

## ALC 9000 SYSTEM



SIMPLY PROFESSIONAL

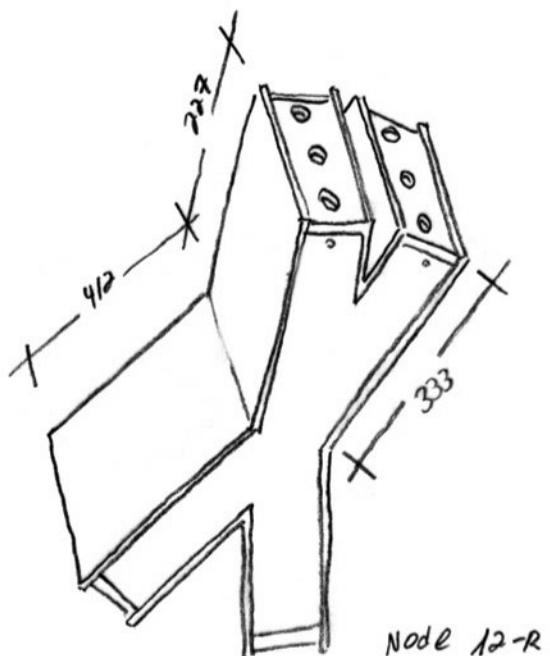
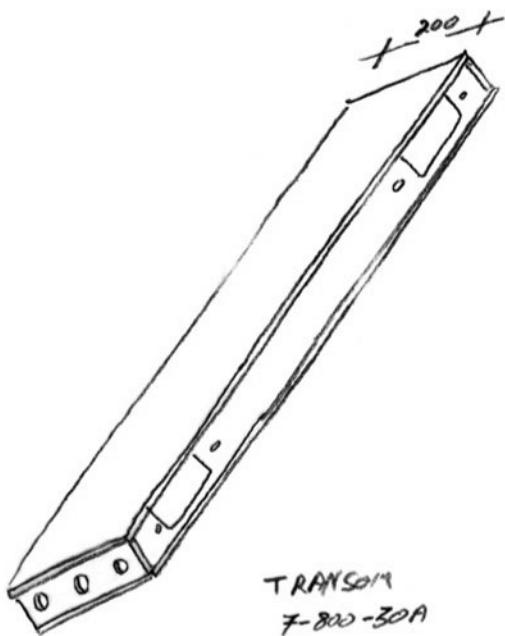


Aluminum Construction



## 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.

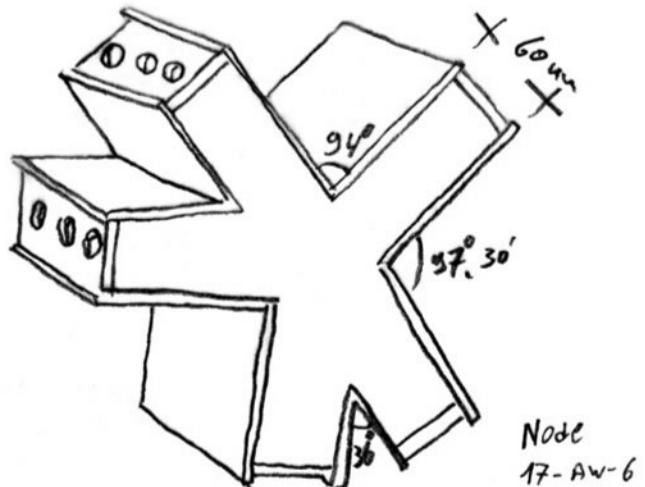
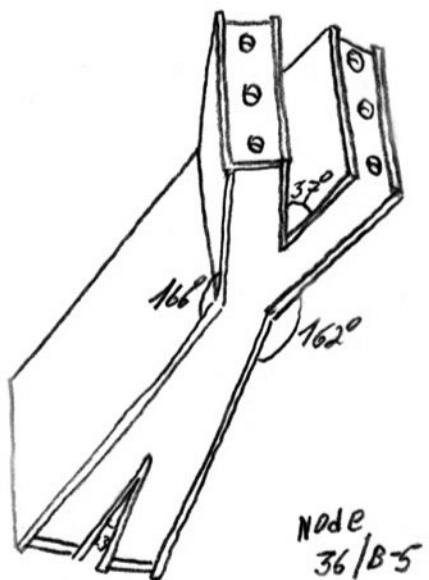


$$\delta = \frac{QL^3}{3EI}$$

$$M = \frac{QL}{8}$$

$$f_A = \frac{Q}{2}$$

$$f_B = \frac{a}{2}$$



the SPHERE node  
and transom



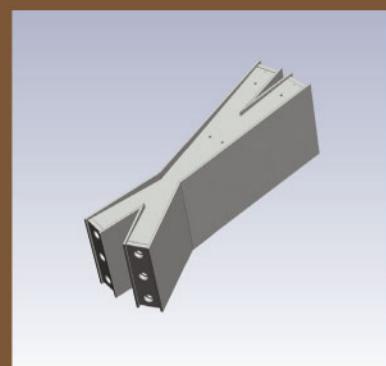
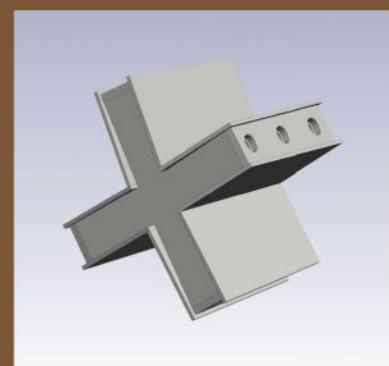
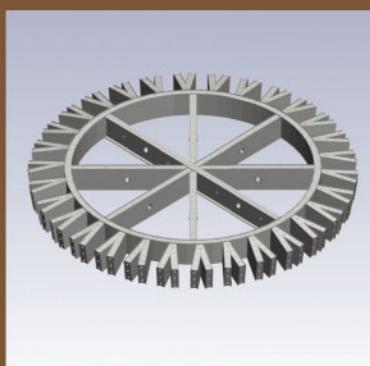
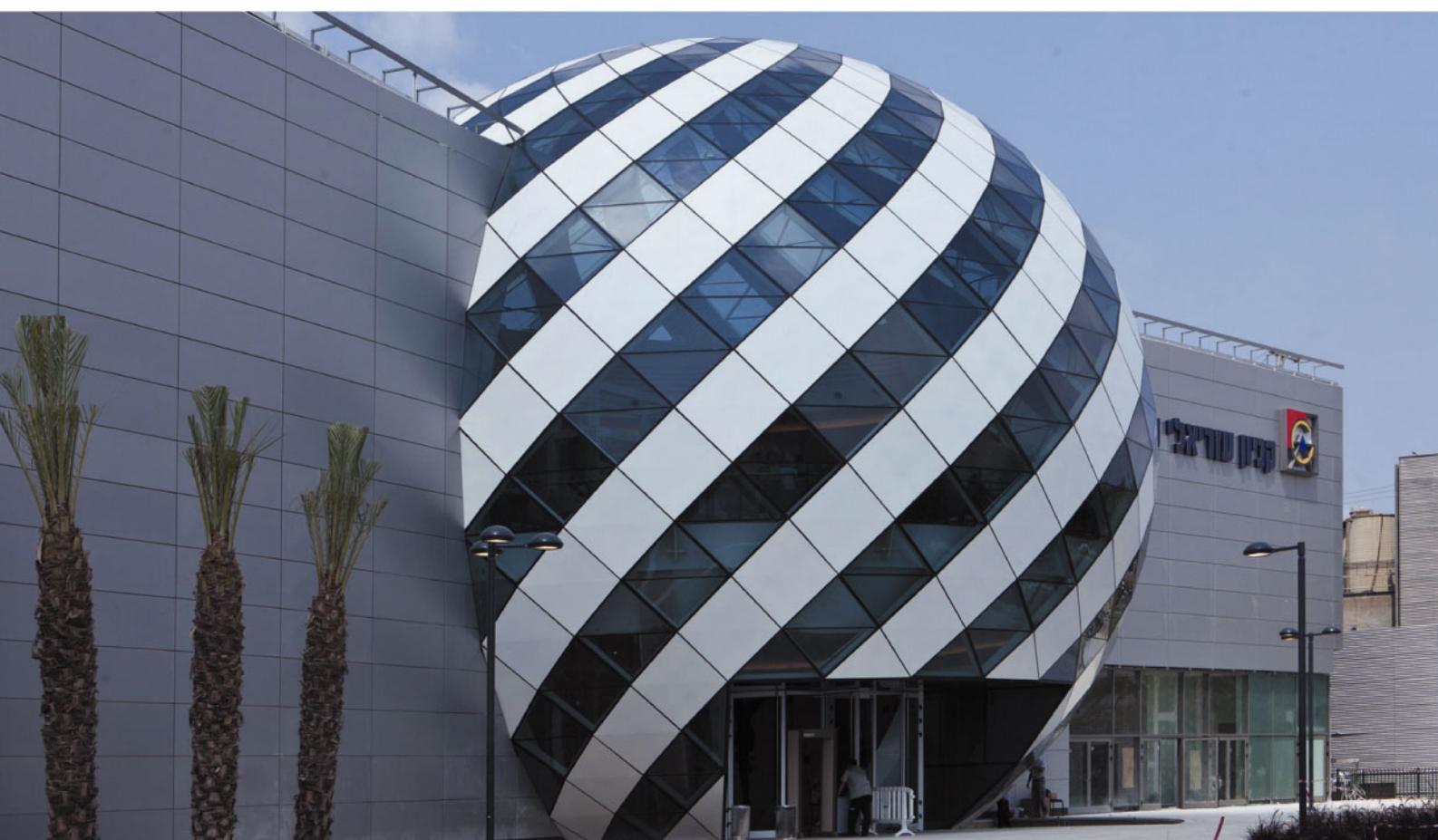
# ALC 9000 - FREE FORMAT

## The Ultimate Planimeteric System

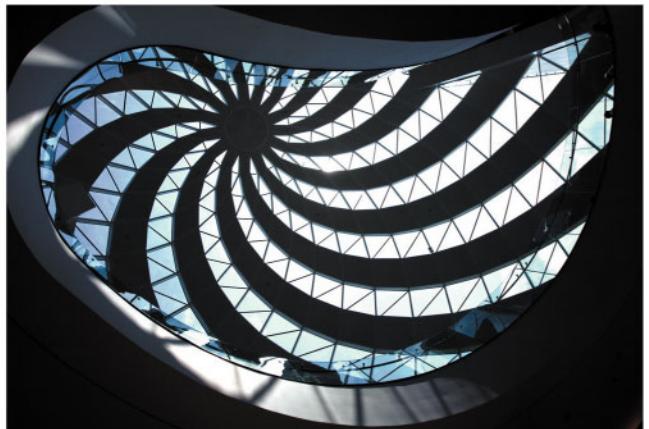
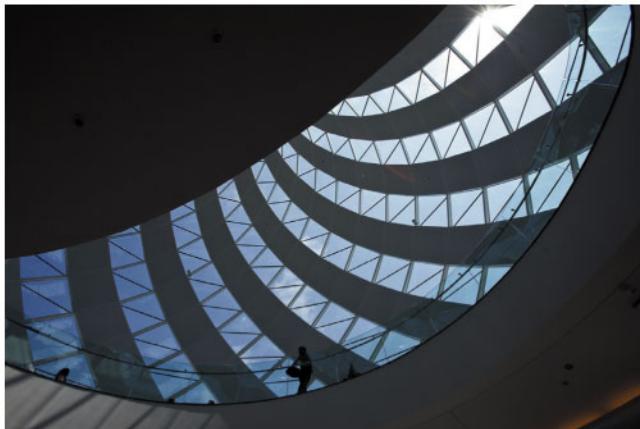
- For curtain wall
- Skylight
- Spherical
- Special Roof

All What Your Imagination Can See

Azrieli Mall - Akko City - Israel



- The **ALC 9000** system was developed by Aluminum Construction Israel, one of the world's leading companies in the field of curtain wall engineering and building cladding.
- The **ALC 9000** 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 the cladding of building.
- The **ALC 9000** system enables spatial, geometric changes in form with infinite design options.
- The **ALC 9000** system can have different types of glazing, such as glass, aluminum panels, granite, wood and more.
- The internal appearance of the **ALC 9000** system is smooth and clean.
- The **ALC 9000** system can be constructed of a number of different types of metal, such as aluminum, steel, magnesium, bronze, stainless steel 316L, and more.
- The **ALC 9000** system enables the glazing to have various geometric forms, as derived from its triangular basis. The forms that can be provided include the triangle, square, diamond, rhombus, rectangle, trapezoid, and others.
- The **ALC 9000** system is glazed structurally, so that the external surface areas are smooth and the spaces between the modules are filled with a sealing compound.
- The glazing skin is attached by a technique that enables free facades between the mantle and the bearing construction.







**Water Proofing and Air Proofing** - The **ALC 9000** system is an especially sealed system; its sealing system enables absolute resistance to especially high wind pressure, up to a level of 5000 Pa.

The sealing system is based on structural sealing and adhesion simultaneously, through the application of sealant with an especially long life (75 years or more).

**Thermal Insulation** - In the **ALC 9000** system, the bearing construction is not exposed to the external atmosphere, therefore this system has no cold bridges.

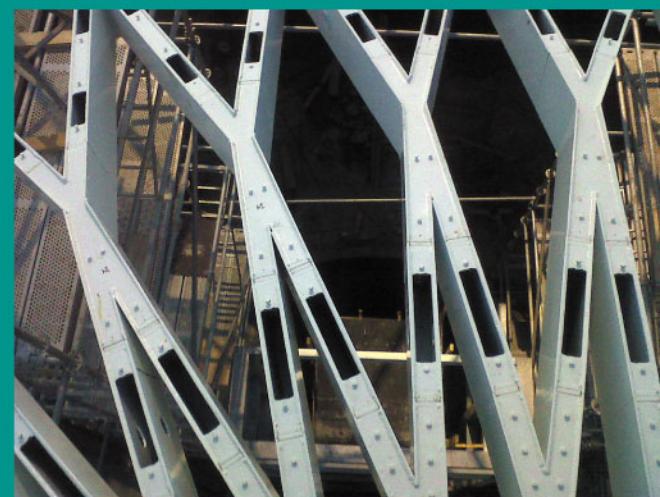
In fact, the system's insulation characteristics are derived from the type of external cladding skin used in the system. For example, in a system clad half with Low E high performance glass and half with insulated aluminum panels, the overall U Value will be 1.1 W/ $^{\circ}$ C/M $^2$ /H.



**Acoustic Insulation - Outside Inside** - In view of the fact that the surface areas of the system are not straight, like a straight wall, but rather they are wrinkled and folded, any sound waves striking the system's outer mantle are broken and refracted at intervals, and thus an especially large acoustic attenuation is naturally caused.

For example: a wall perpendicular to the ground, that is glazed with laminated 5+1.52+6 mm glass will cause an attenuation of approximately 35 dB.

In the **ALC 9000** system, angled at 5 degrees or more and glazed with the same type of glass, the attenuation will reach approximately 39 dB.



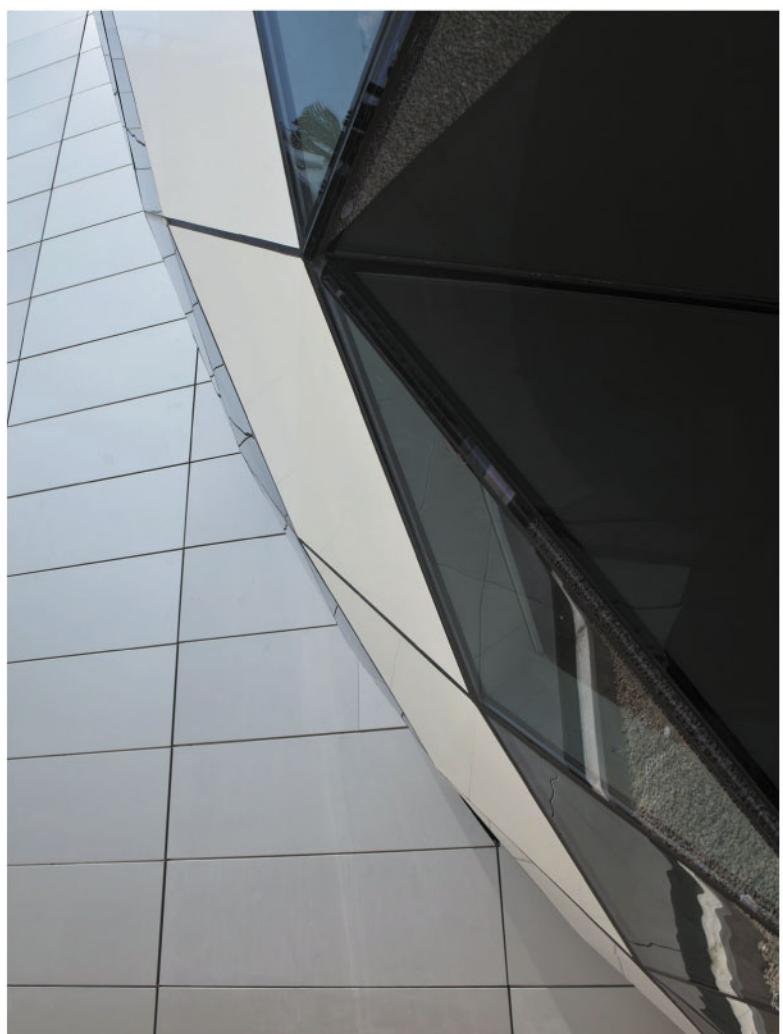
**The Construction** - The construction of the **ALC 9000** system consists of carefully planned junctions, such that their design and production method, and their spatial geometry, enable the provision of free spatial configurations, which enables a broad spectrum of configurations.

These junctions are connected to one another by linking beams that create the module key.

The entire construction is manufactured at the Aluminum Construction plant and it reaches the site when finished and painted. In fact, no welding or drilling works are applied to this construction.

The drilled sections are attached to each other by means of a concealed screw system.

On the **ALC 9000** system, it is possible to install air conditioning, plumbing and electrical systems on the interior side.



**Construction Types** - The materials used to build the construction derive from the following parameters:

1. Static requirements of the system.
2. Size of the required modules.
3. Geometrical considerations.
4. The appearance desired by the architect.
5. Price.

Even though the construction can be made of aluminum, iron, stainless steel 316L, bronze, and others, it is correct to concentrate on two types of material – aluminum and iron – in view of the fact that these two are suitable for most of the possible types of finish: polyester or silicone polyester paint. A construction made of aluminum also enables an anodized finish.

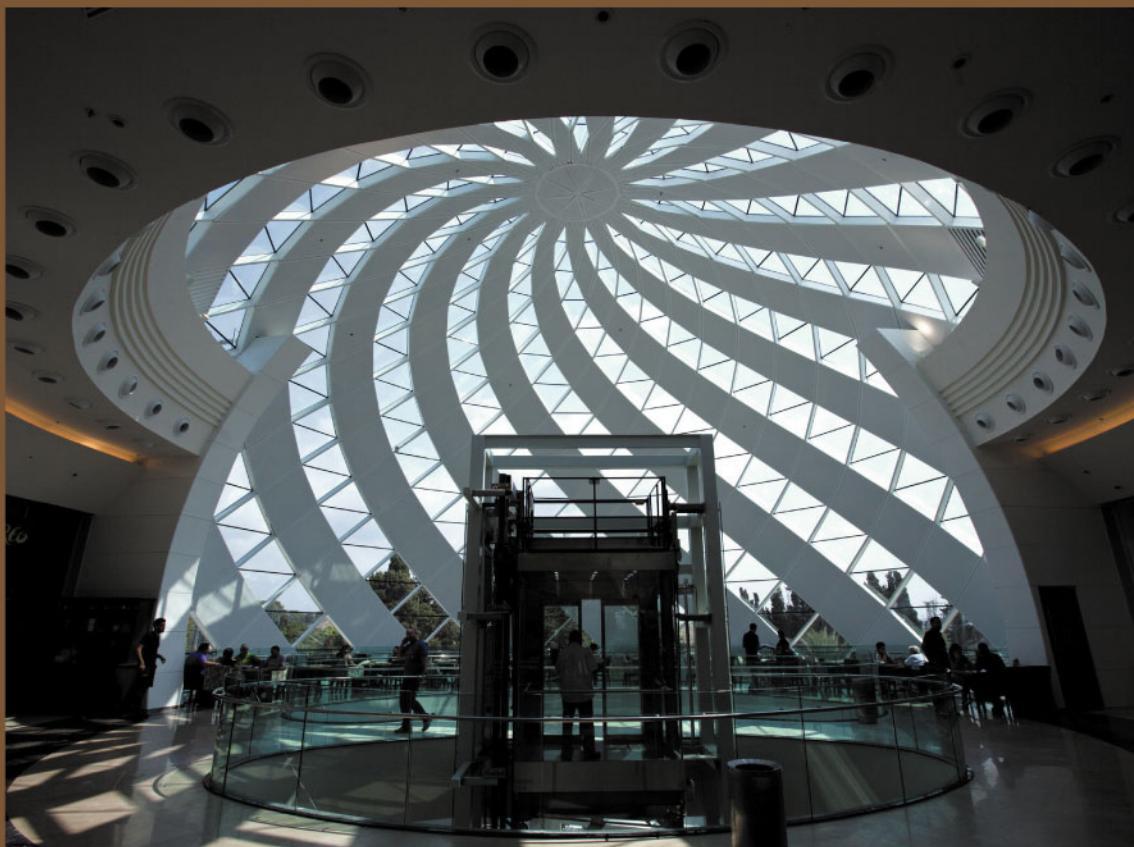


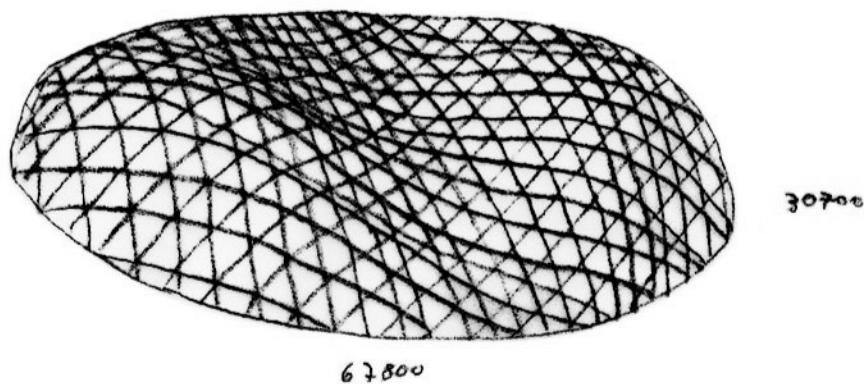
**The Design** - The **ALC 9000** system is designed with SolidWorks software by a team of senior engineers employed by Aluminum Construction Ltd.

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

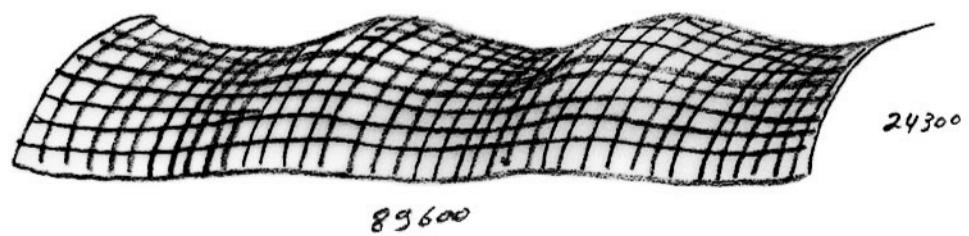
In view of the fact that the design is executed in three dimensions, the architect can use the design to examine the appearance of the system from any direction and whenever he wishes to do so.





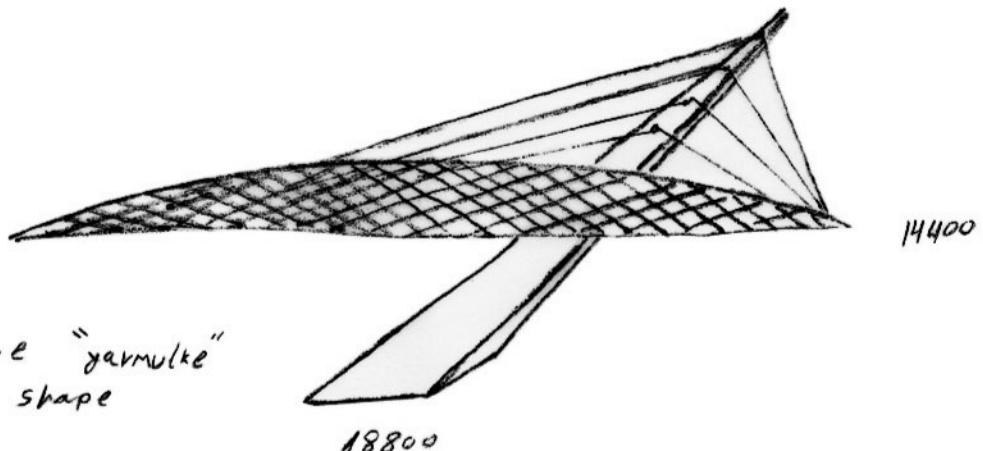
Double bubble sky light  
shape

67800



movement wave  
shape

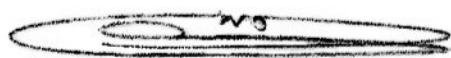
89600

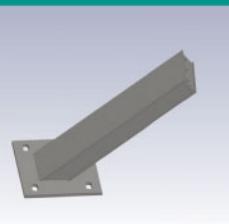
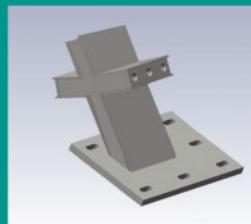
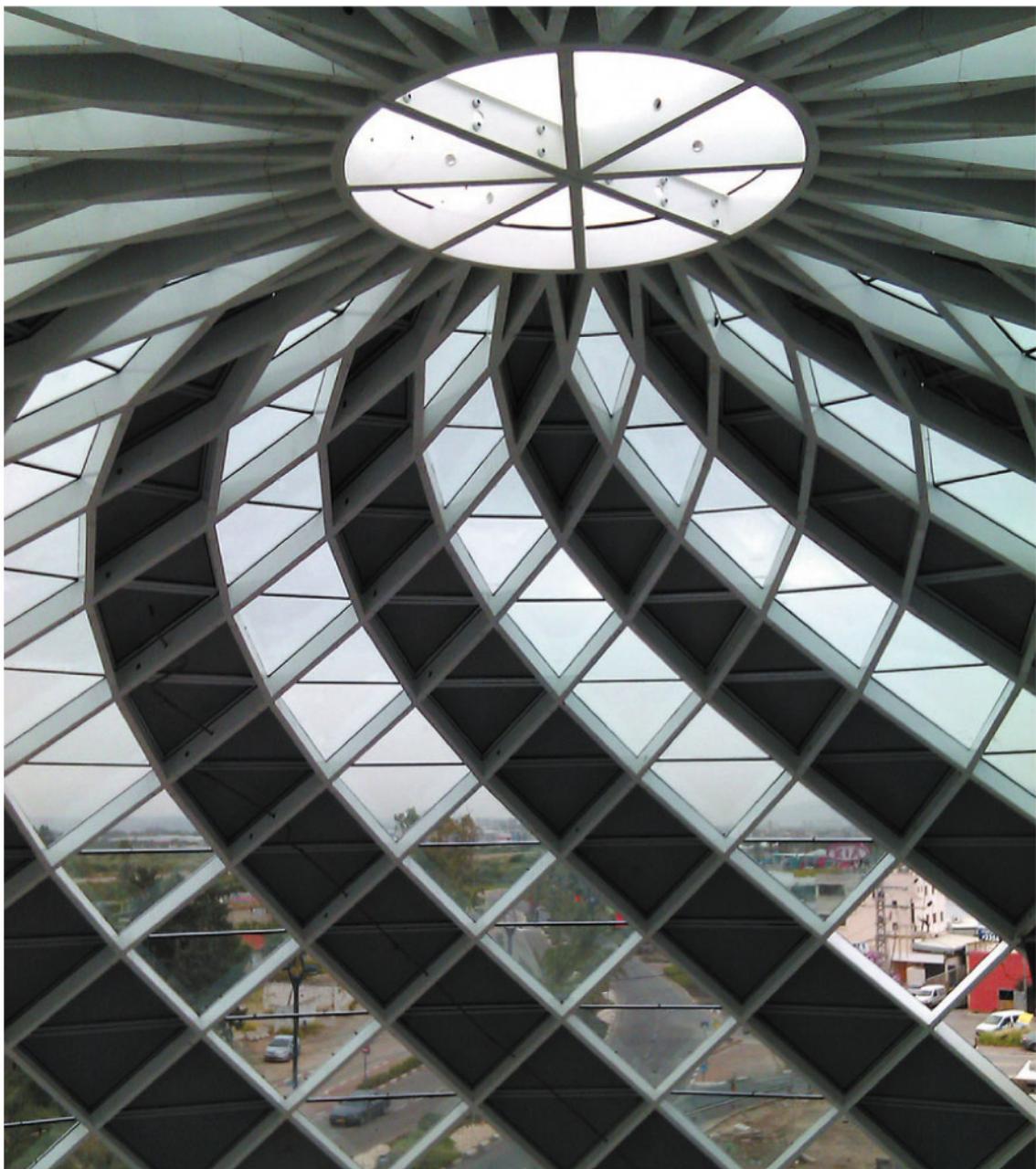


dome "yarmulke"  
shape

18800

The ALC 9000  
free form shape as  
yours mind can see





■ All pictures that appear in the catalog are genuine.



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