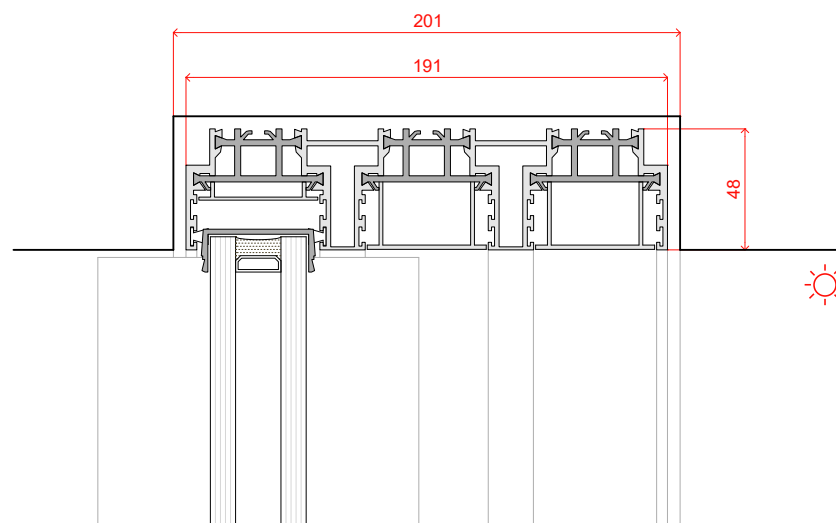
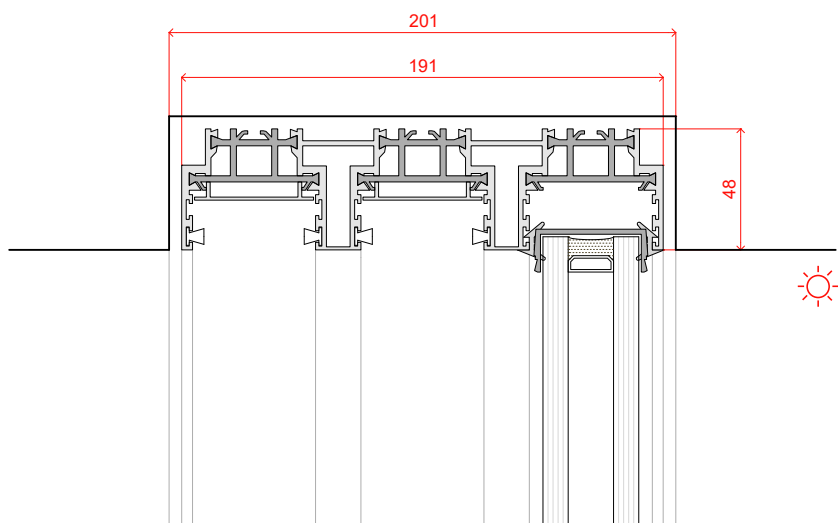
MULTIPLE POCKET



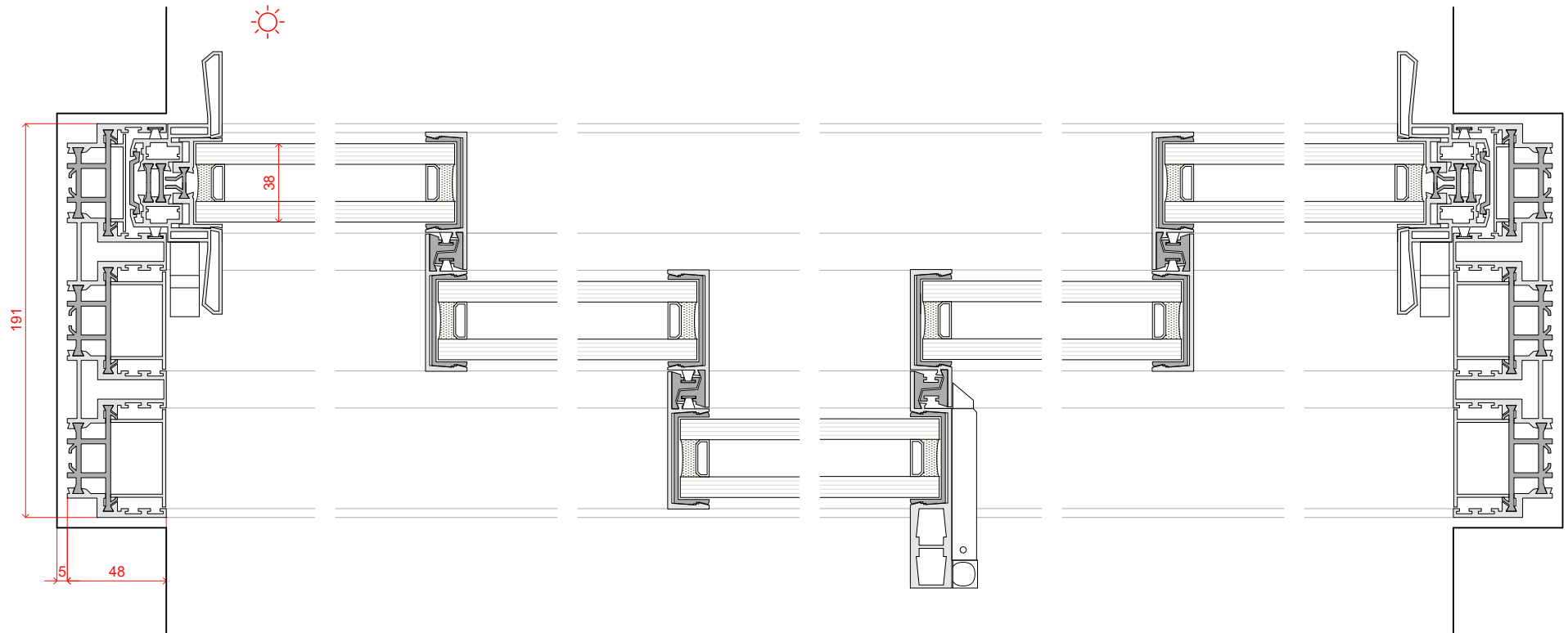
2.3.1 HORIZONTAL - TRIRAIL

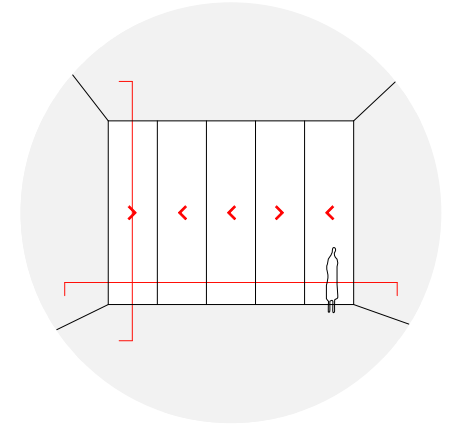
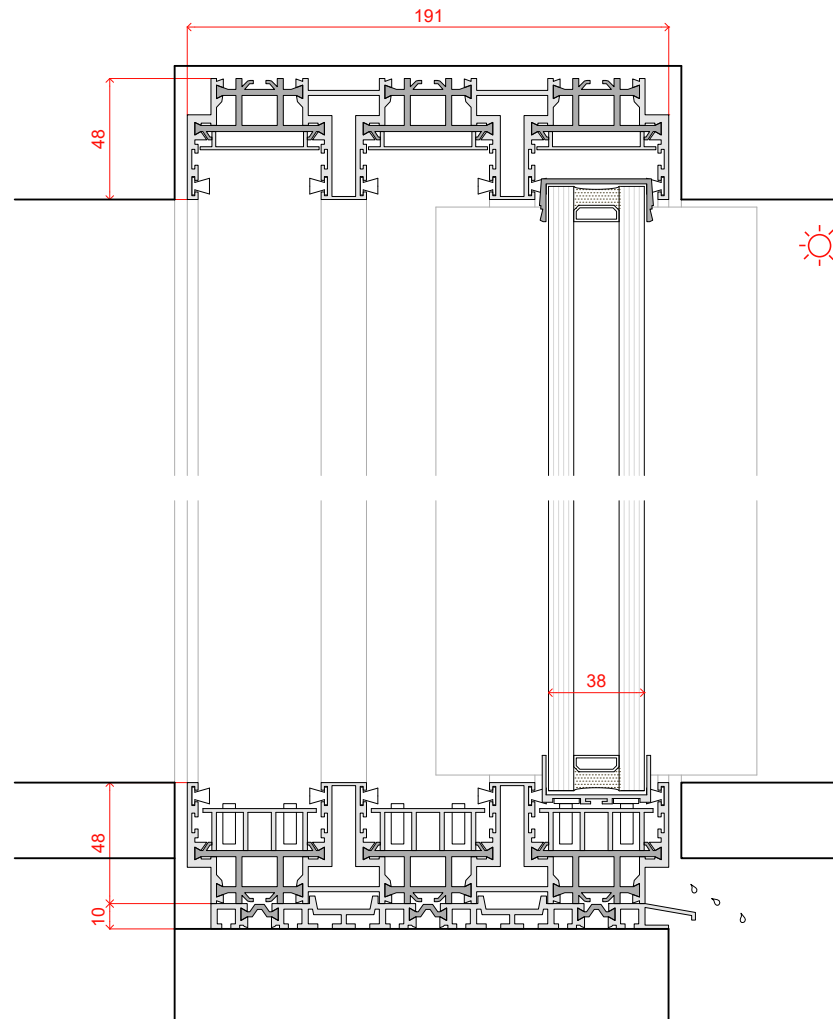


FIXED + MULTIPLE SLIDING + FIXED
(CENTRAL OPENING)

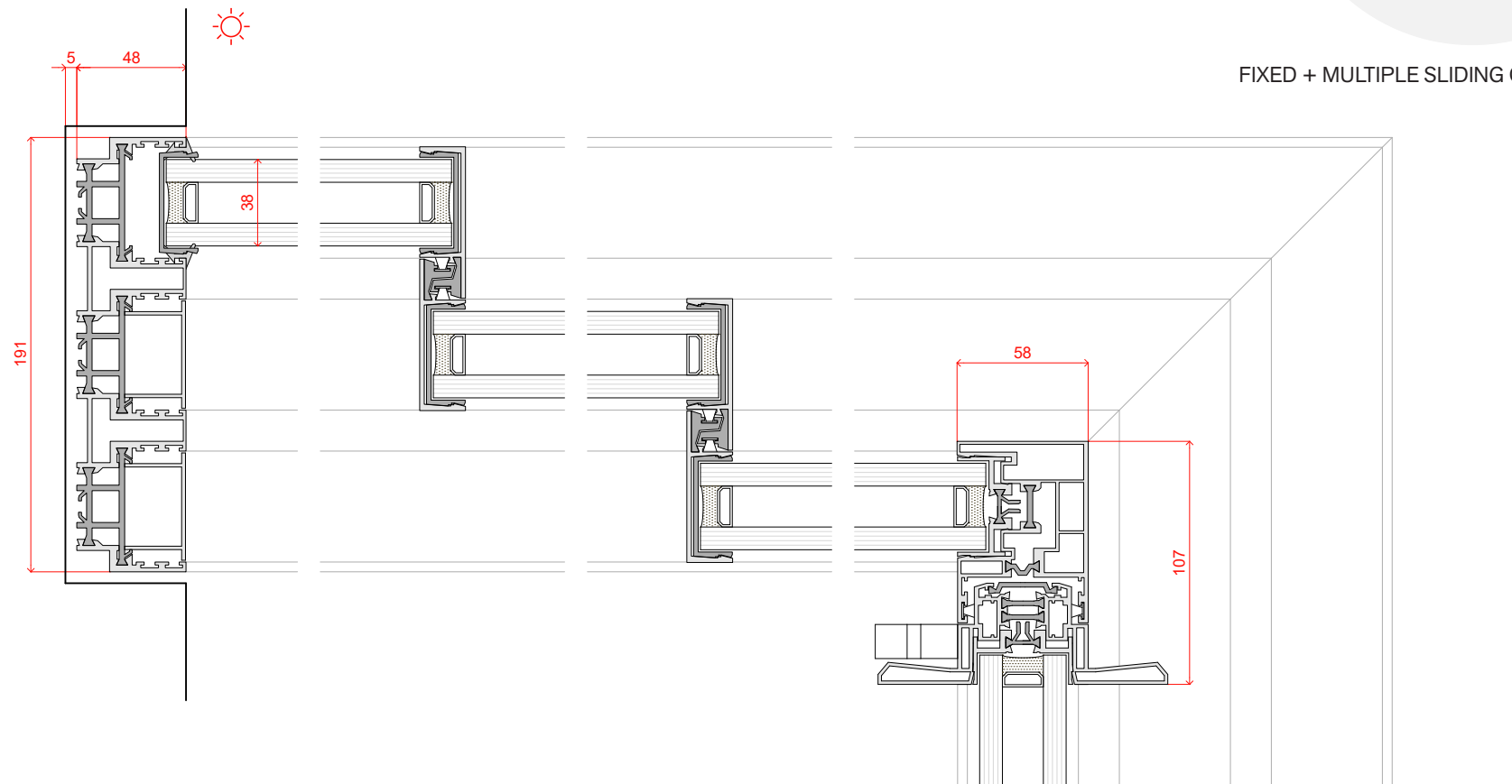


2.3.1 HORIZONTAL - TRIRAIL

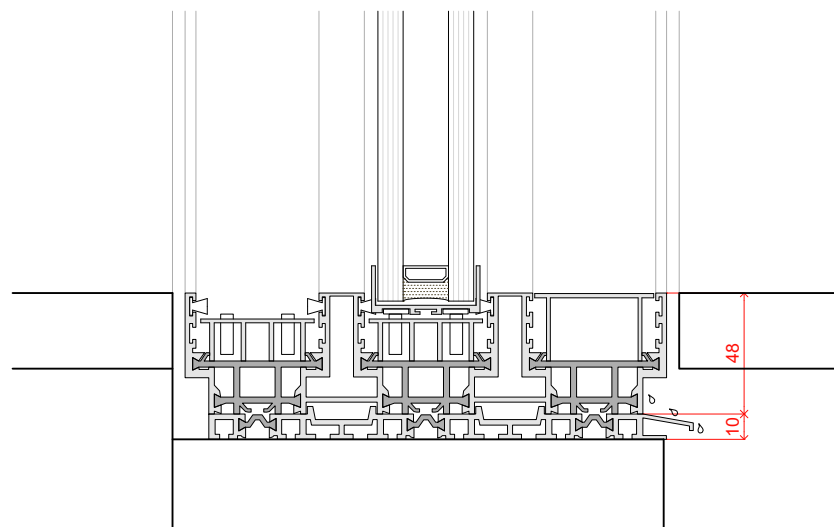
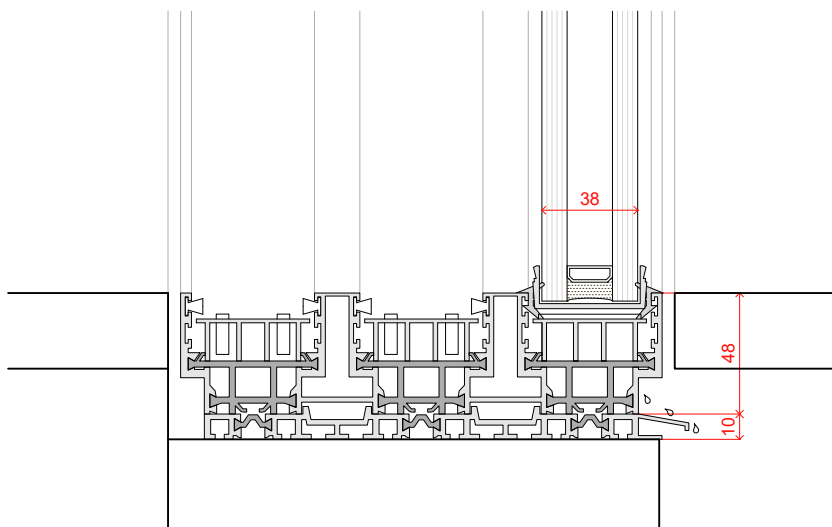
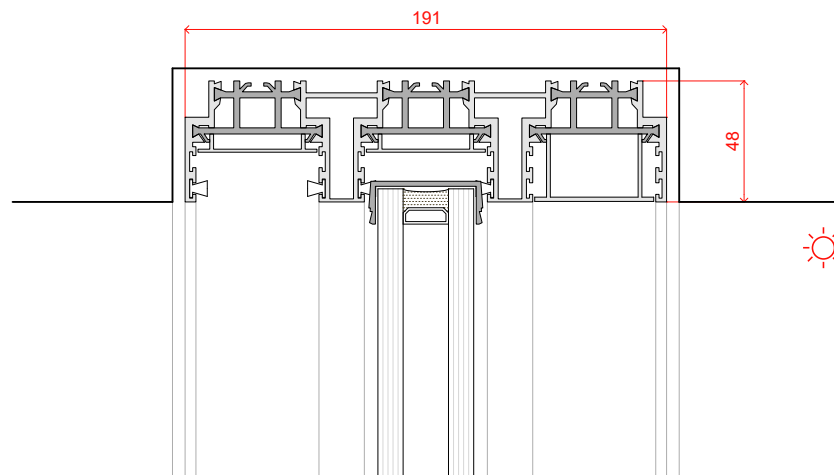
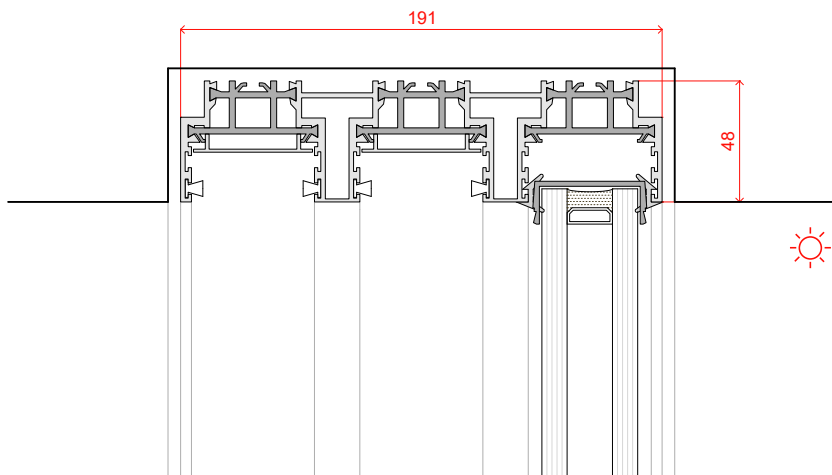




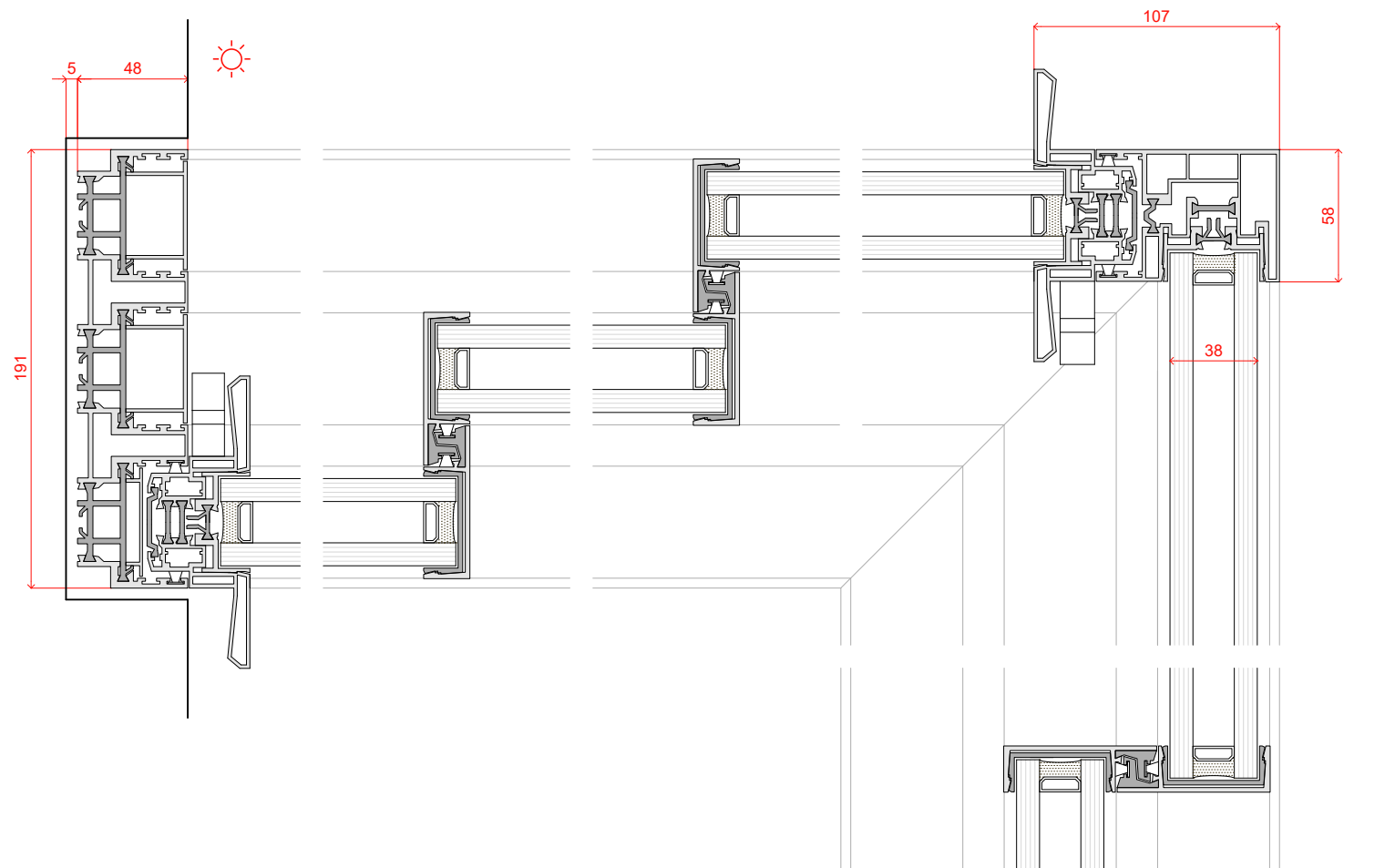
2.3.1 HORIZONTAL - TRIRAIL

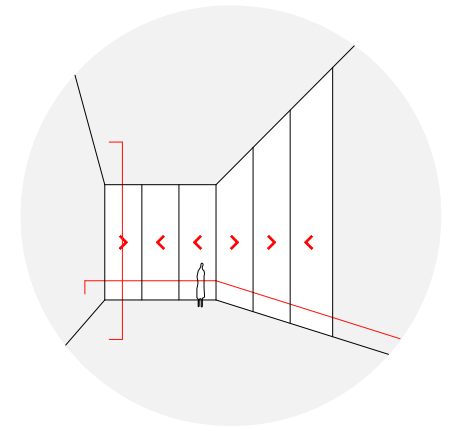
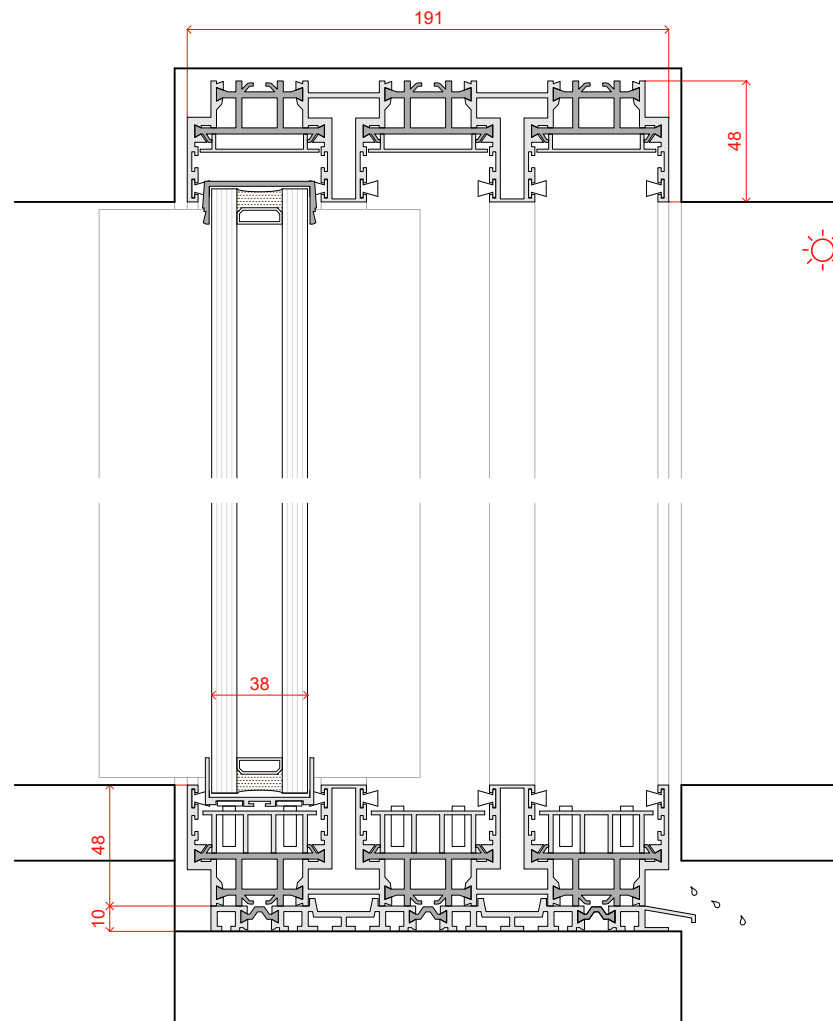


FIXED + MULTIPLE SLIDING CORNER + FIXED (IN)



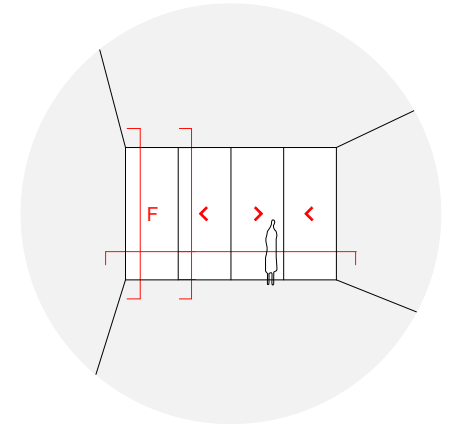
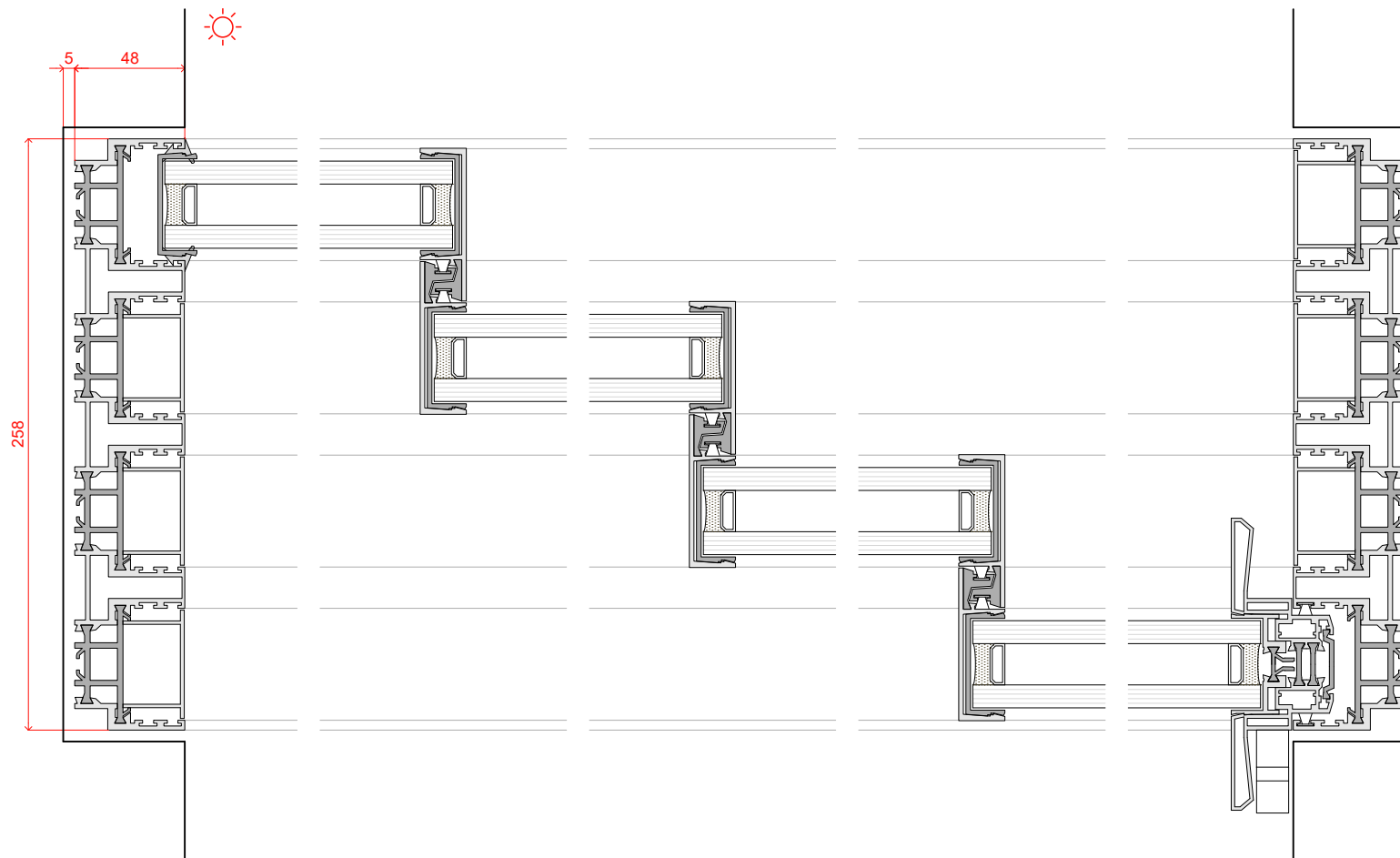
2.3.1 HORIZONTAL - TRIRAIL



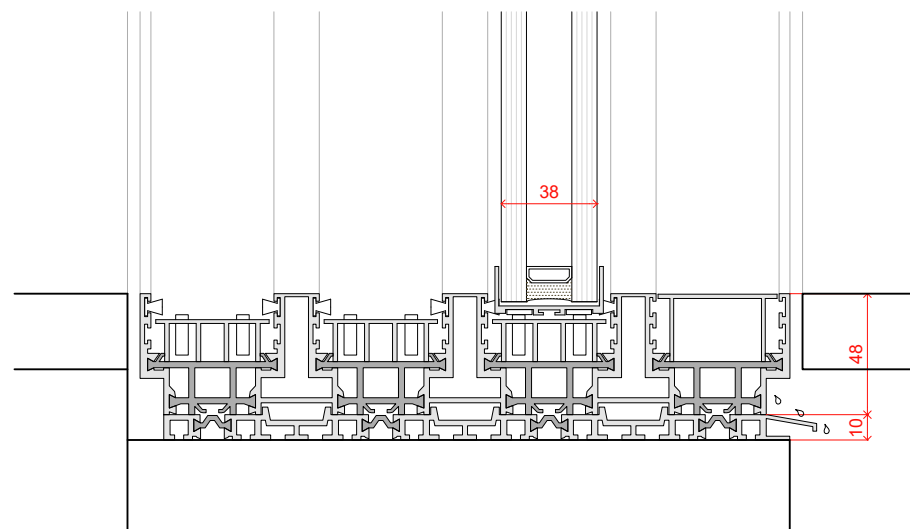
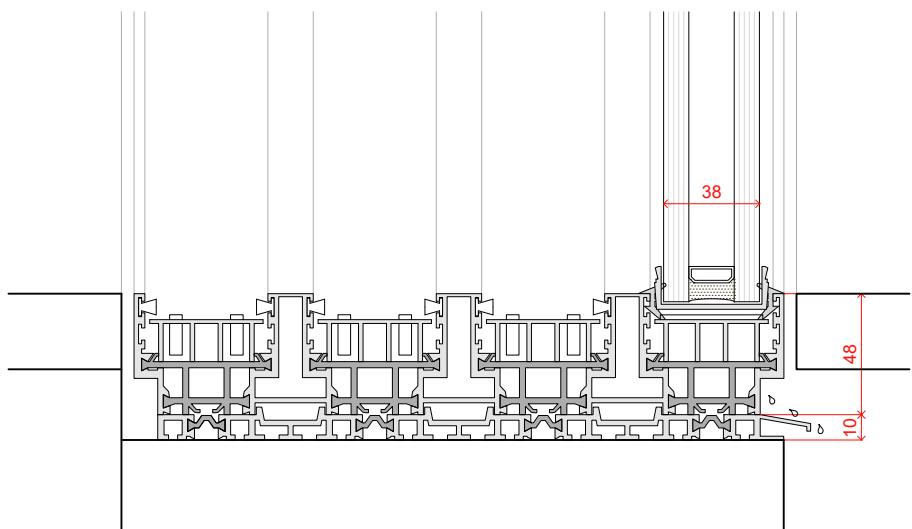
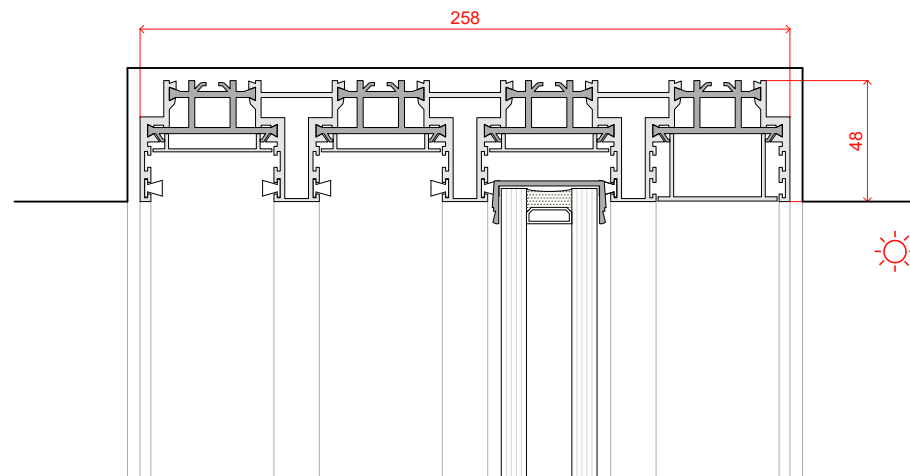
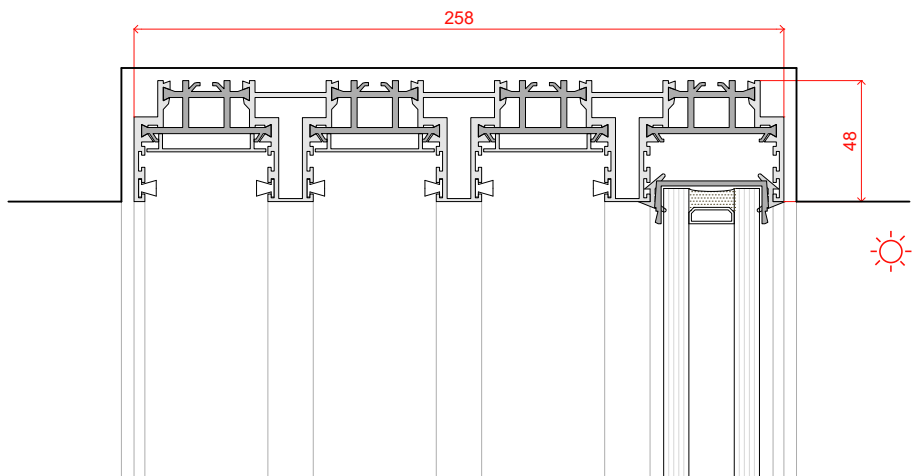


MULTIPLE SLIDING CORNER (OUT)

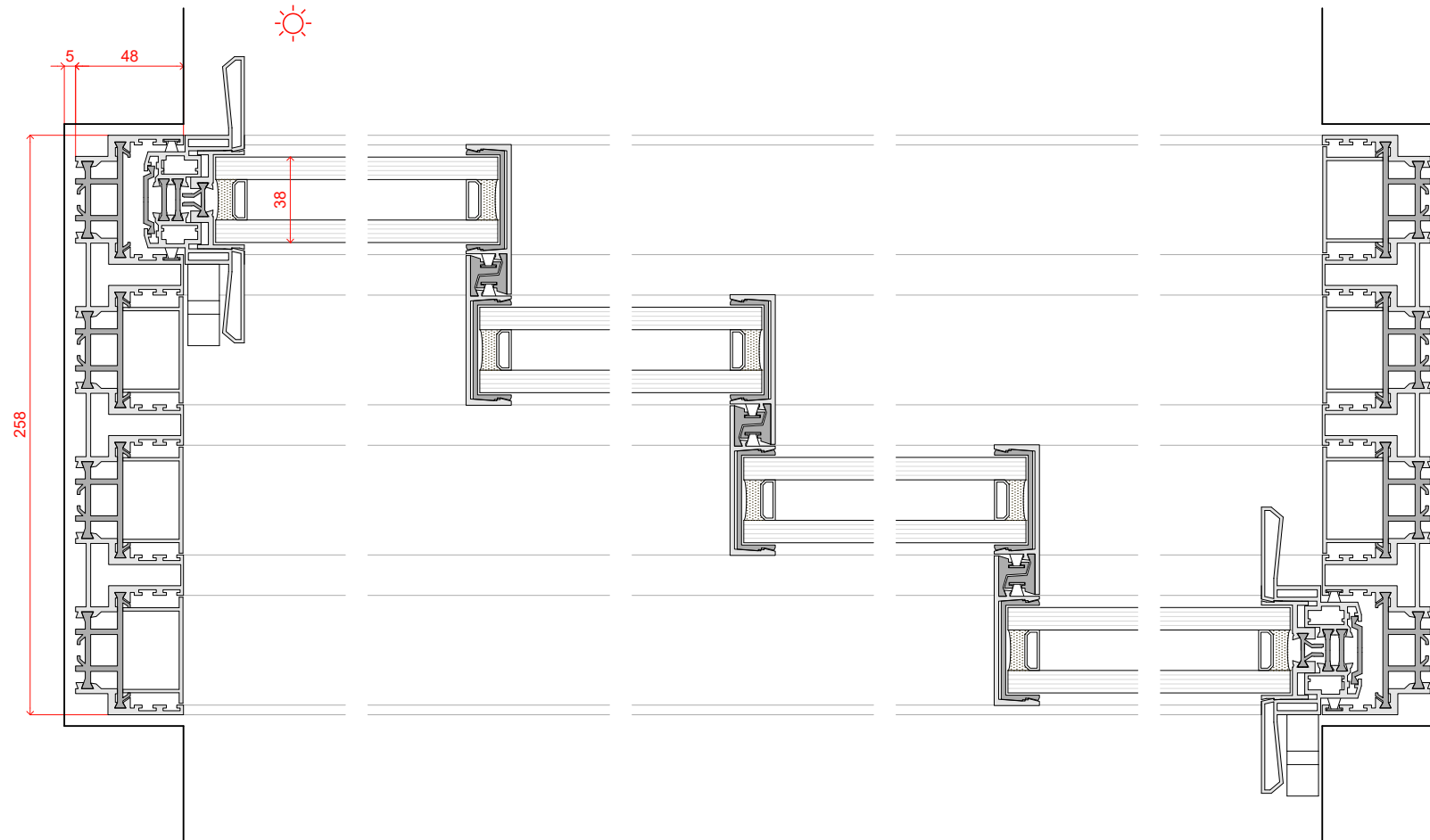
2.3.1 HORIZONTAL - MULTIRAIL

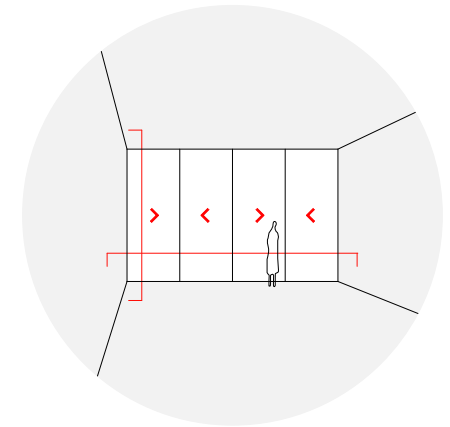
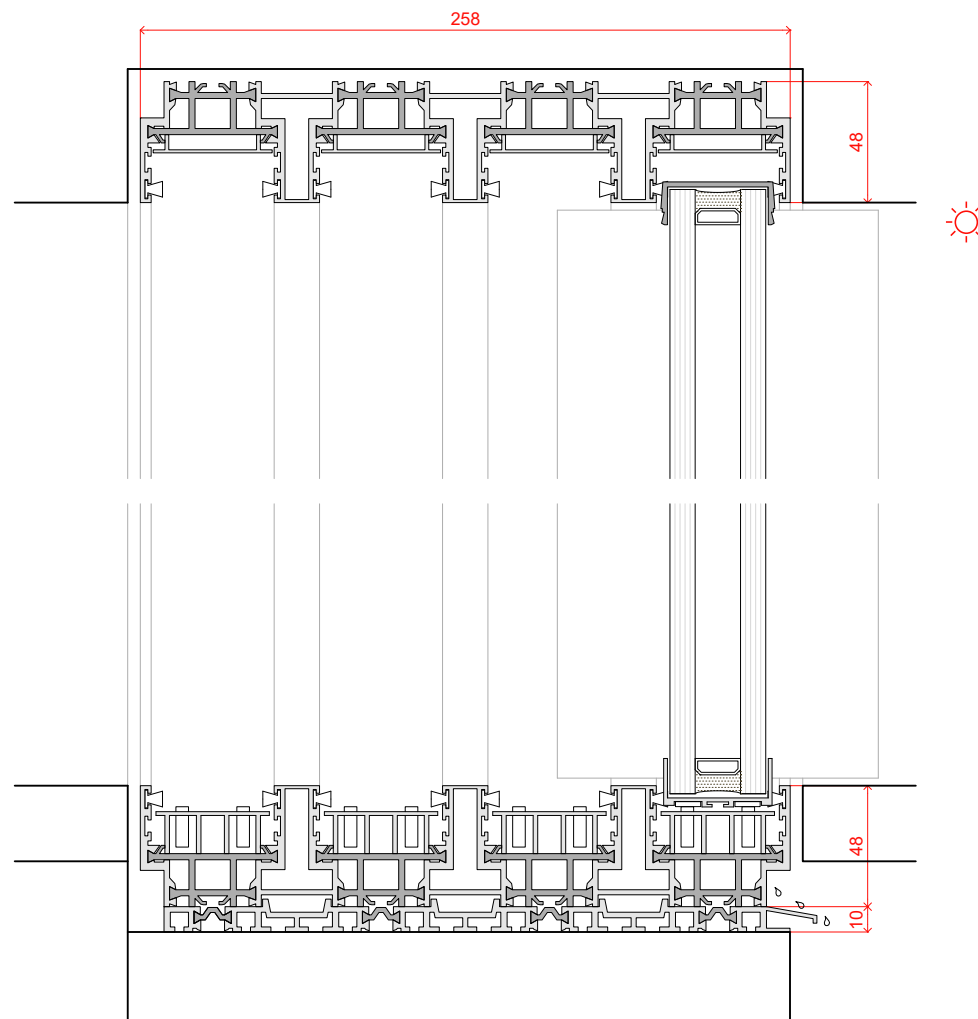


FIXED + MULTIPLE SLIDING



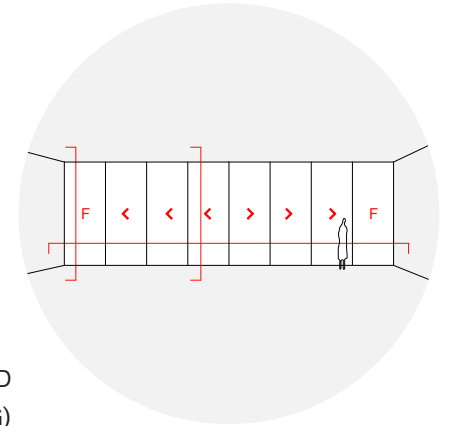
2.3.1 HORIZONTAL - MULTIRAIL



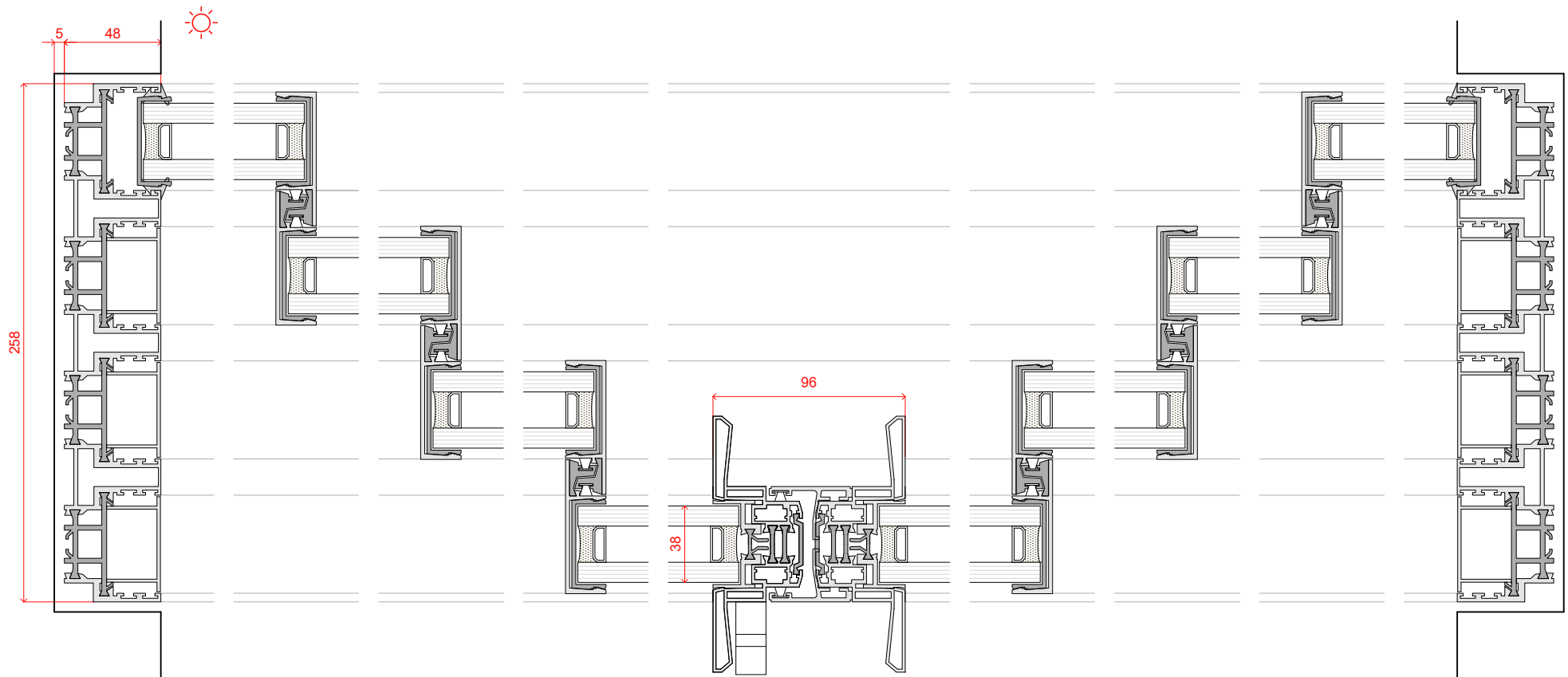


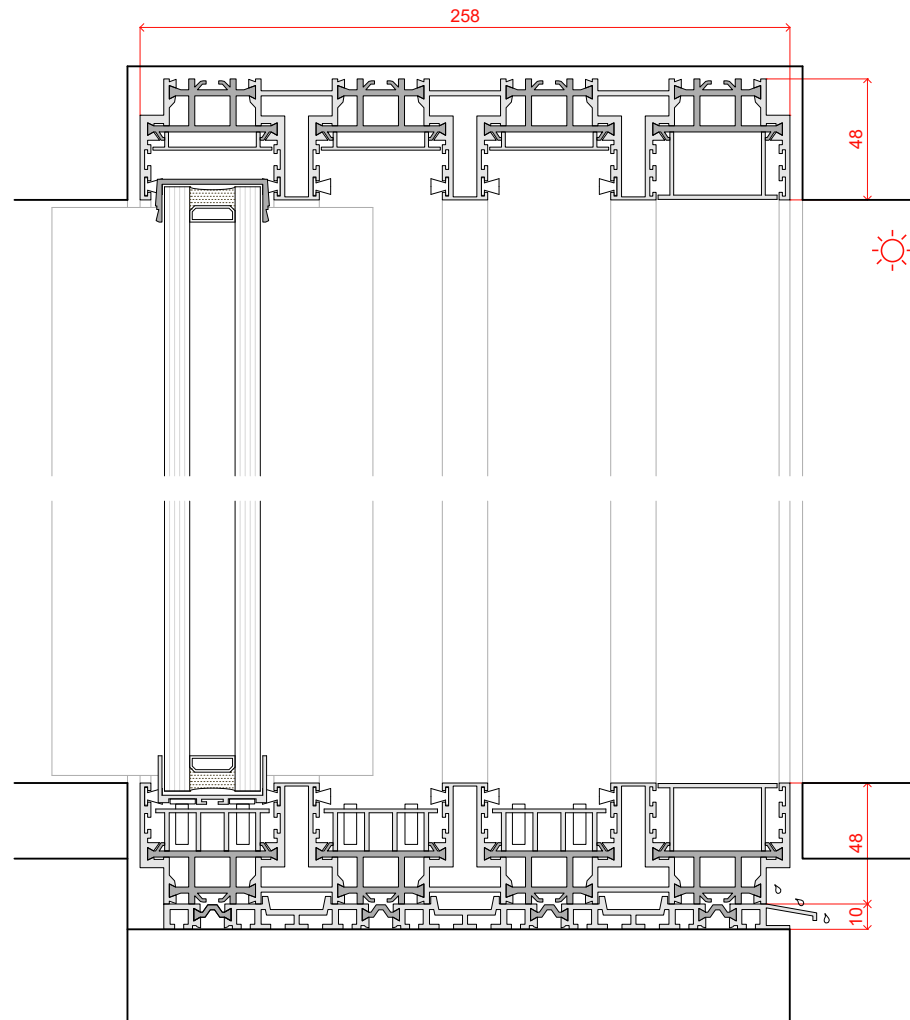
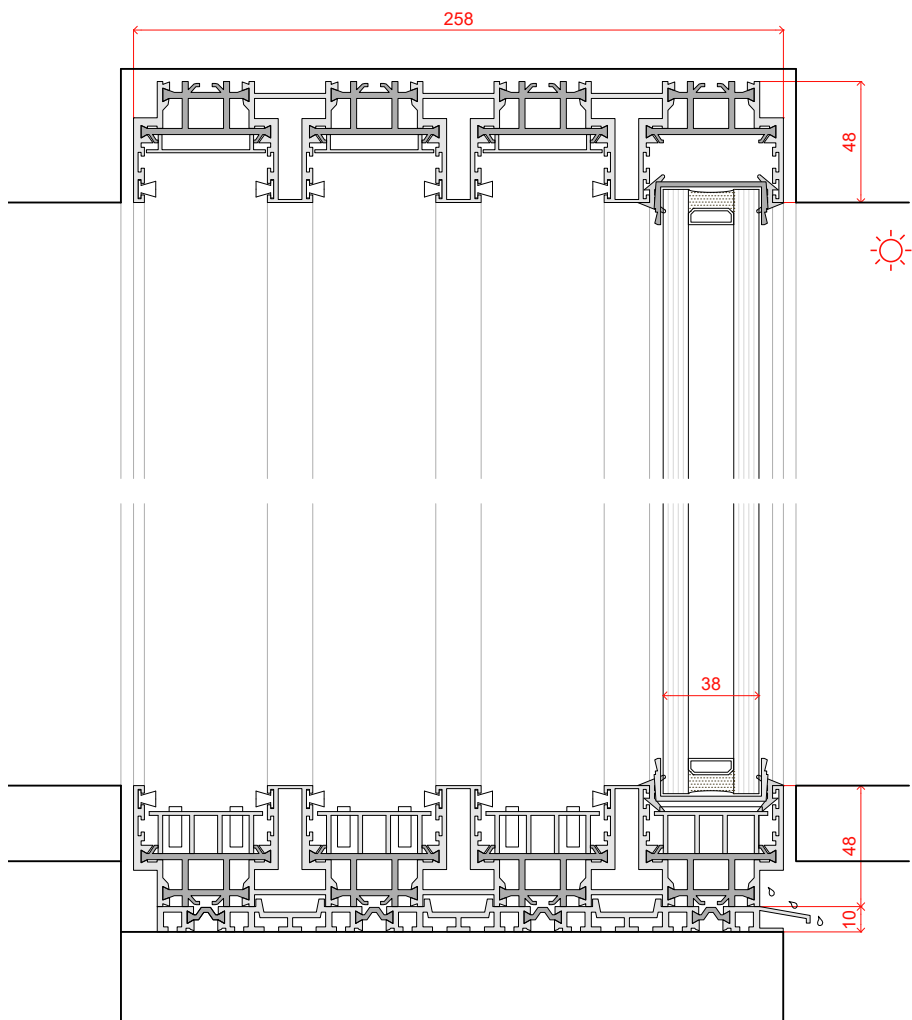
MULTIPLE SLIDING

2.3.1 HORIZONTAL - MULTIRAIL

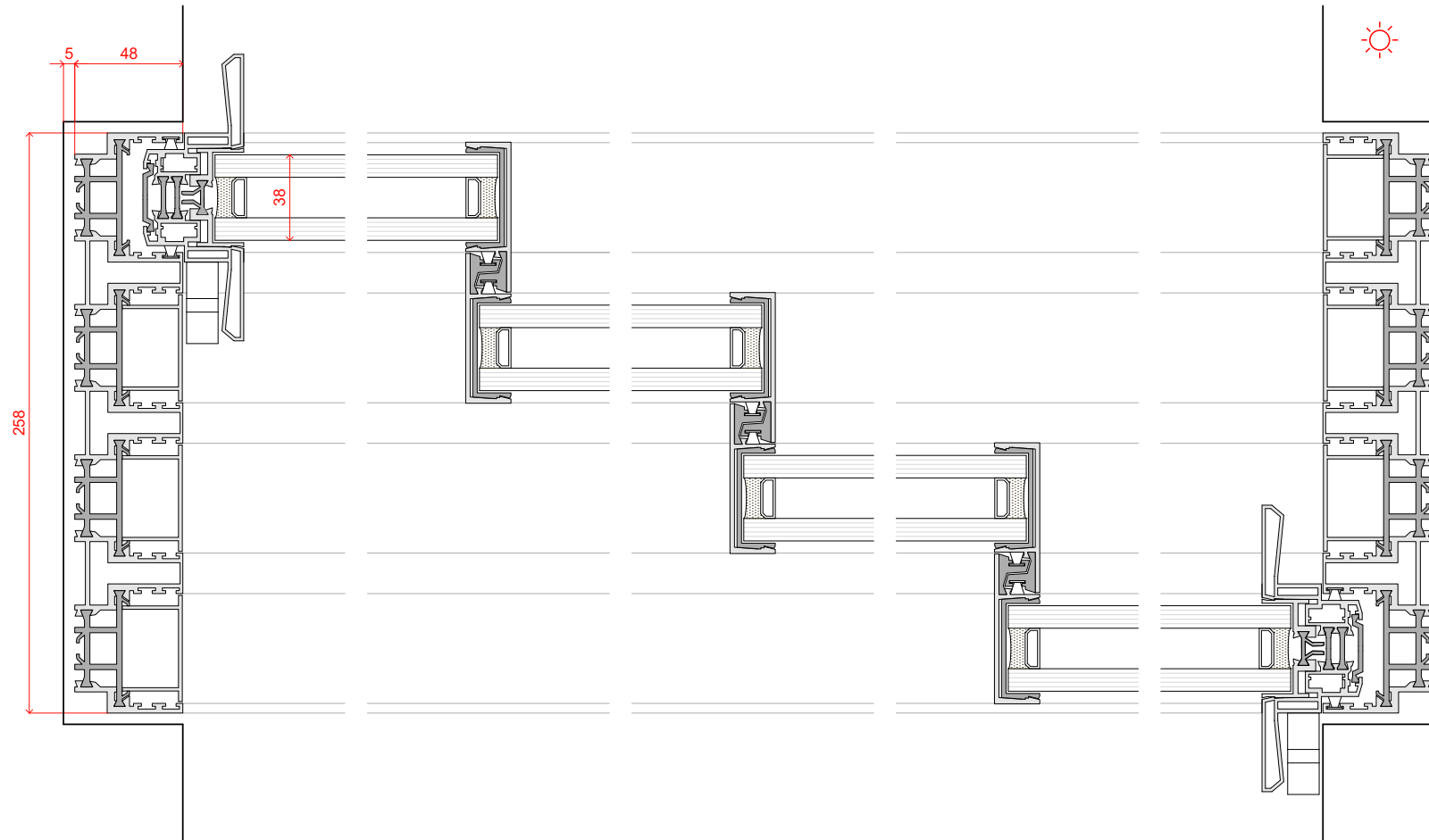


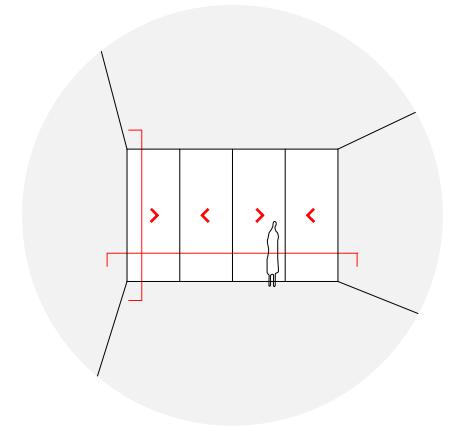
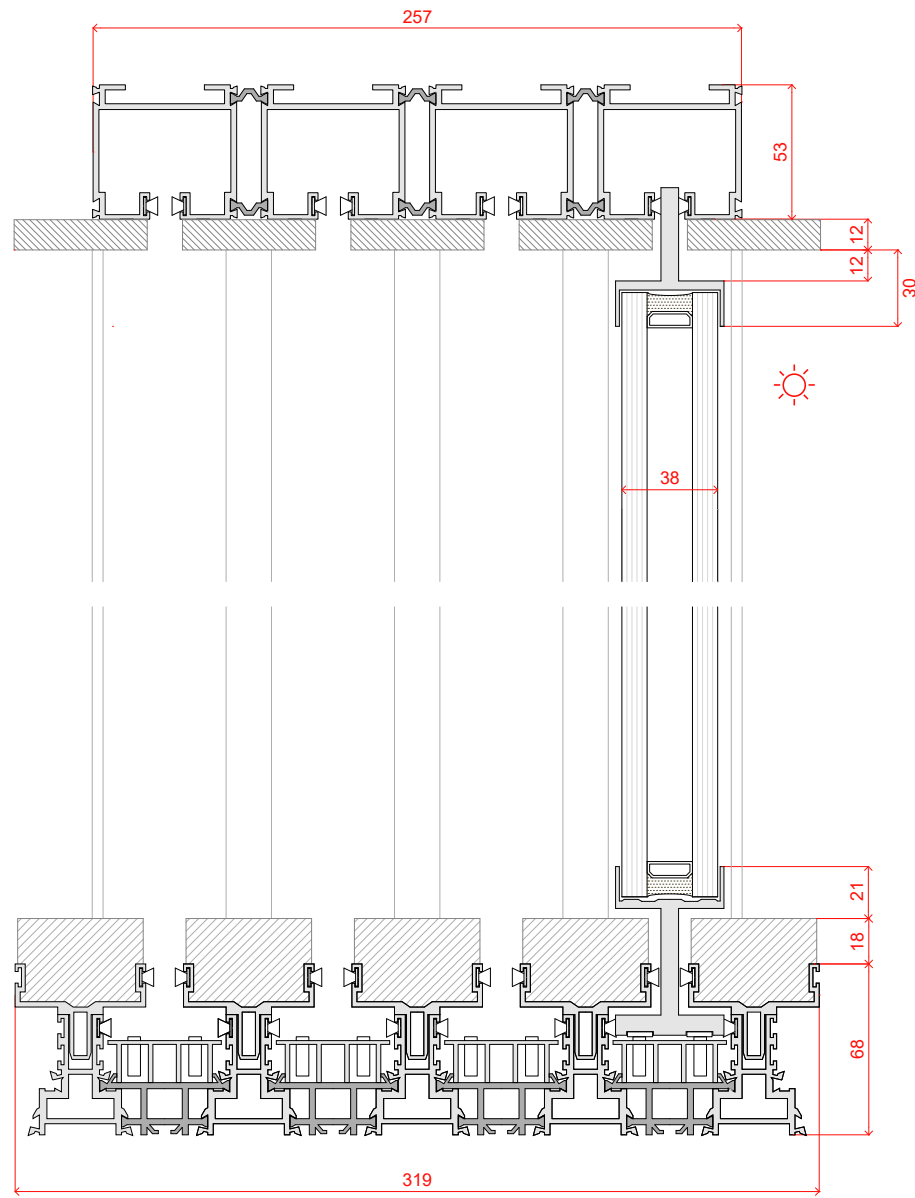
FIXED + MULTIPLE SLIDING + FIXED
(CENTRAL OPENING)





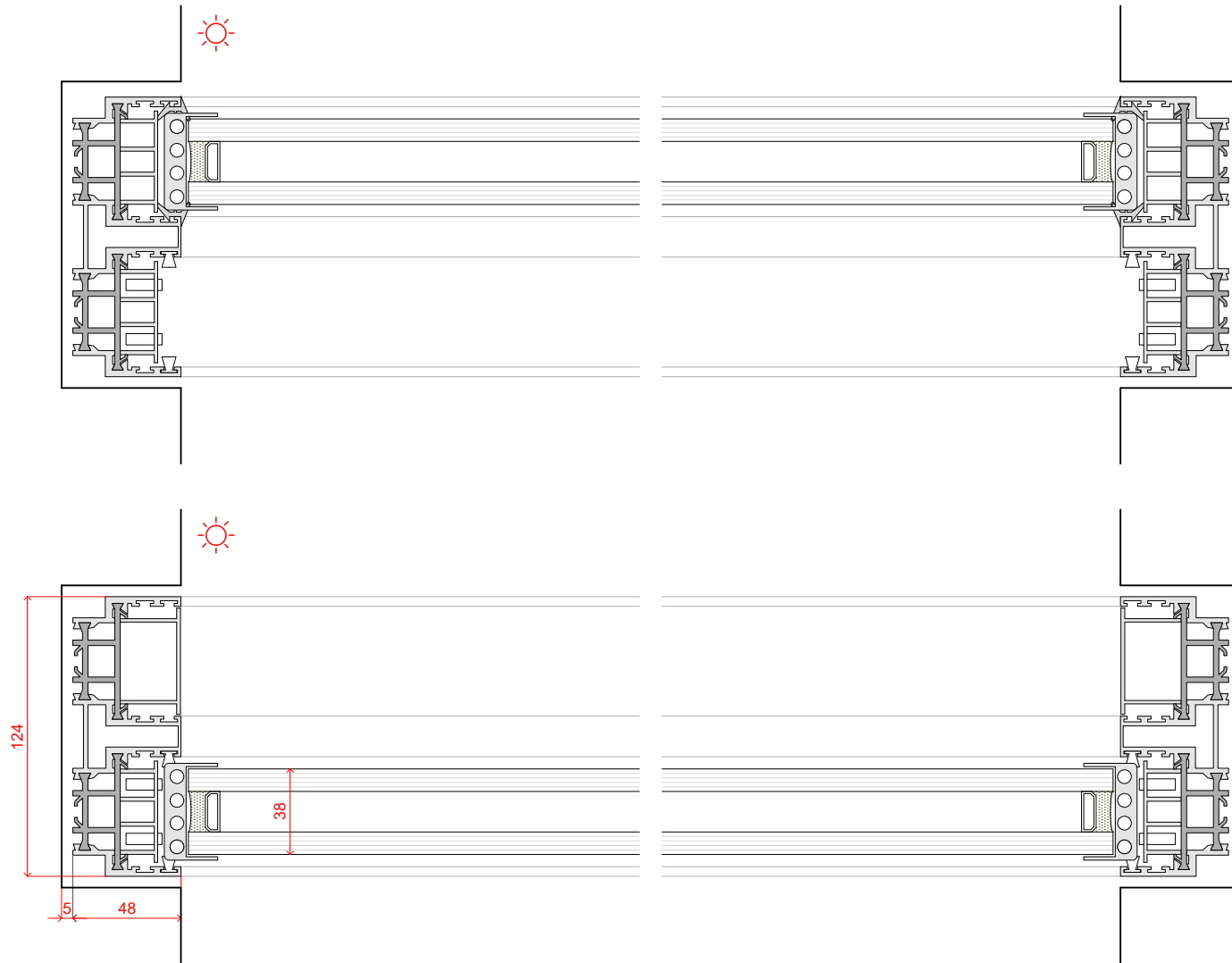
2.3.1 HORIZONTAL - INVISIBLE FRAME

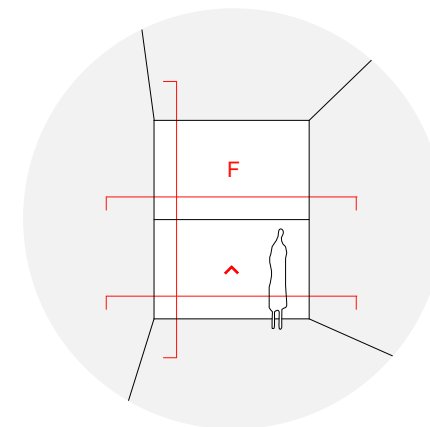
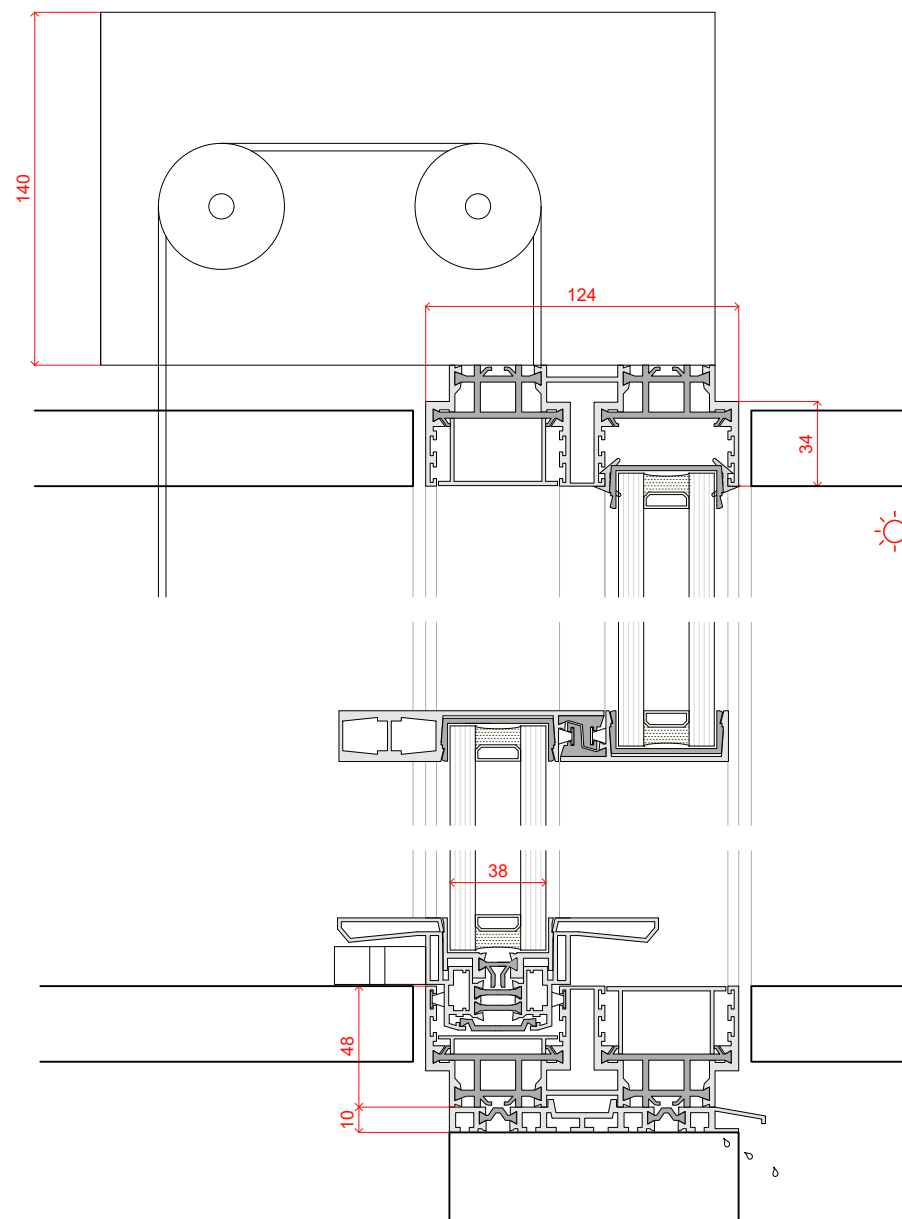




MULTIPLE SLIDING

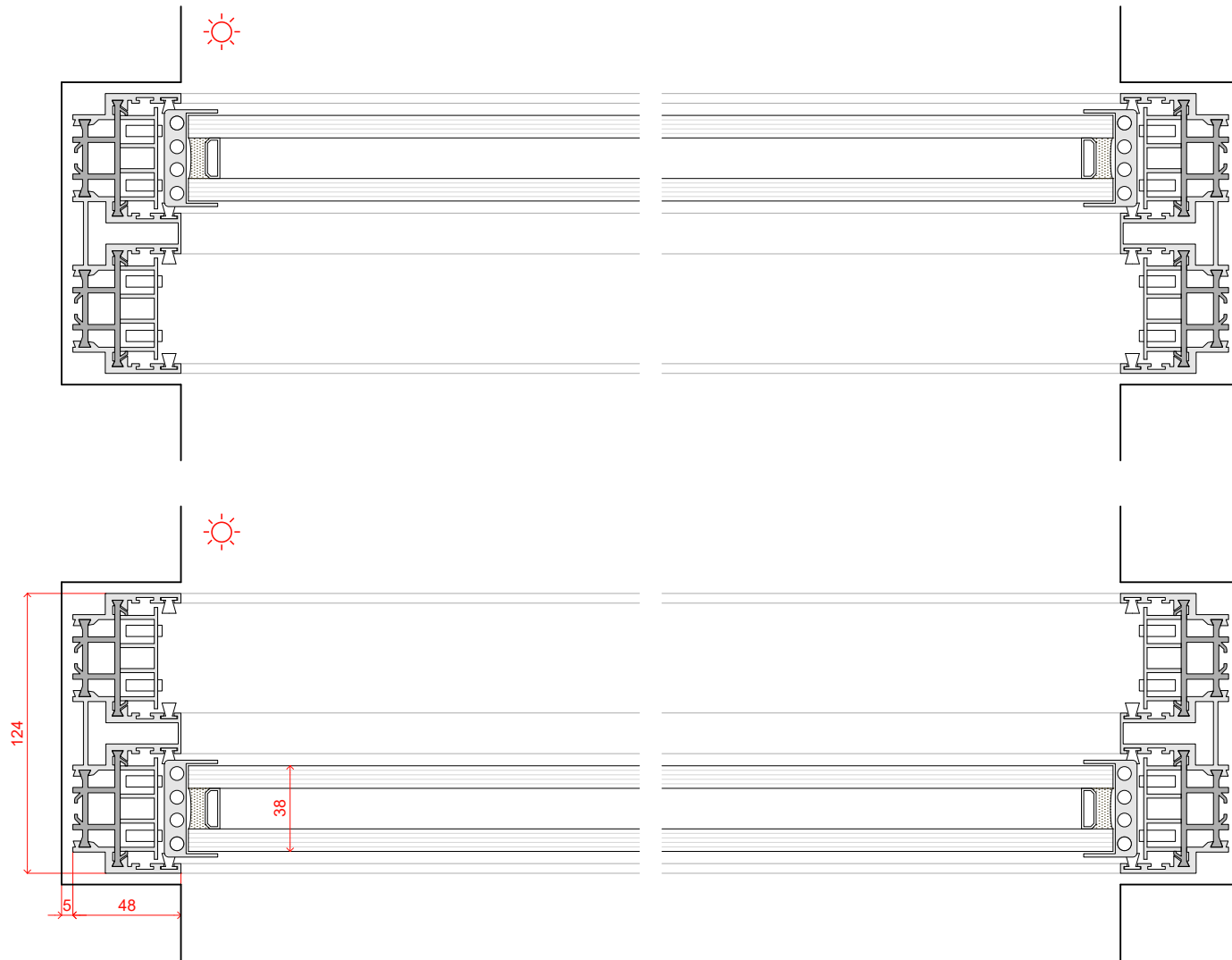
2.3.2 VERTICAL - BIRAIL

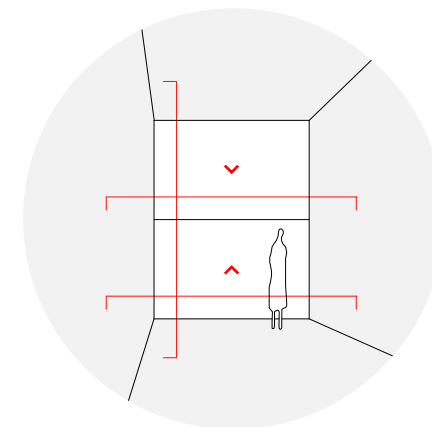
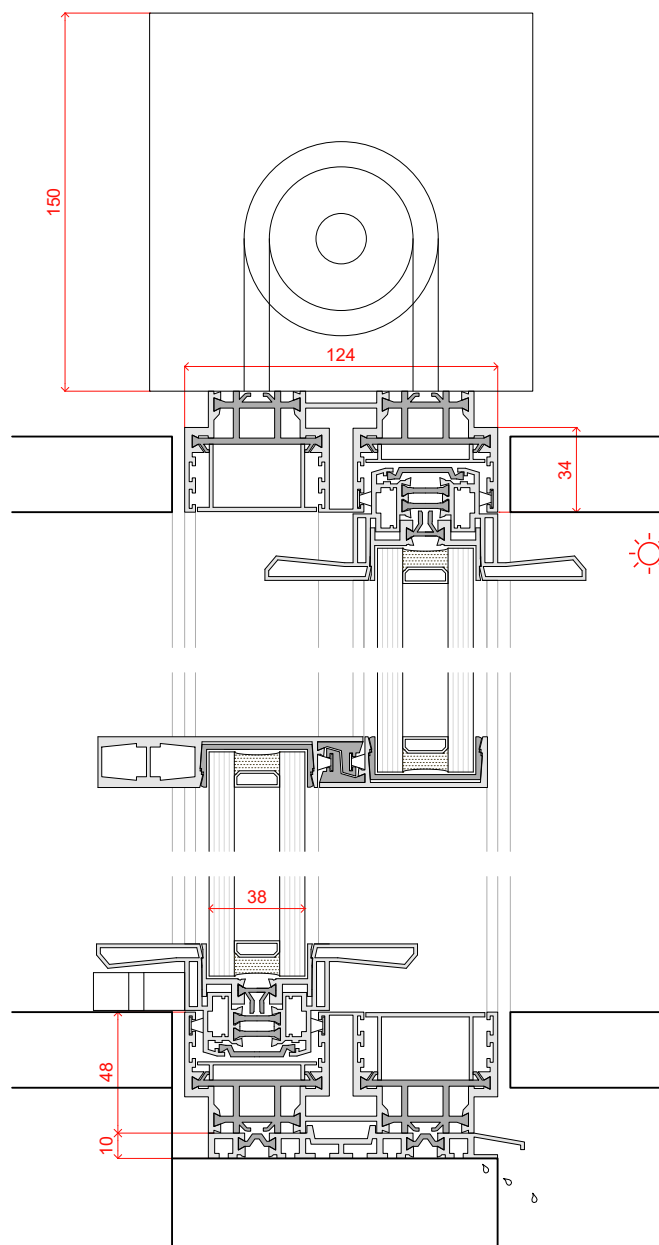




FIXED + SLIDING

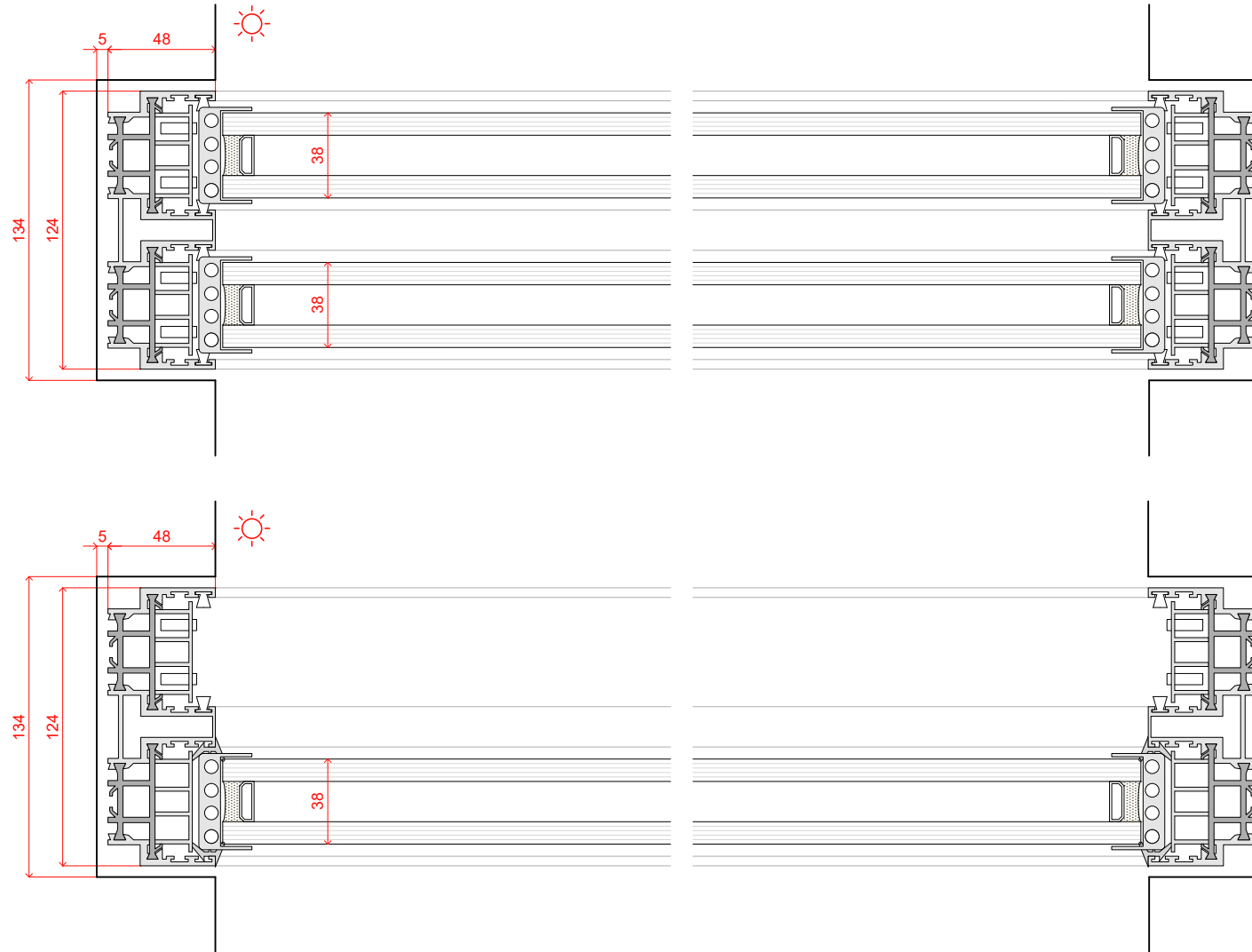
2.3.2 VERTICAL - BIRAIL

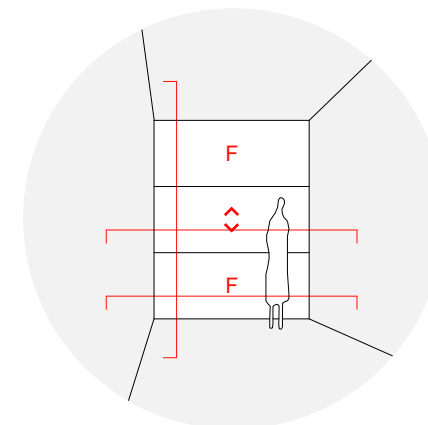
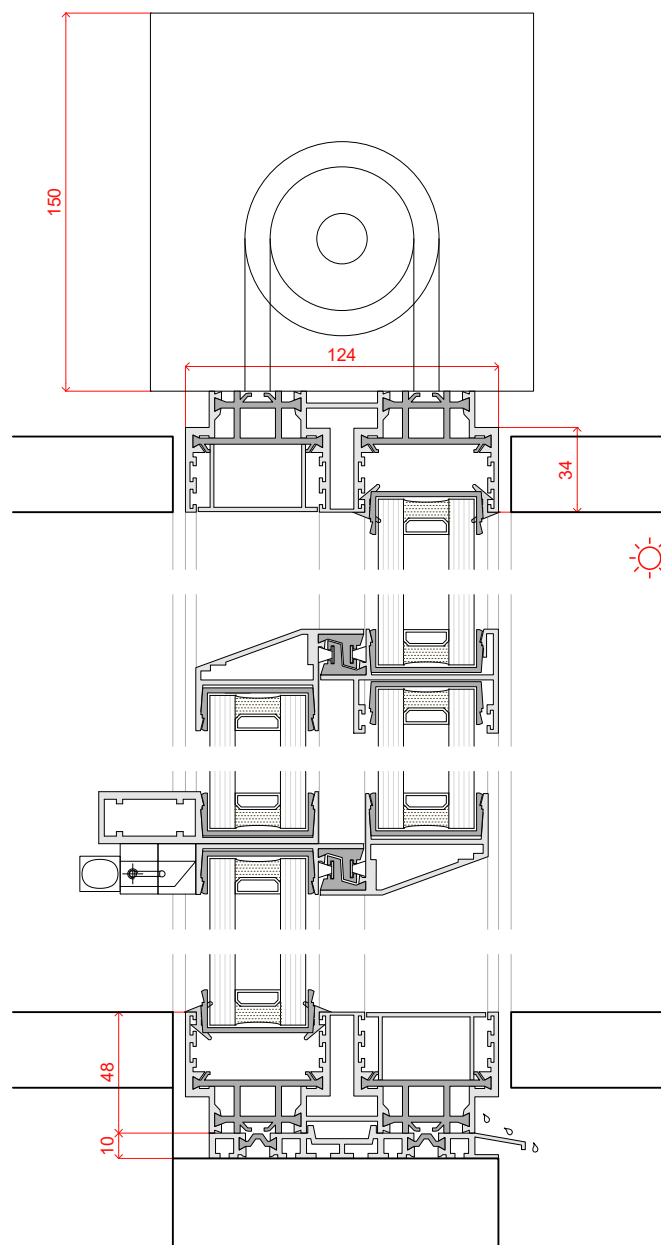




DOUBLE SLIDING

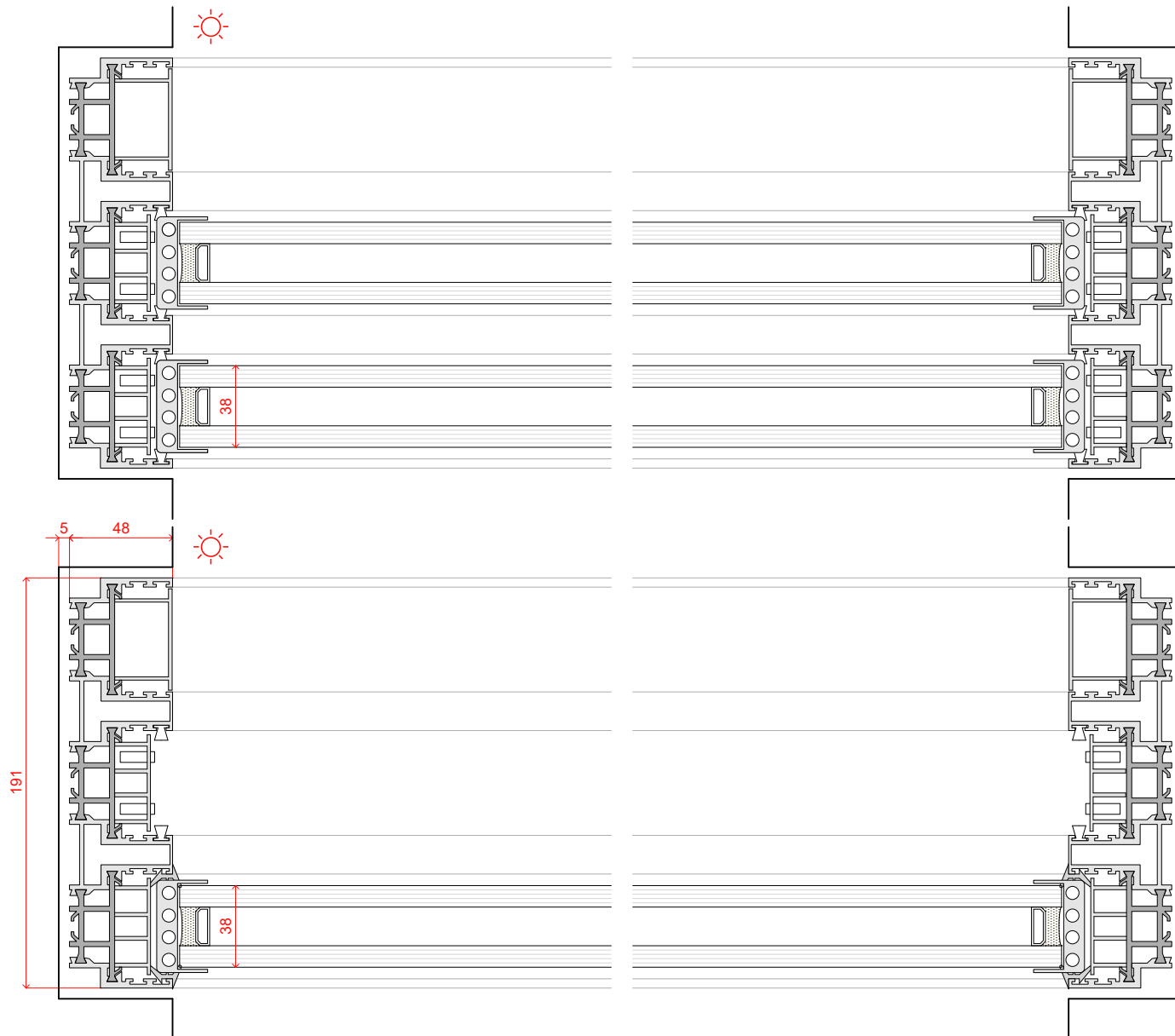
2.3.2 VERTICAL - BIRAIL

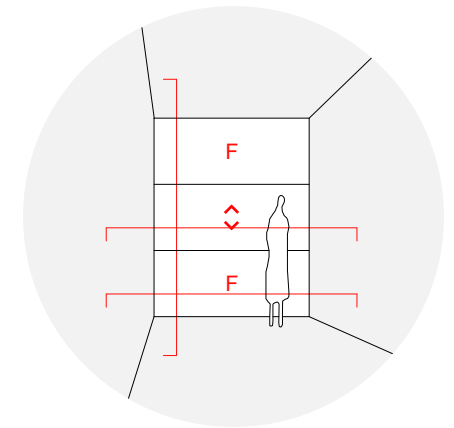
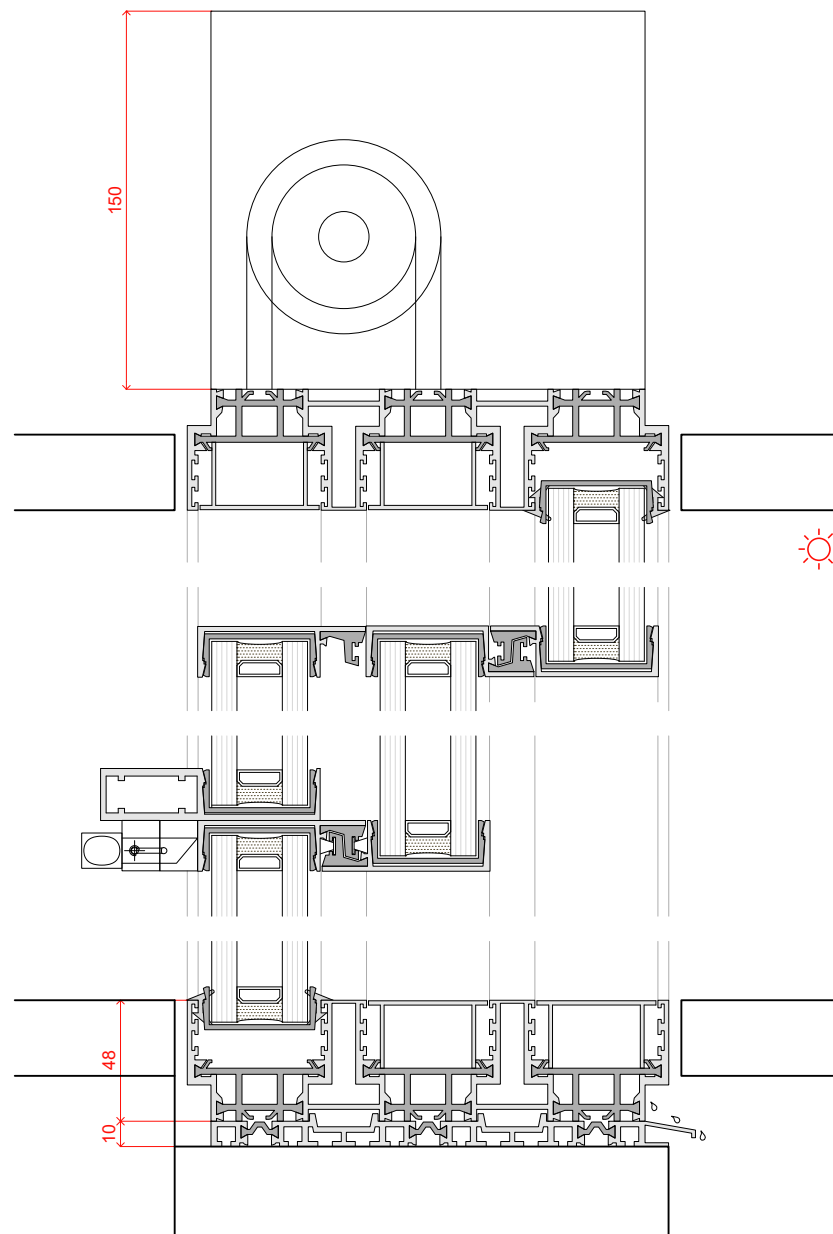




FIXED + SLIDING + FIXED

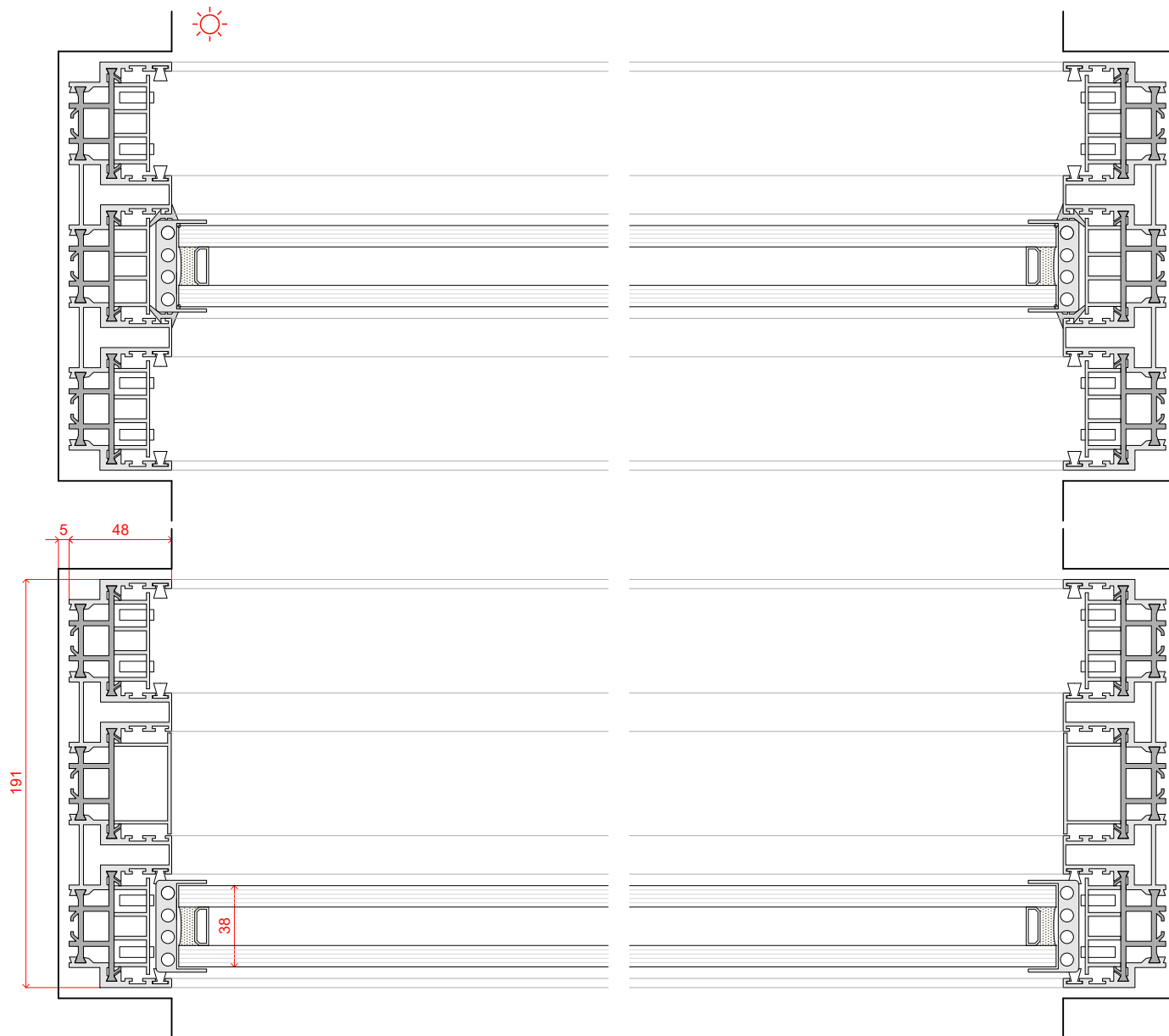
2.3.2 VERTICAL - TRIRAIL

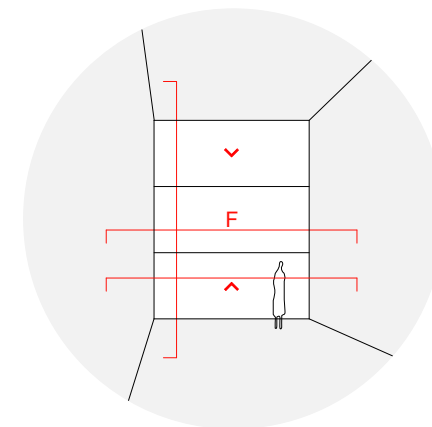
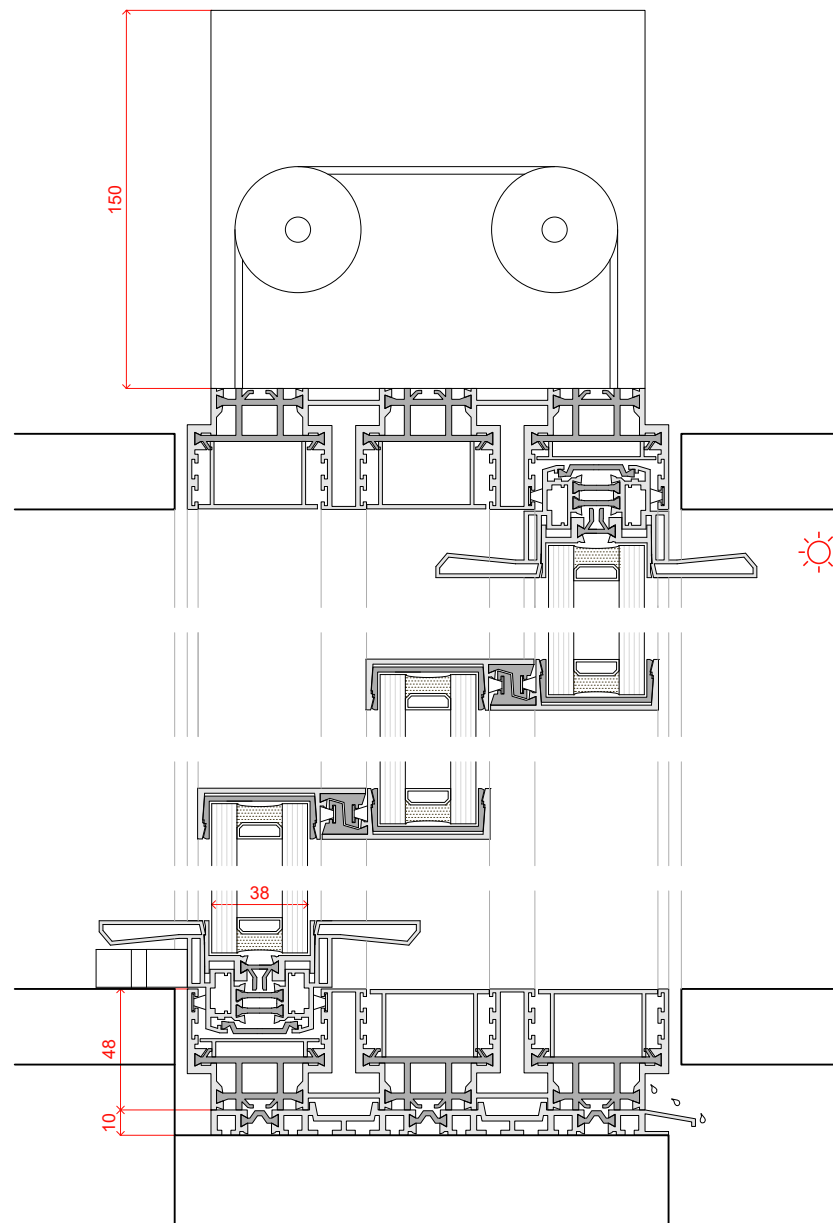




FIXED + SLIDING + FIXED

2.3.2 VERTICAL - TRIRAIL

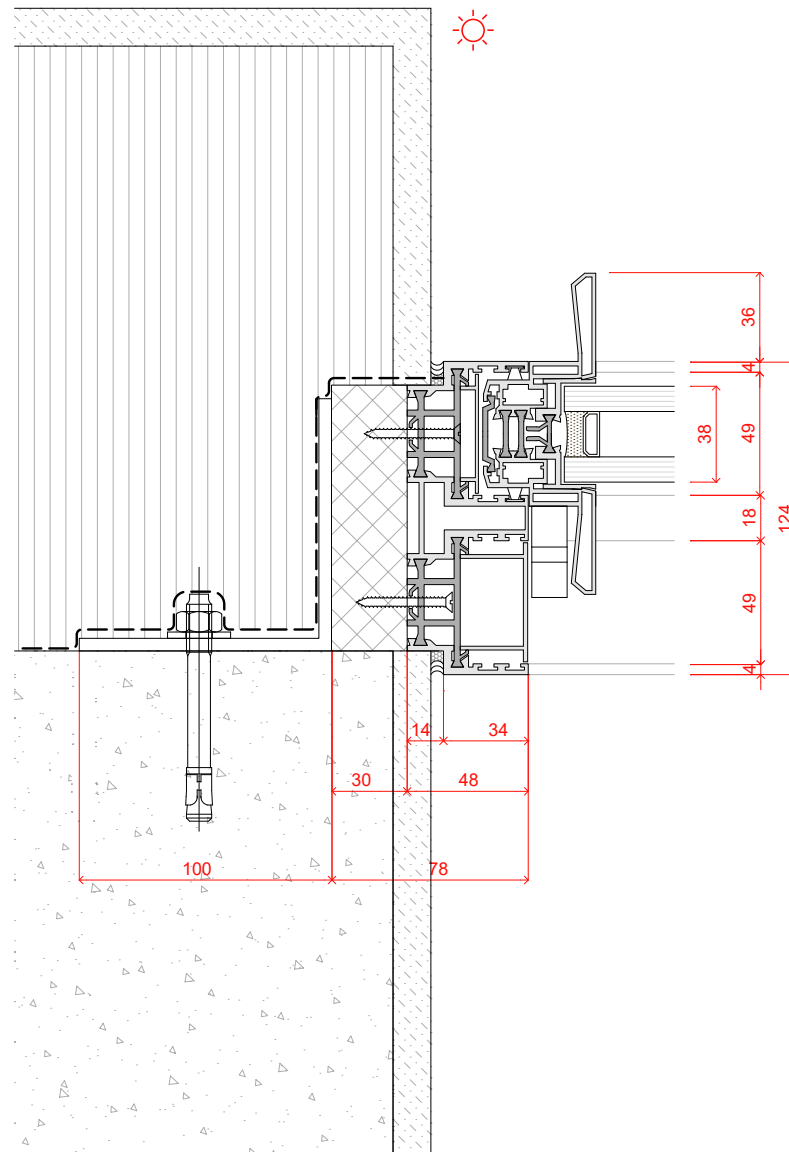


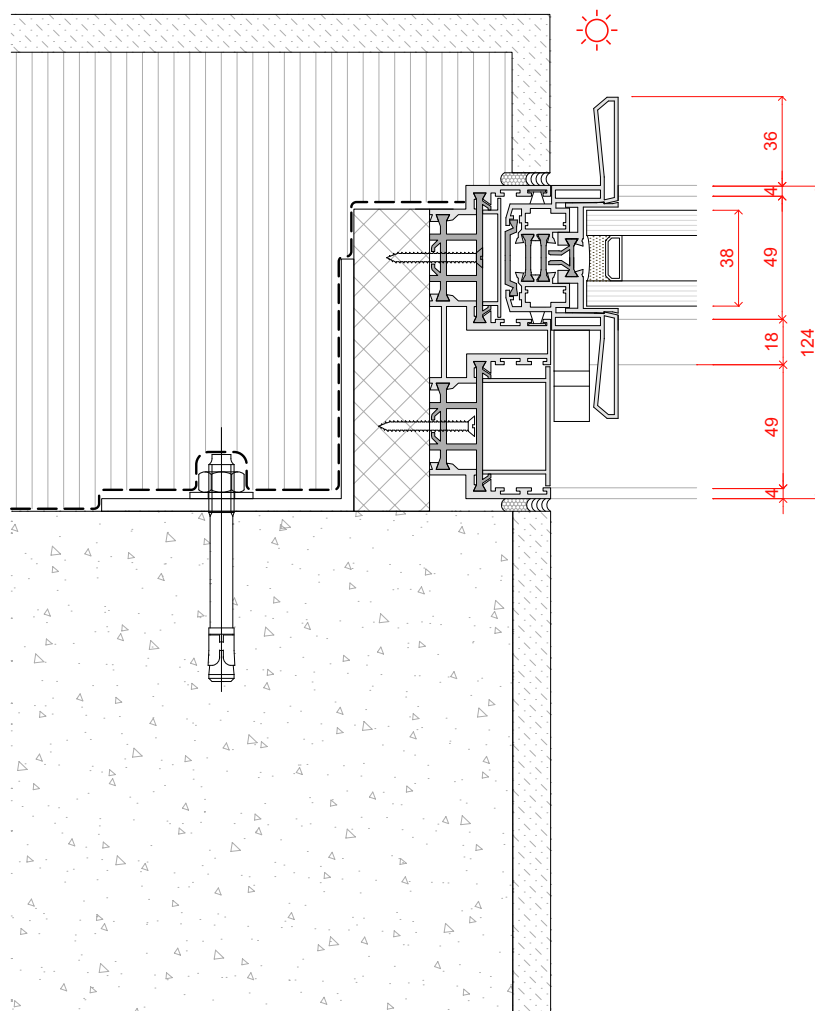


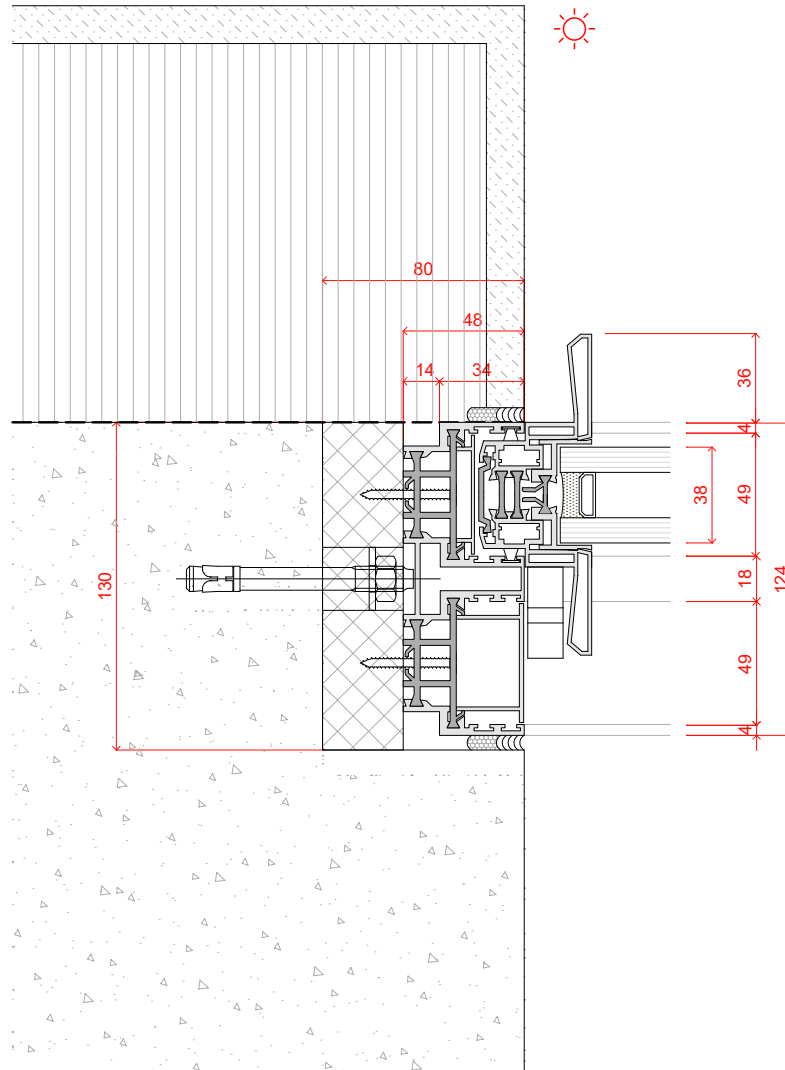
SLIDING + FIXED + SLIDING

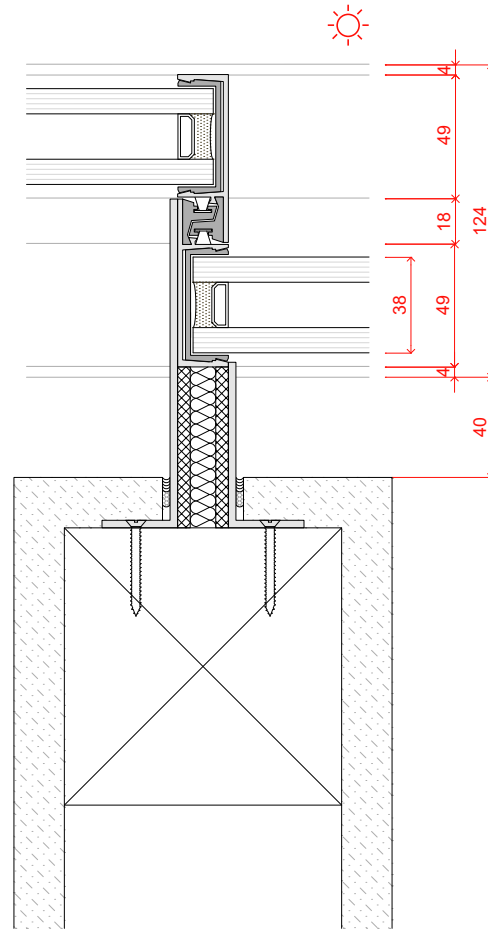
2.4 BUILDING CONNECTIONS

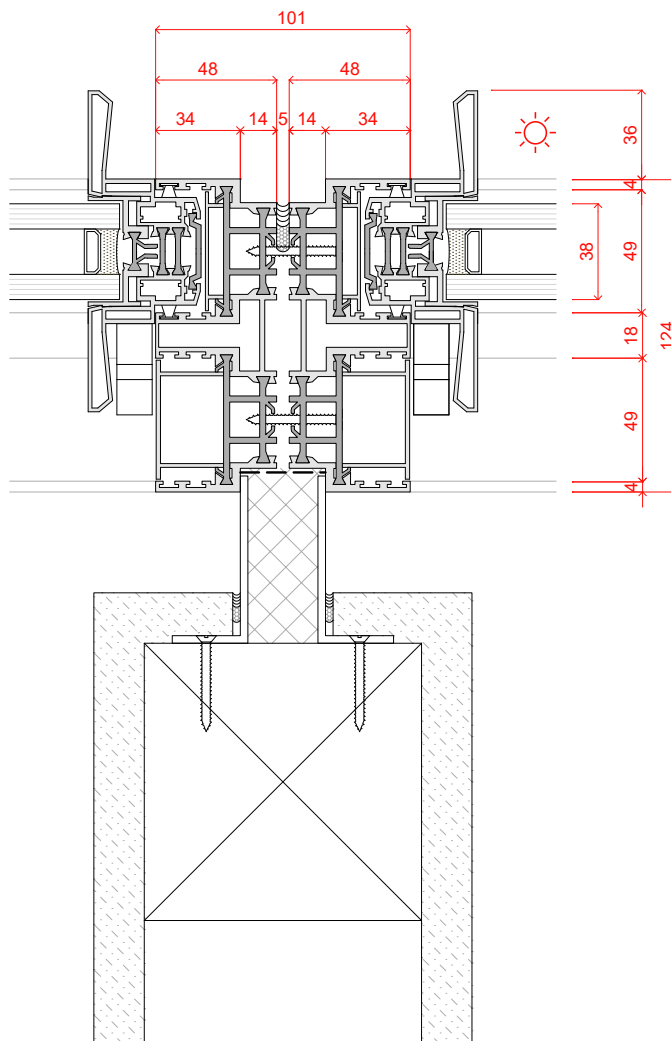
[A]

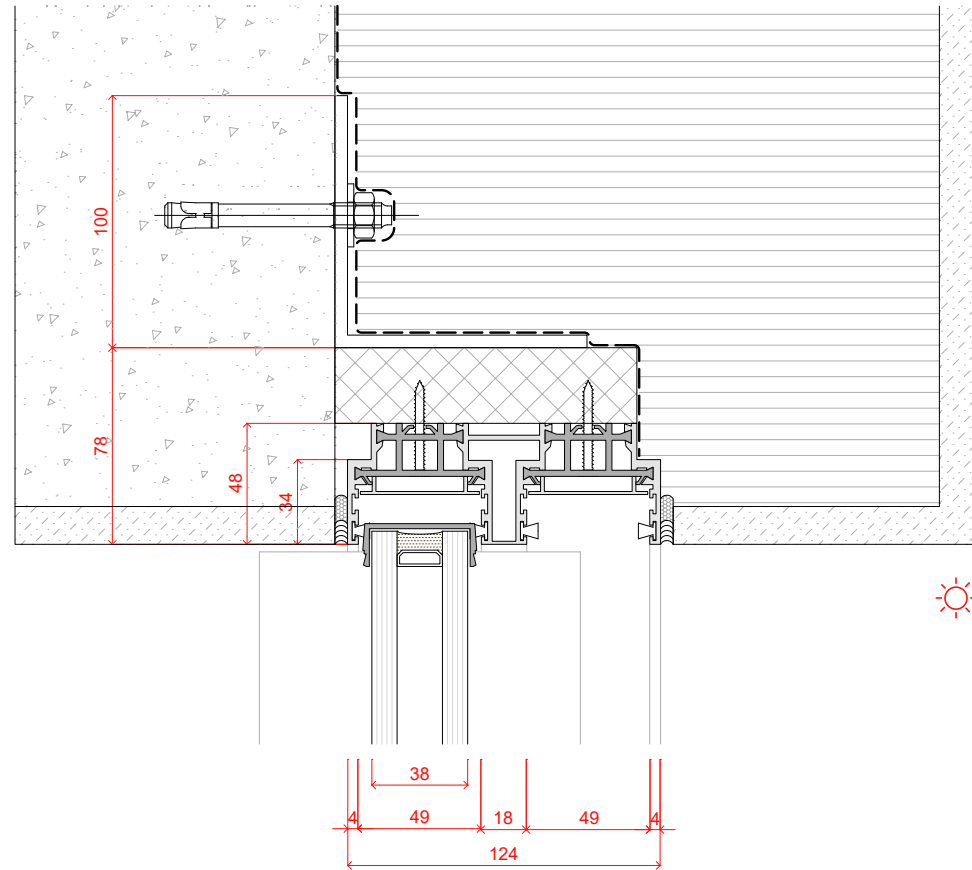


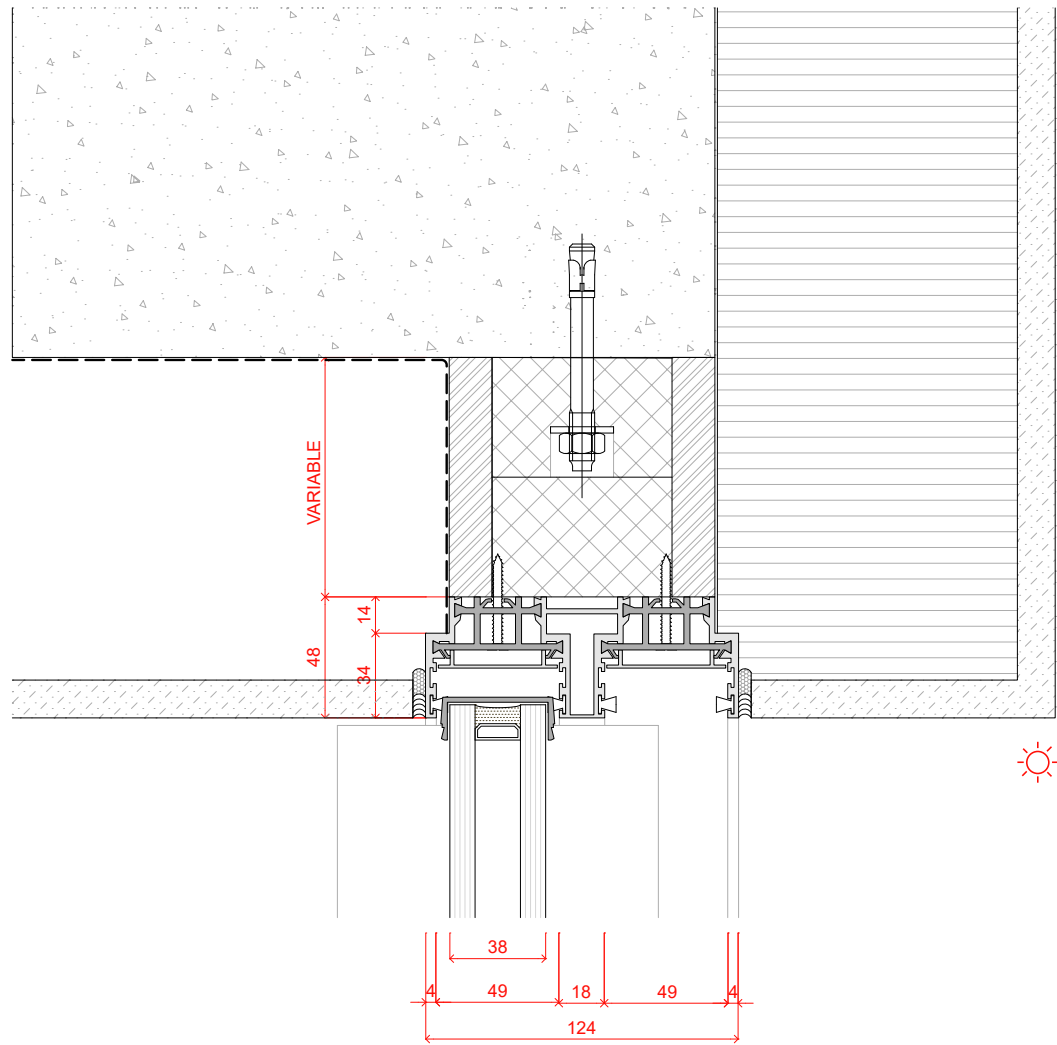


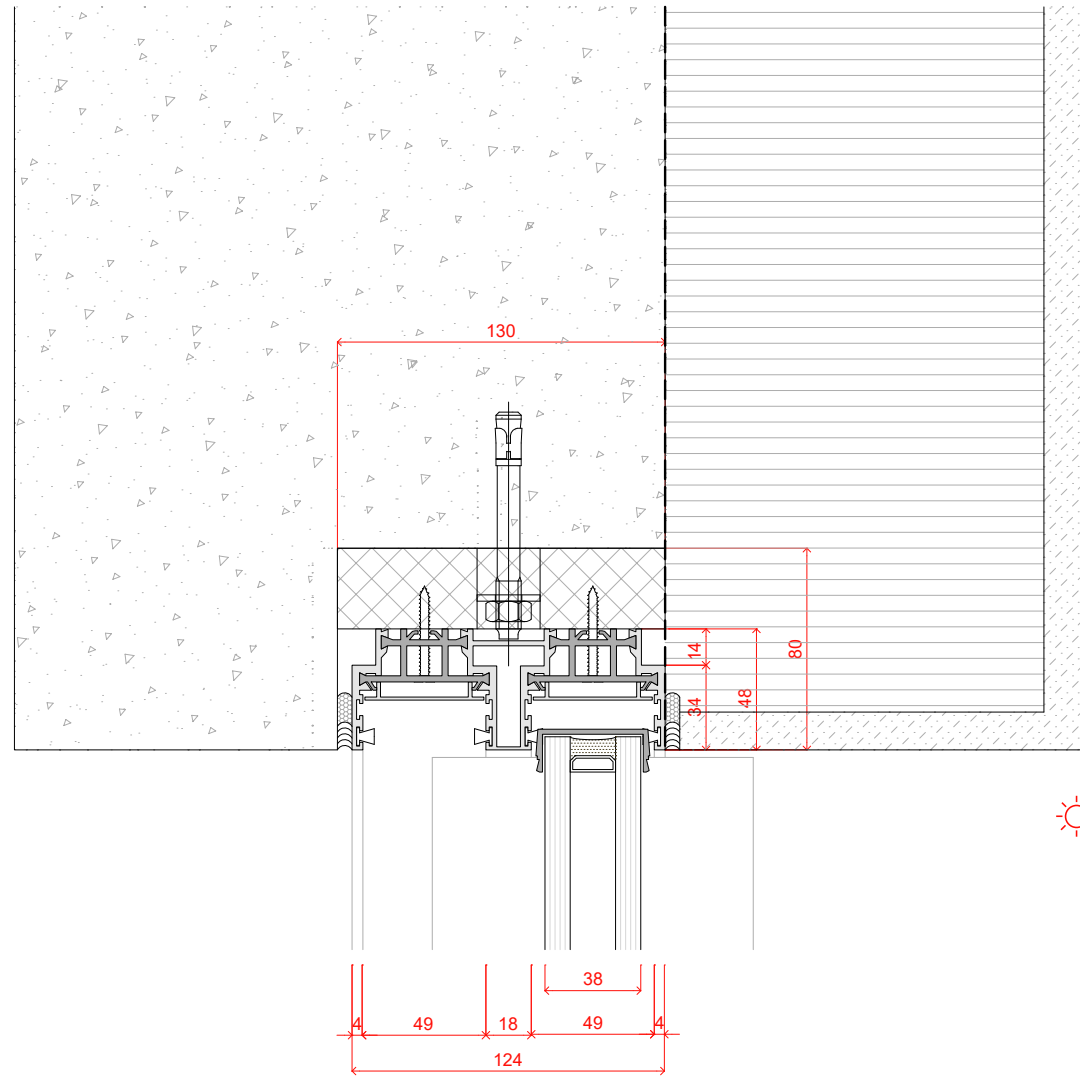


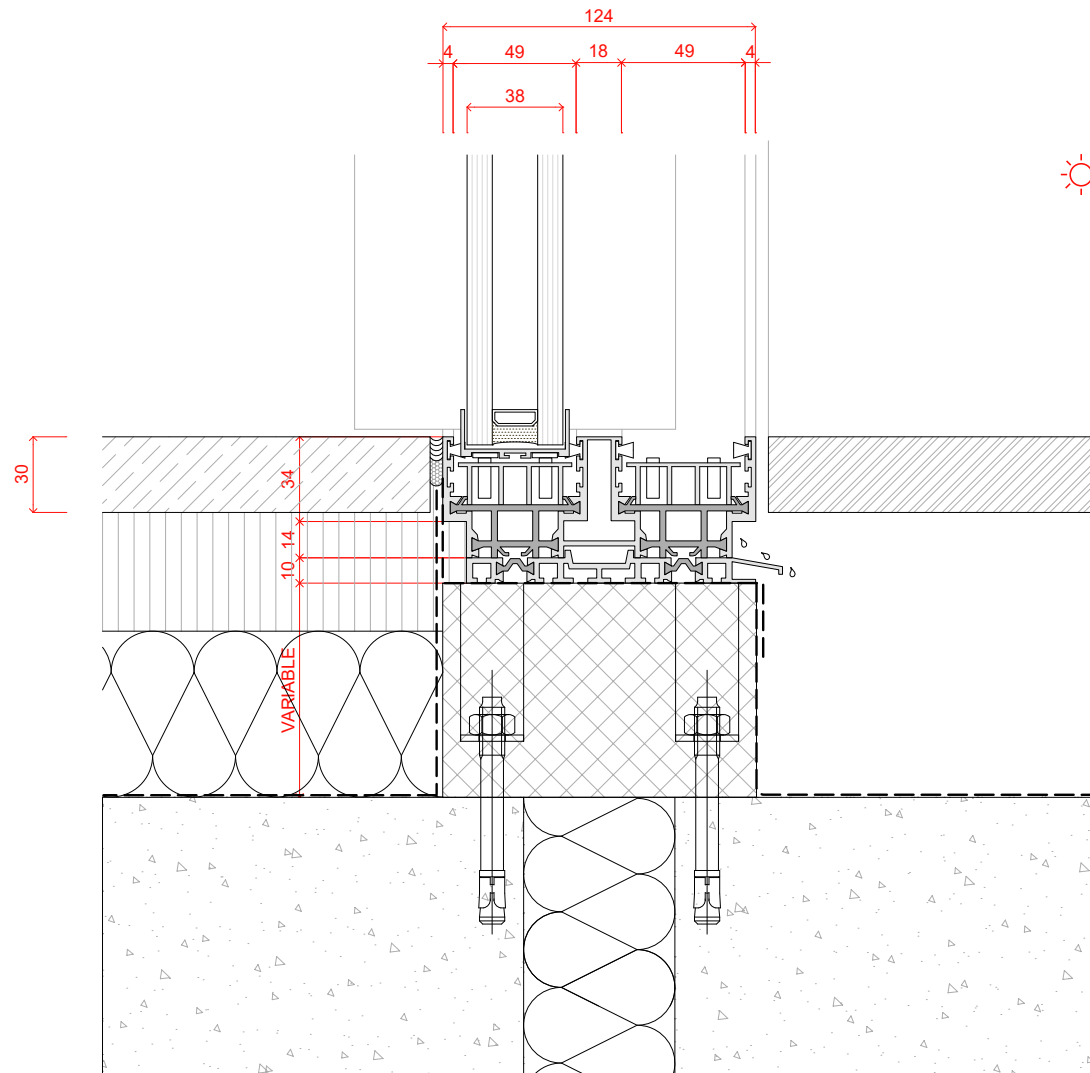


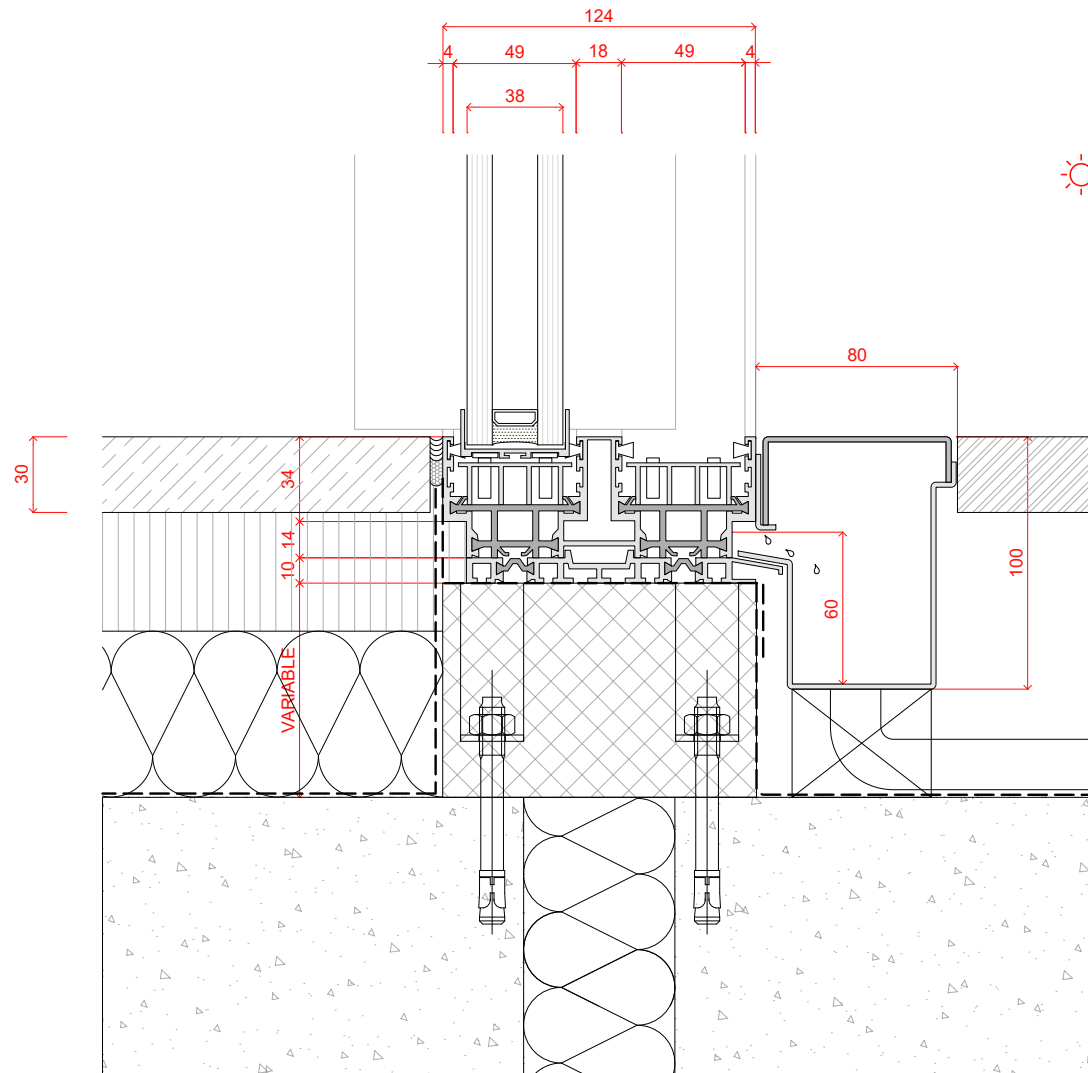


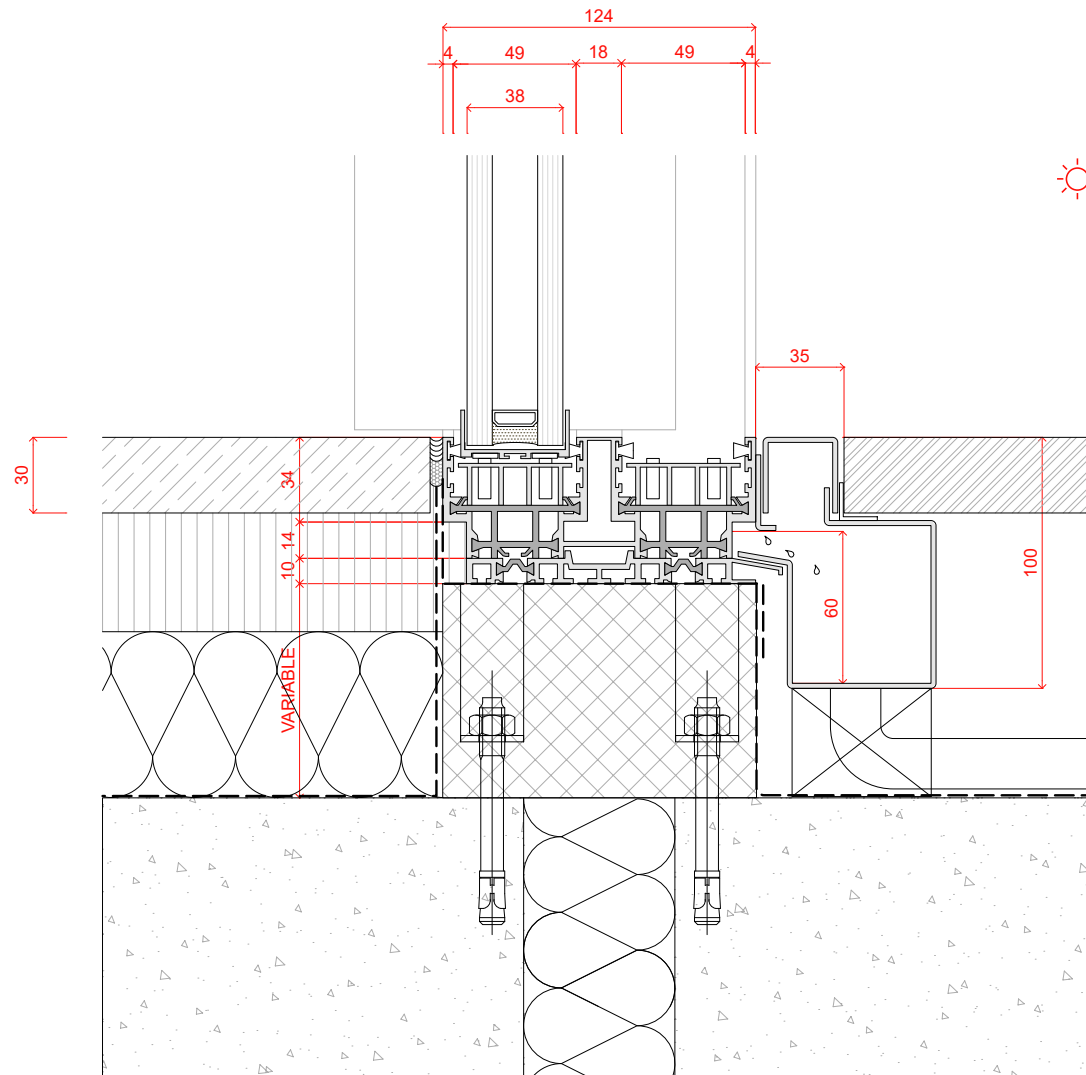








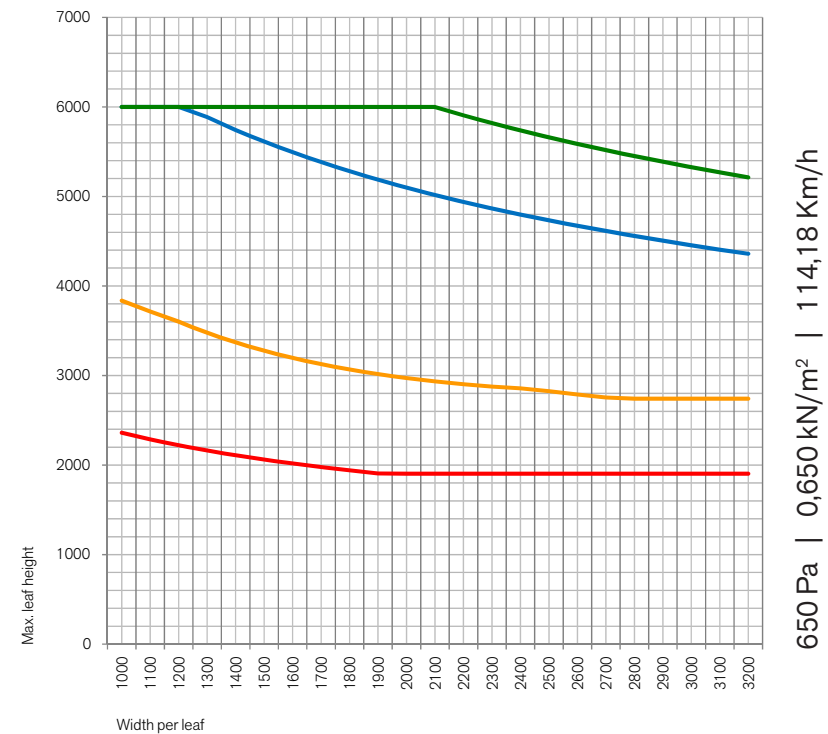
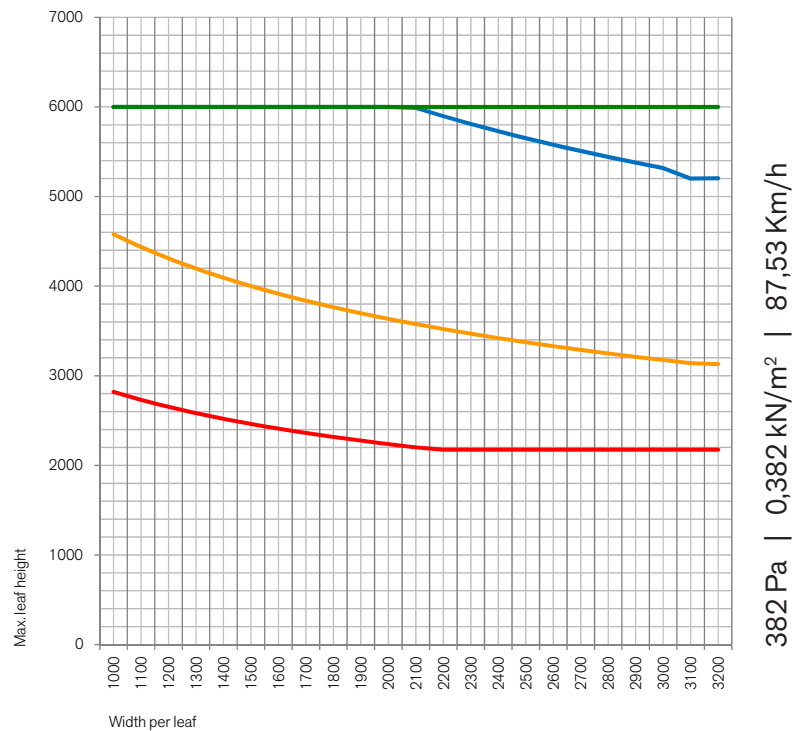




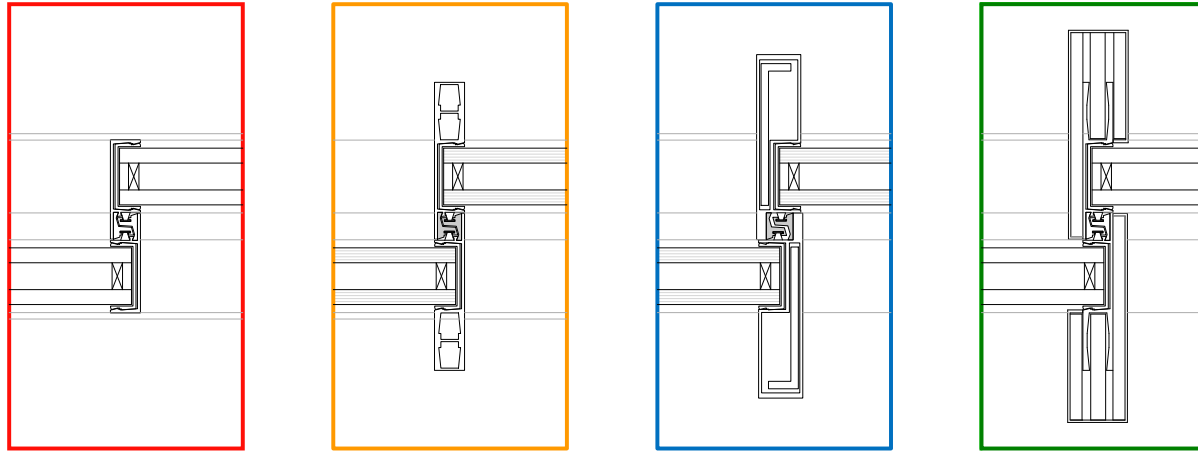
2.5 TECHNICAL SPECIFICATIONS

2.5 TECHNICAL SPECIFICATIONS

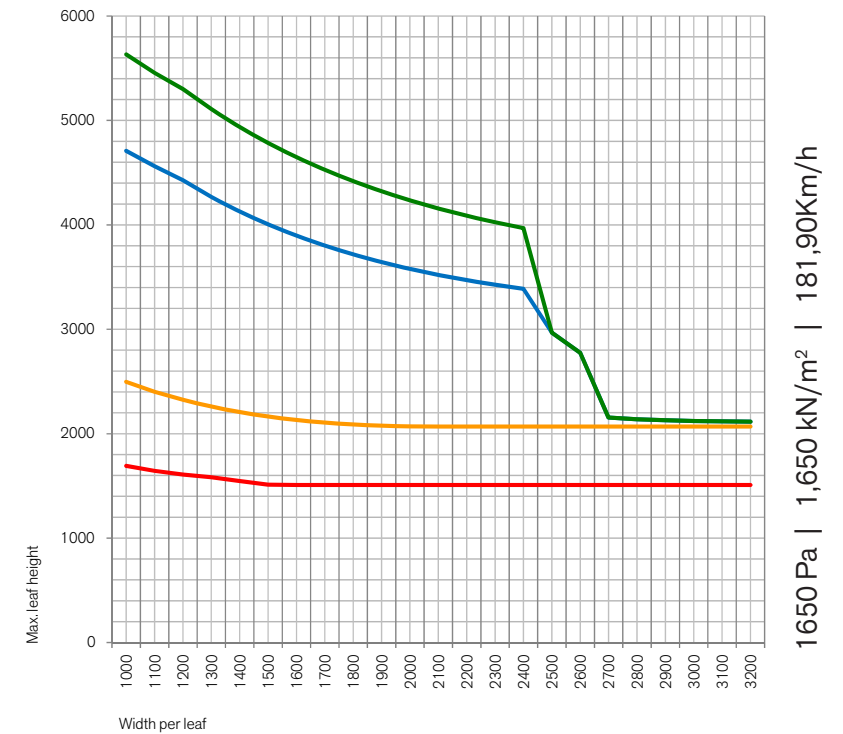
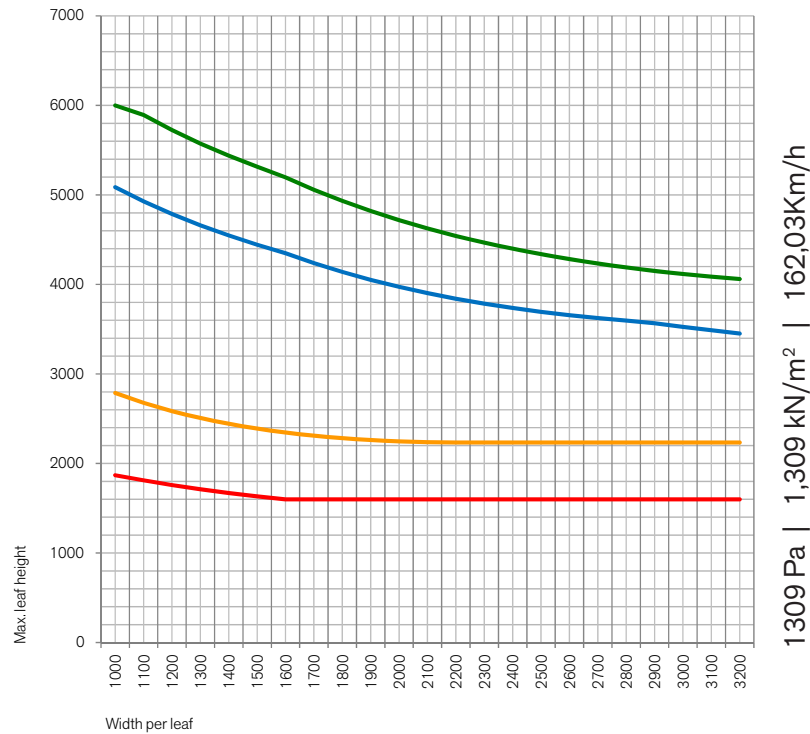
2.5.1 WIND LOAD DIAGRAMS



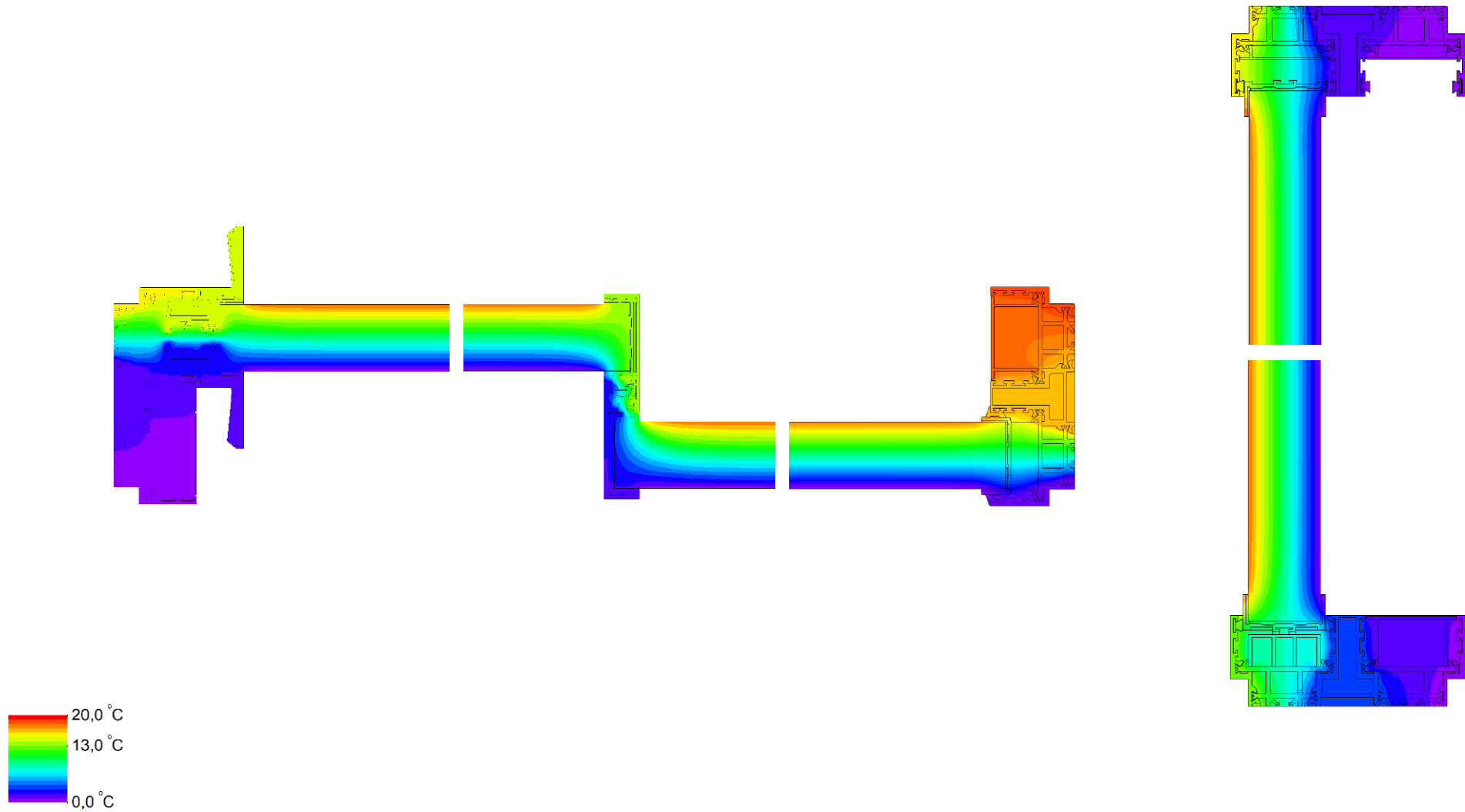
Glass:
1010 heat-strengthened



- **20N**
Normal
- **20R**
Reinforced central mullion
- **30RiL S.Steel**
Ultra-reinforced with L steel profile
- **40R3 S.Steel**
Ultra-reinforced with steel profiles



2.5.2 THERMAL PERFORMANCE



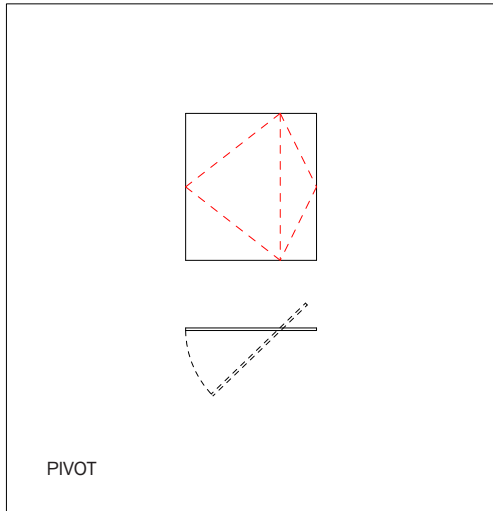


3. OPENING SYSTEM

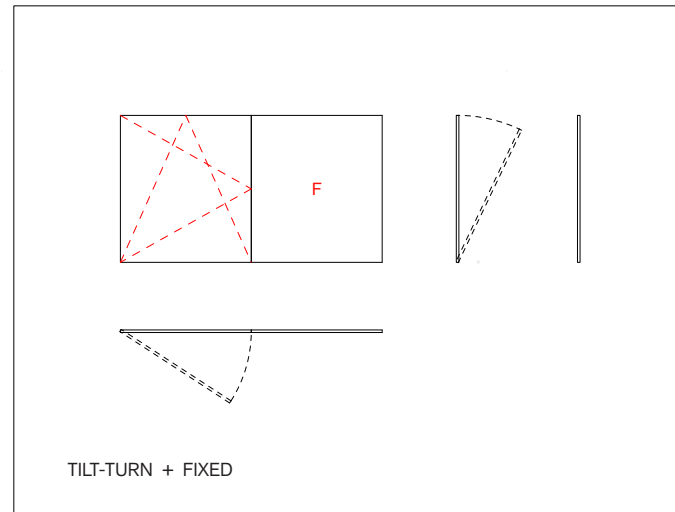
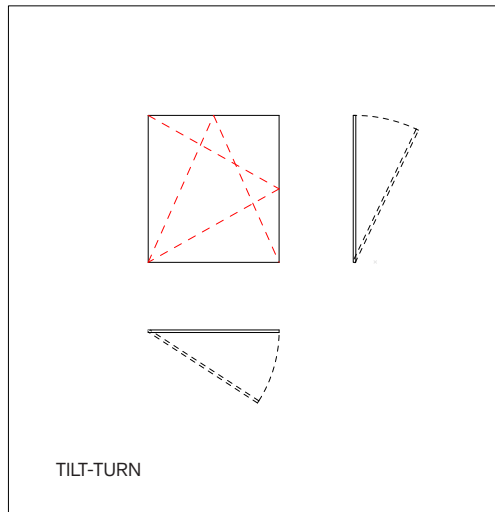


3.1 TYPOLOGIES

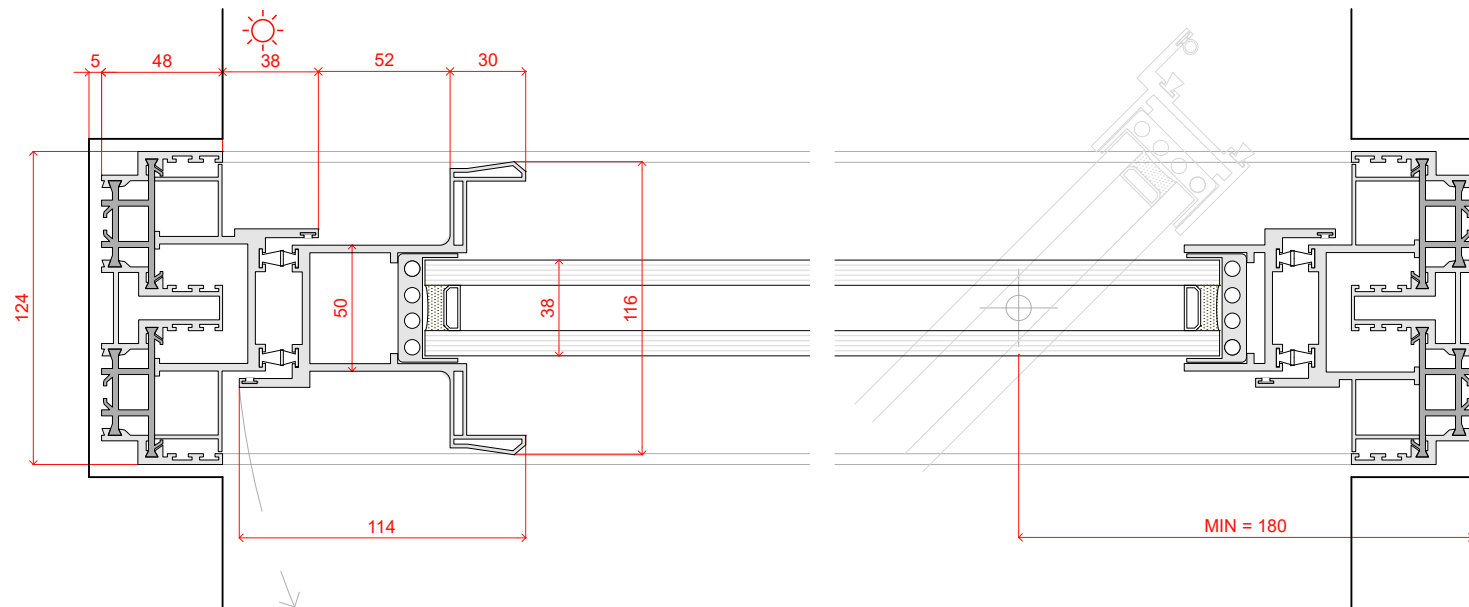
3.1.1 PIVOT

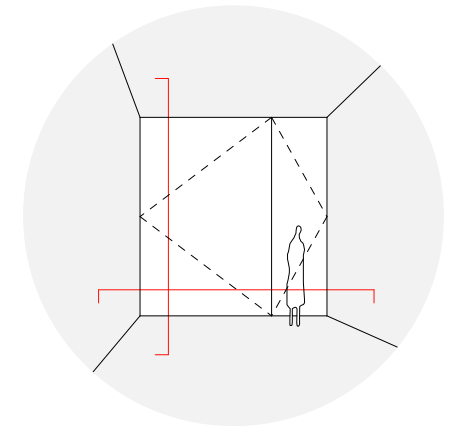
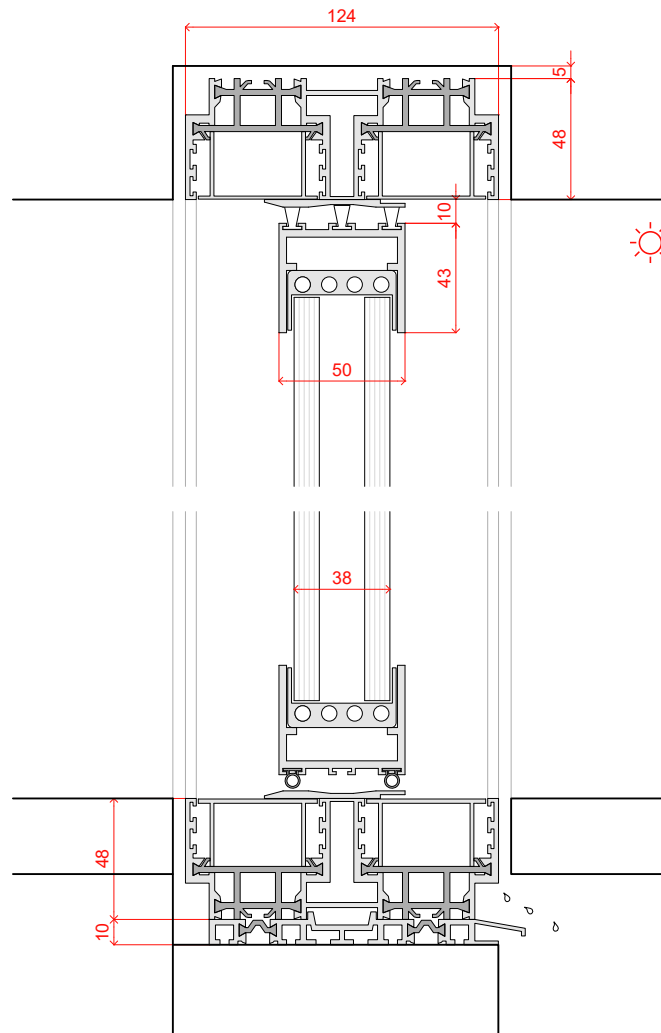


3.1.2 TILT-TURN



3.1.1 PIVOT

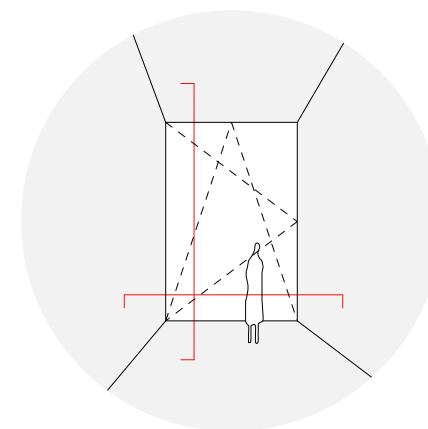
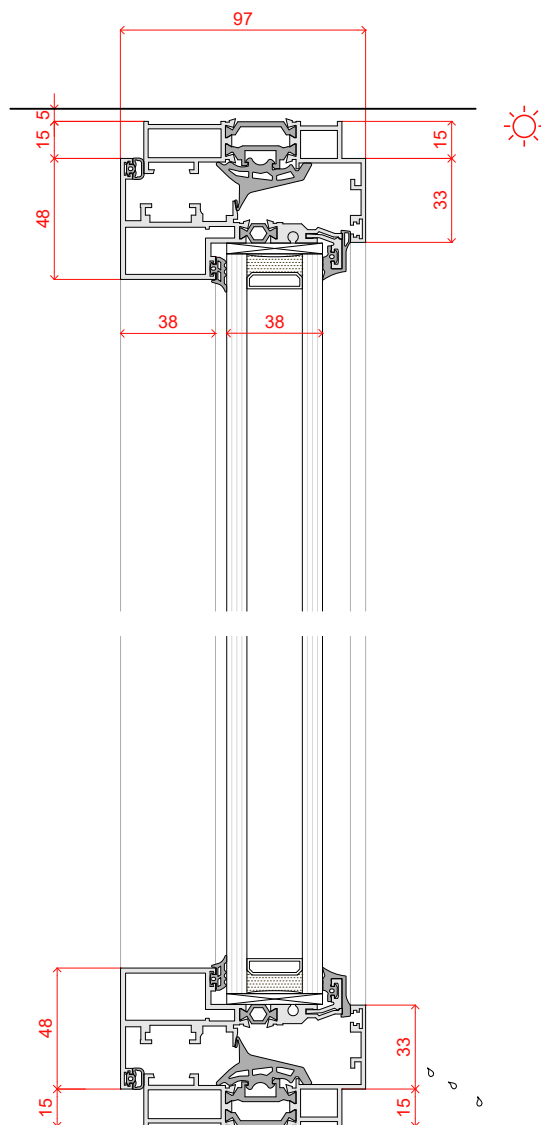




PIVOT

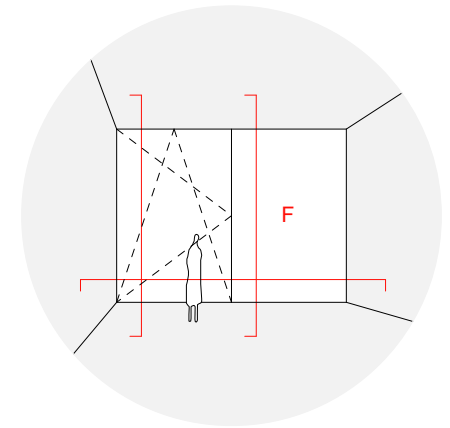
3.1.2 TILT-TURN



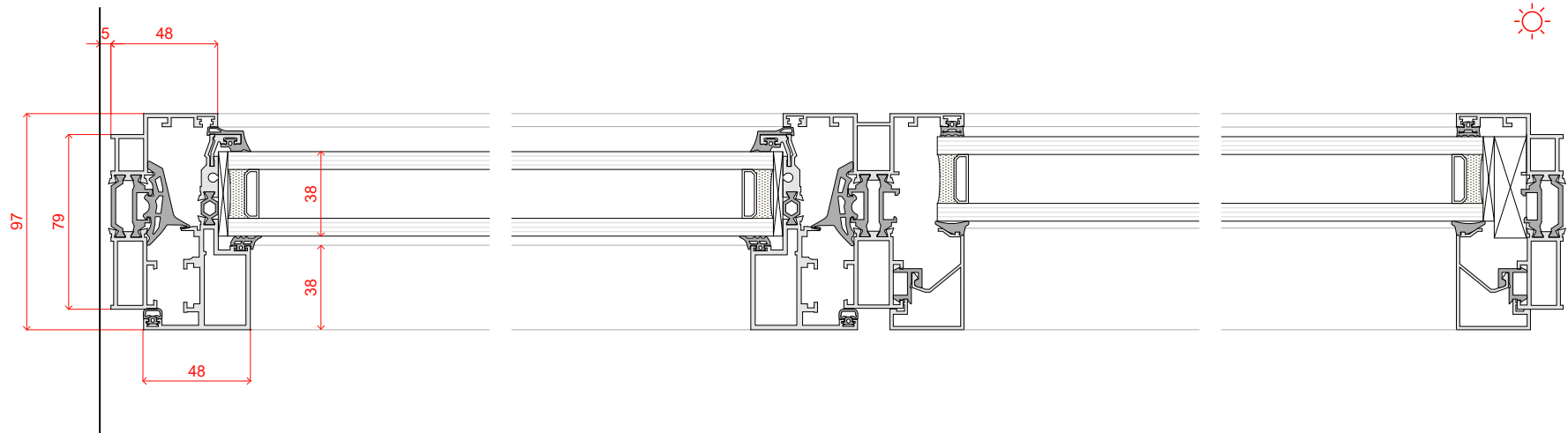


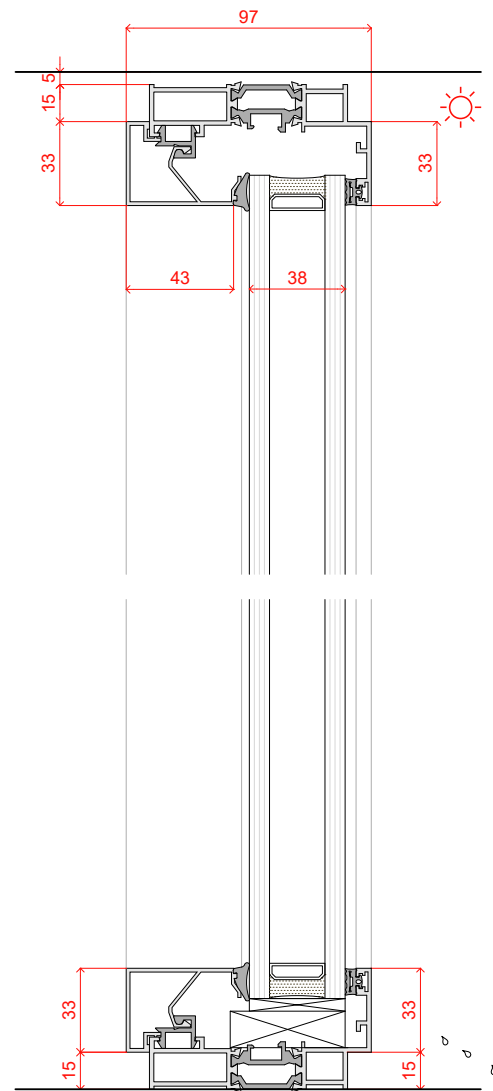
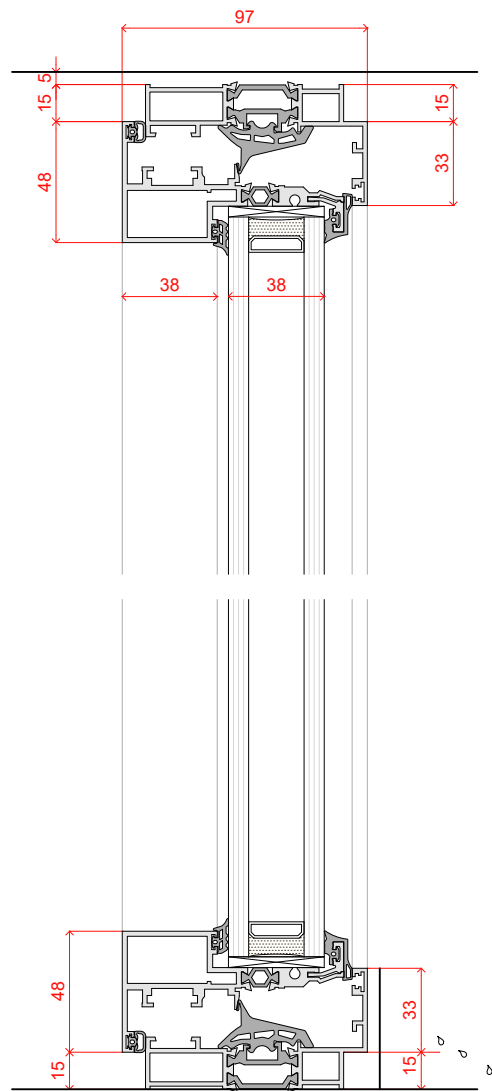
TILT-TURN

3.1.2 TILT-TURN



TILT-TURN + FIXED





UNLIMITED PERSPECTIVE SA

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