

ALC 9200 SYSTEM



SIMPLY PROFESSIONAL

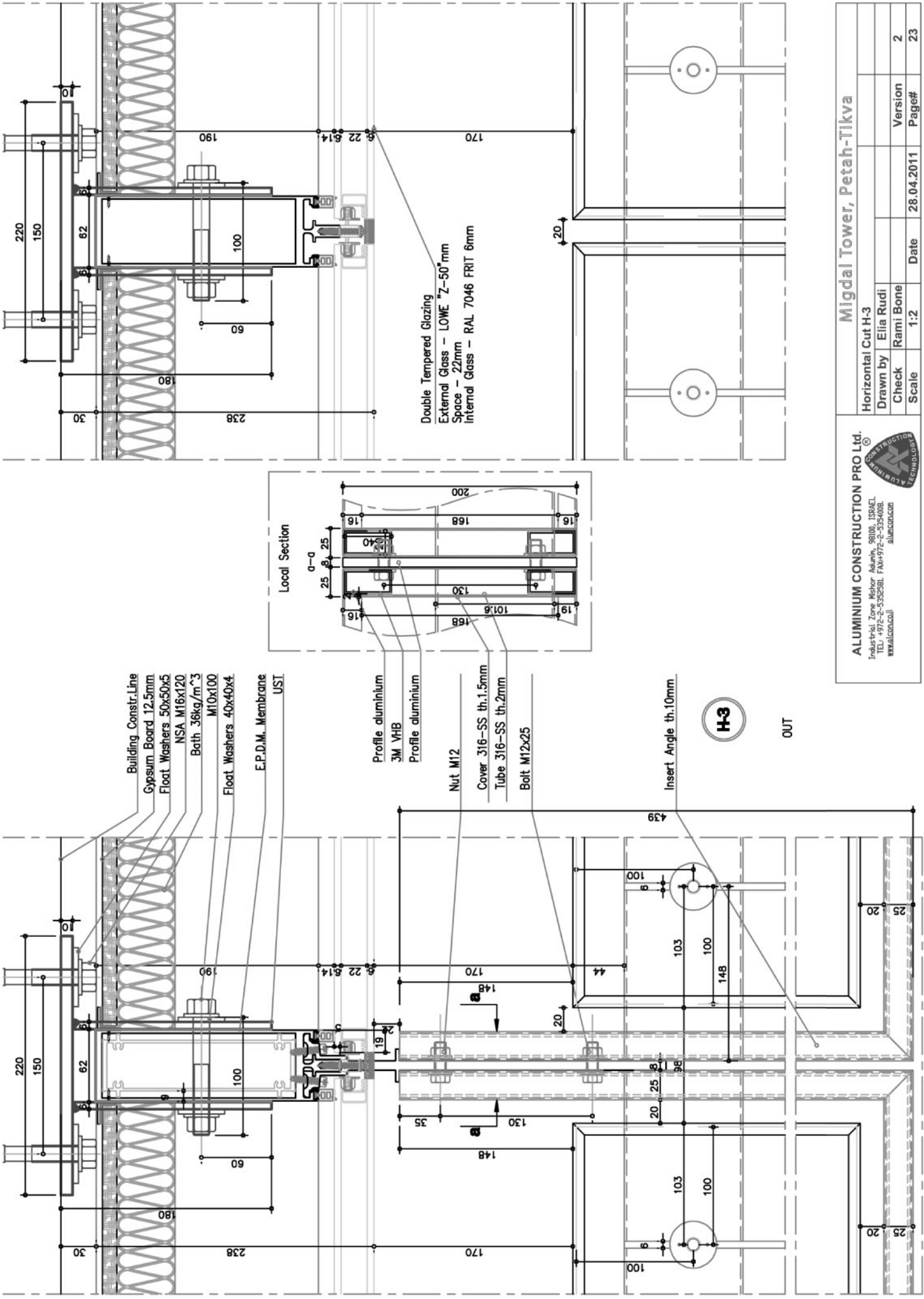


Aluminum Construction



Aluminum Constructions Technology

Aluminum Construction Ltd. is Israel's leading curtain wall engineering and manufacturer for tall buildings (towers). Aluminum Construction Ltd. was founded in 1987 and boasts 2 plants - one in Israel and the other in Europe. The Company has 200 employees including engineers, production workers, installation workers, quality control technicians, etc. Aluminum Construction Ltd. develops and designs curtain wall systems and is renowned for its quality and professionalism both in Israel and in Europe. Aluminum Construction Ltd. tests the curtain wall systems it designs in a laboratory located on its premises and deemed to be one of the world's three leading laboratories testing curtain wall systems. Aluminum Construction Ltd. tailors its curtain walls to Israeli, European and American standards and adheres to some of the world's most stringent quality control guidelines. Aluminum Construction Ltd. installs its curtain walls with the help of its team of skilled employees. Aluminum Construction Ltd. provides service and oversees its projects through its subsidiary, "Aluminum Constructions International". Aluminum Construction Ltd. invites you to join the family of customers, enjoying its products and schedule a visit to the plant at any time.



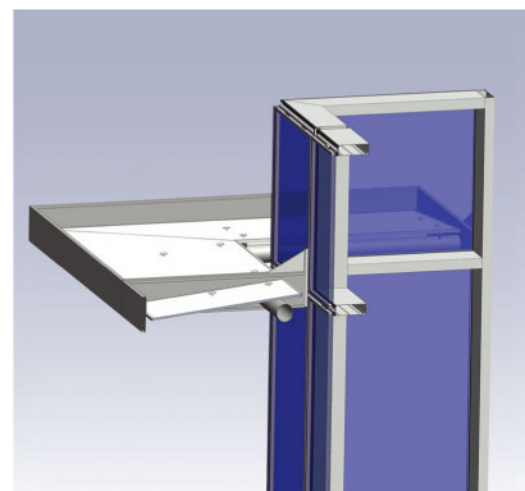
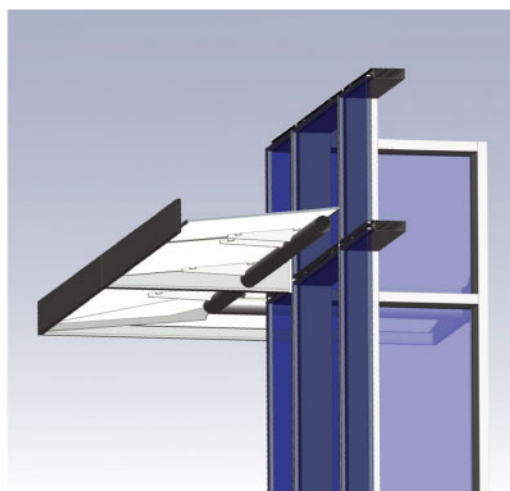
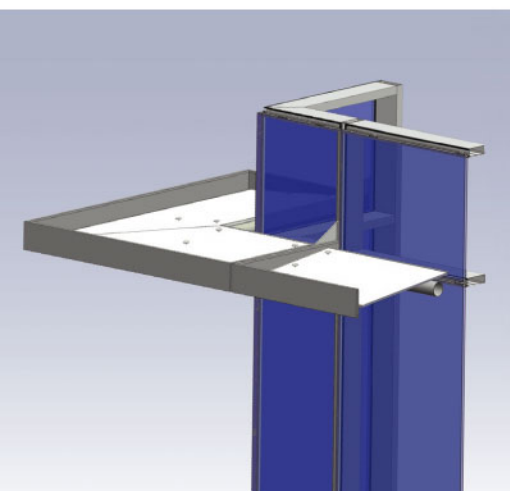
Migdal Tower, Petah-Tikva			
Horizontal Cut H-3			
Drawn by	Elia Rudi	Version	2
Check	Rami Bone	Date	28.04.2011
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ALC 9200 - SHADED CURTAIN WALL

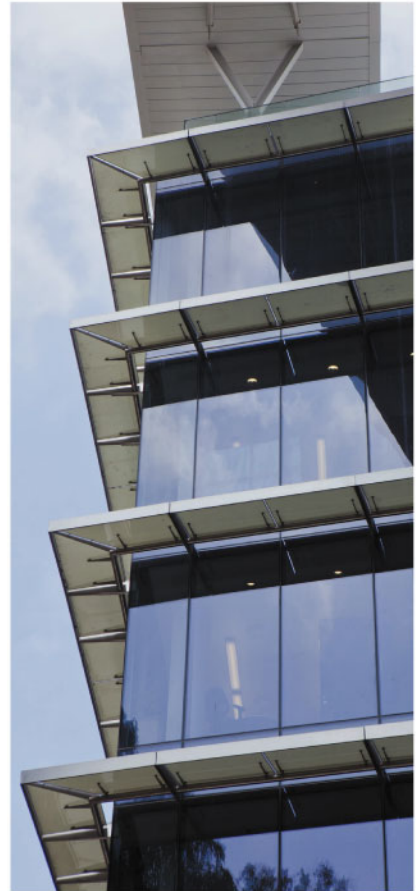
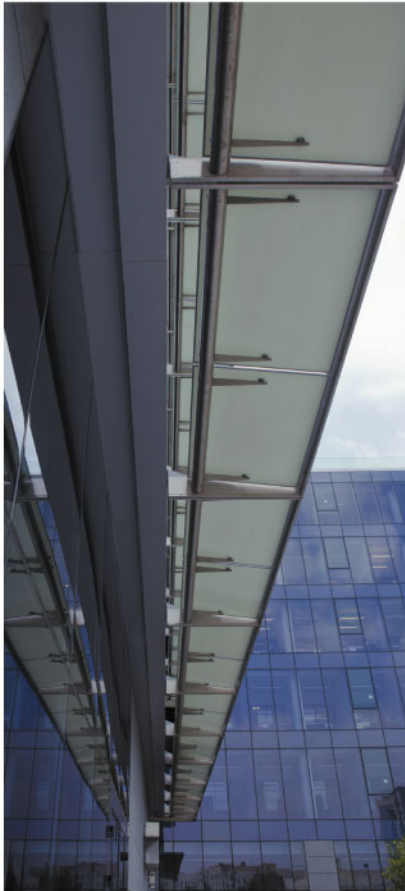
Structural Glass Curtain Wall & Sun Shades

- Comfortable Life Behind Glass
- Saving Energy
- High Benefit



- The **ALC 9200** system was developed by Aluminum construction ISRAEL, one of the world's leading companies in the field of curtain wall engineering.
- The **ALC 9200** system has been designed and tested in the company's laboratories in Israel, and has been proven to conform to American and European standards for curtain wall.
- The **ALC 9200** system allows using a large range of shades.
- The **ALC 9200** system can have different types of glazing, such as glass, aluminum panels, granite, wood and more.
- The **ALC 9200** system can be constructed by a number of different types of metal such as aluminum, stainless steel 316L and more.
- The **ALC 9200** system is glazed structurally so the external surface area is smooth and the spaces between the modules are filled with a sealing compound.

ALC 9200 - To Live in Harmony with Nature









Shading

The **ALC 9200** system is the ultimate solution that enables comfortable life behind GLASS:

- The shading stop 80% of the direct sun radiation before the sun radiation arrived of the GLASS wall.
- The shading prevent dazzle inside the building.
- The shading also reduce the heat load in 40%.
- Huge energy savings.
- Save of object, furniturs etc against UV radiation.



Shadow Planning and Engineering

Aluminum construction has the ability to calculate the heat load, in every façade and tell how effective the shading is. After we know the efficiency we calculated the energy reduction and the cost refund.

Computerized Model of Thermal Energy

Glazing

- Solarban 50
- LowE + AIR, LT 0.50, SC 0.36, RefIn 12%, RefOut 11%

Thermic Mass

- Wall
- Floor-ceiling

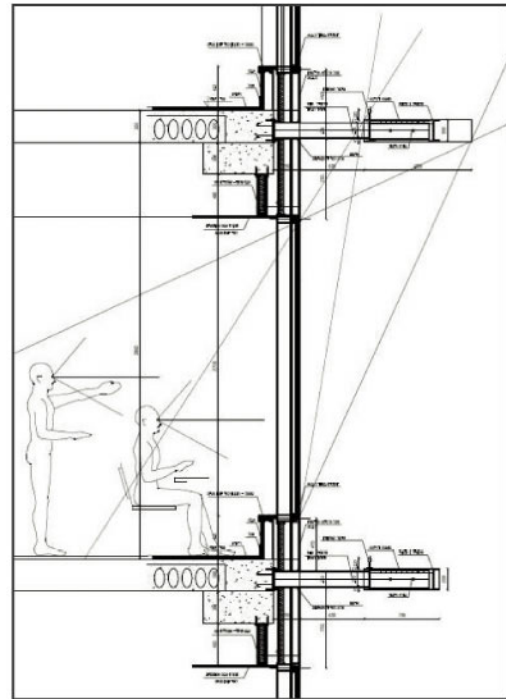
Internal Energy Sources

- 350 persons per floor
- Artificial Illumination
- Electronic equipment
- Hours of usage

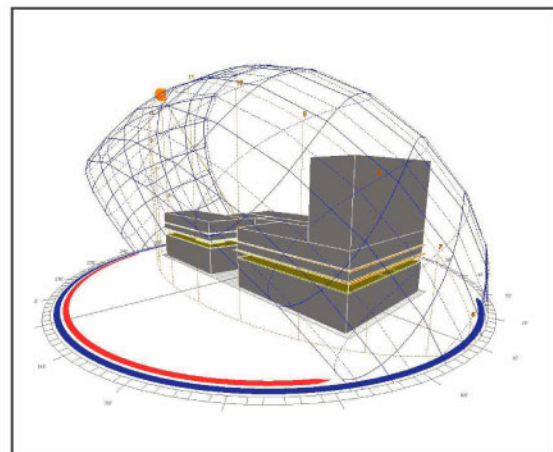
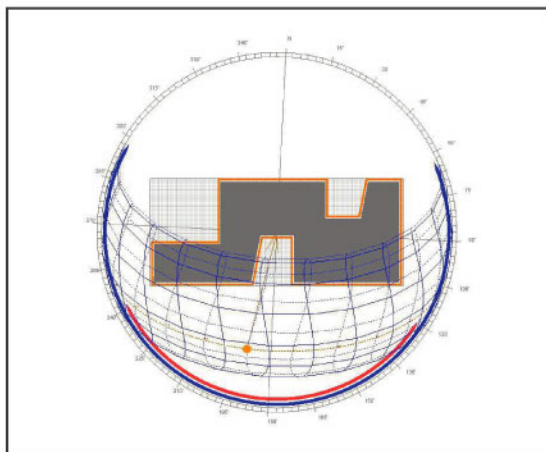
Aircondition + Ventilation

- Fresh air 2.5 cm/H + 0.5 cm/H
- Cooling temperature 23°C, heating temperature 21°C

Shading Geometry



3 Dimensional Climate Model + Sun Orbit Course

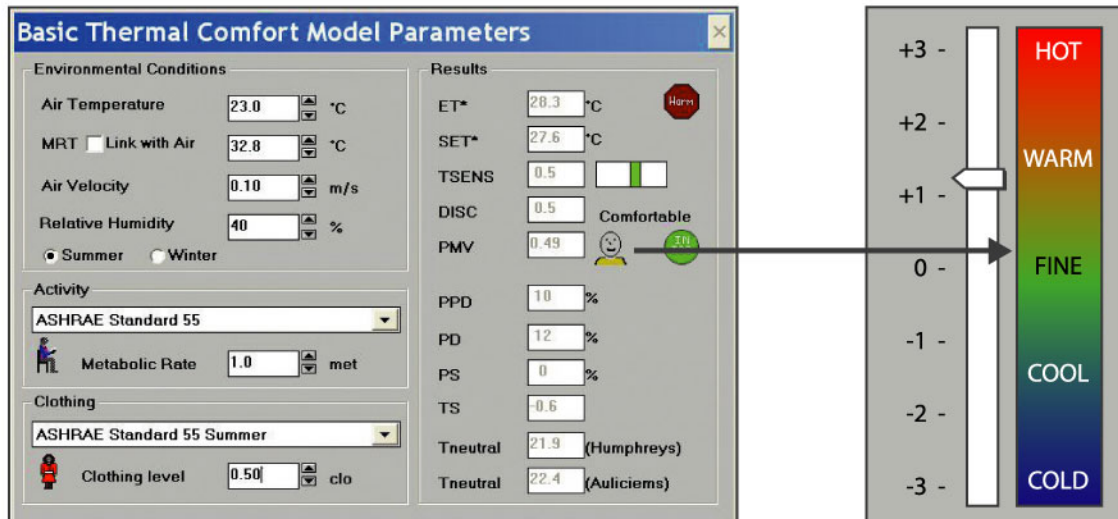


Water and Air Proofing

The **ALC 9200** system is an especially sealed system: its sealing system enables absolute resistance to exceptionally high wind pressure up to a level of 5000pa. The sealing system is based on structural sealing and adhesion simultaneously, through the application of sealant with a particularly long life (75 years or more).



Thermal Comfort Model



130 W/M² solar radiation & 37° GlassT (& 23° AirT)

32.7	MRT _{Sun}	27.1	MRT _{Shade}	0.38	fp	130	I
260	8E+09	23					
100	9E+09	37					

150 W/M² solar radiation & 34° GlassT (& 23° AirT)

32.7	MRT _{Sun}	26.2	MRT _{Shade}	0.38	fp	150	I
260	8E+09	23					
100	9E+09	34					

The Design

The **ALC 9200** system is designed with "solidworks" software by a team of senior engineers employed by Aluminum Construction Ltd.

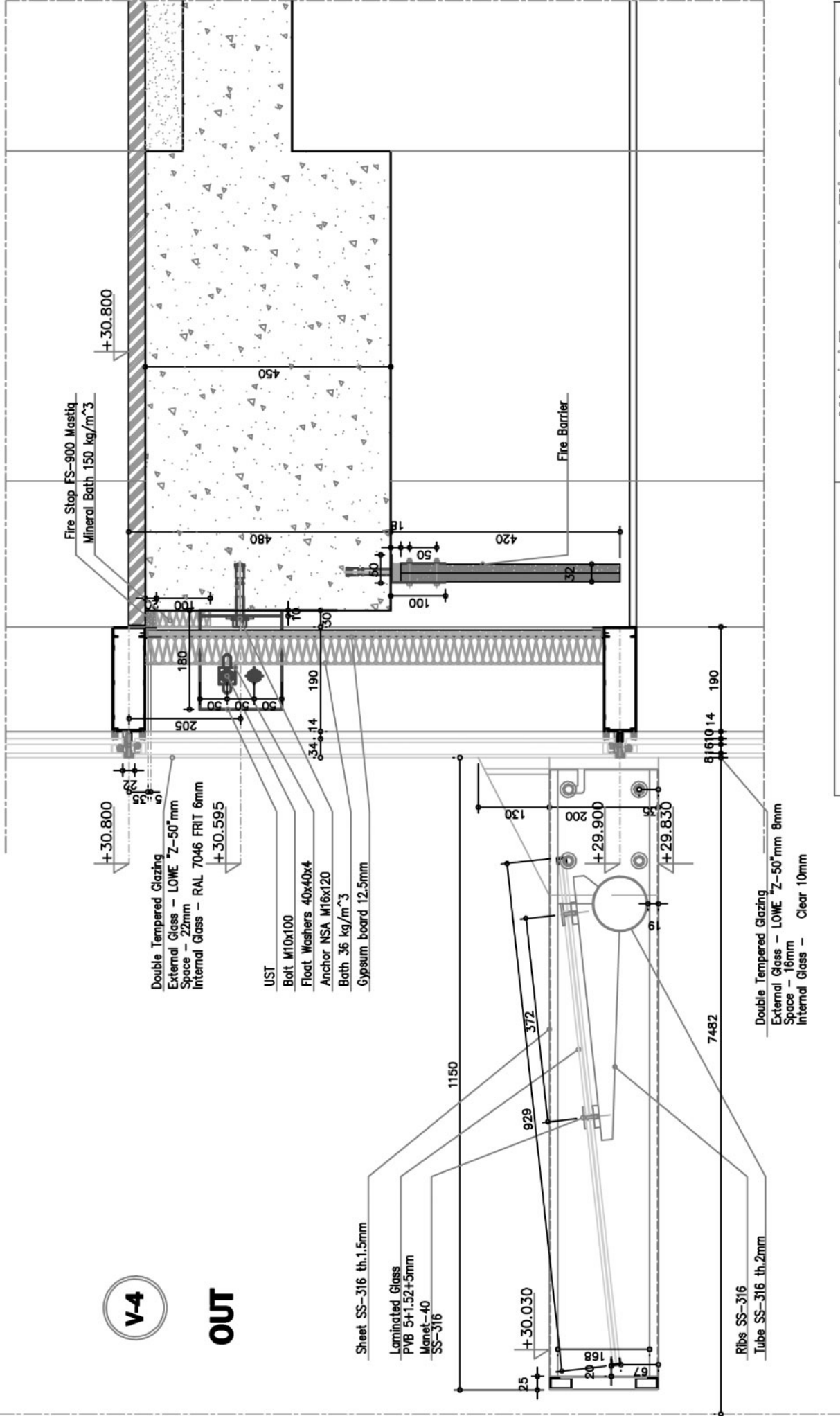
During the design work, static and dynamic calculations are made for the system, as subject to the relevant standards for system of this type.

Computer-aided design enables the automatic downloading of geometries and dimensions to the production floor when the precision required for this system is exceedingly high.

In view of the fact that the design is executed in three dimensions, the architect can use the design to examine the appearance of the system or any direction and whenever he wishes to do so.



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Migdal Tower, Petah-Tikva, Step B

Vertical Cut V-4			
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