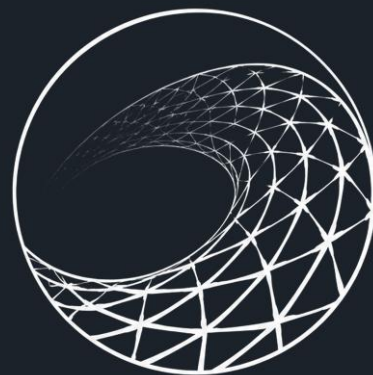




C O R T E X

FACADE ENGINEERING COMPANY

BUILT TO BE SEEN

SELECTED WORKS

2026

CORTEXFACADE.COM



Ava Center, Tehran. A free-form steel and glass roof over the atrium — national award for special steel structures, 2020.

FAÇADE ENGINEERING

BUILT TO BE SEEN

Every façade we take on begins as a drawing somebody was told could not be built. Free-form skylights. Cable nets spanning an atrium without a mullion in sight. Louvre fields that had to brace a building against seismic movement and still let the daylight through.

We work as engineers first. That means sitting with the architect while the geometry is still negotiable, and coming back with the answer that keeps the idea intact — the node that resolves in three planes, the panel schedule that fabricates cleanly, the tolerance that survives site.

Twelve projects follow. Two of them hold Iran's national award for special steel structures. All of them were drawn, engineered, fabricated and installed by the same team.

CORTEX FAÇADE ENGINEERING GROUP

WHO WE ARE

CORTEX Façade Engineering Group designs, engineers, fabricates and installs building envelopes. One company covers all four stages, which is the reason our details survive the journey from model to site rather than being redrawn by whoever inherits them.

Aluminum profile production sits behind the work. Sections are developed for the project instead of chosen from a catalogue, and that freedom is what makes complex geometry affordable rather than merely possible.

The group is organized in two divisions. A technical division covering design and engineering, shop drawings, fabrication and quality control. A commercial division covering sales, finance, trade and customs clearance — so a project in another country does not stall at a border.

THE COMPANY

ESTABLISHED

2020

HEAD OFFICE

Tehran, Iran

INTERNATIONAL BASE

Yerevan, Armenia

MARKETS

Iran · Iraq · Caucasus · Gulf · Europe

DELIVERED

12 reference projects

RECOGNITION

2 national steel-structure awards



FAÇADE SYSTEMS

Curtain wall

Unitised and stick systems, thermally broken, engineered to project loads.

Cable-supported glazing

High-tension cable nets and rod systems with point-fixed glass.

Spider glazing

Point-fixed façades and canopies on stainless steel fittings.

Free-form skylights

Doubly curved roof glazing, rationalised into fabricable panel sets.

Space frames

Long-span three-dimensional steel structures for halls and roofs.

Ventilated rainscreen

Porcelain ceramic, terracotta, fibre cement, HPL and ThermoWood.

Composite cladding

Aluminium composite panels, wet-seal and dry-joint.

Solar shading

Fixed and diagonal louvre fields, vertical fins, perforated metal.

BEYOND THE ENVELOPE

Windows and doors Aluminium systems across the full performance range.

Terrace covers Retractable and folding roof structures.

Interior systems Modular ceilings, showcases, handrails and balustrades.

Parapets and railings Road railing systems and roof-edge protection.

Solar energy Photovoltaic integration within the envelope.



Parametric shading structure — geometry rationalized into a repeatable node set.



03 CAPABILITY

ENGINEERING & SIMULATION

Nothing leaves the office on assumption. Geometry is generated, load paths are proven, and thermal behaviour is calculated for the climate the building will stand in — before the first profile is extruded.

Form finding

Parametric surface generation and rationalization into buildable geometry.

Finite element modelling

Structural verification of frames, nets, nodes and connections.

Computational fluid dynamics

Wind pressure and flow behavior across complex surfaces.

Energy calculation

Thermal performance, solar gain and condensation risk.

3D detail design

Full shop drawings, panel schedules and node documentation.

Mock-up testing

Full-scale prototypes measured, not assumed.

HOW WE DELIVER

01 Design

Geometry, form finding and system selection, developed alongside the architect while the design still has room to move.

02 Engineering

Structural and thermal analysis, connection design and load verification against the codes the project is built to.

03 Shop drawing

Fabrication-ready documentation: panel schedules, node drawings, setting-out and interfaces with adjacent trades.

04 Fabrication

Profile production and assembly under our own quality control, with dimensional checks recorded against the model.

05 Installation

Survey, setting out, erection and commissioning by teams who have read the drawings they are building from.



Ava Center skylight, seen from the atrium floor.



Arian Motor Factory — space frame erection, Arak.

05 WHY CORTEX

SIX REASONS

01

One team, four stages

Design, engineering, fabrication and installation sit inside one company. Nothing is lost in a handover, and no one is left arguing about whose drawing was wrong.

03

Profiles made for the project

Aluminium extrusion in-house means the section follows the detail instead of the detail bending to fit whatever section was available.

05

Built to be maintained

Thermal movement, water management and access are resolved at design stage, for the climate the building will actually stand in.

02

Geometry is not a constraint

Free-form skylights and cable nets are our normal work rather than an exception we price defensively. Complex surfaces get rationalised, not simplified away.

04

Proven under load

Every system is verified by finite element analysis and CFD, and — where the risk justifies it — by full-scale mock-up before a single panel is ordered.

06

Award-recognized

Best Special Steel Structure in Iran, 2020 and 2022, for the Ava Center and Fanap skylights.

SELECTED WORKS

Twelve projects across Iran, Iraq and Austria — skylights, cable nets, unitised walls and long-span steel.



01

AVA CENTER SHOPPING MALL

Tehran, Iran



02

SOBHAN BIOTECH COMPANY

Tehran, Iran



03

ANSAR CULTURAL CENTER
BUILDING

Tehran, Iran



04

NOOR HOSPITAL

Qom, Iran



05

MIDDLE EAST PLANT
RESEARCH CENTER

Tehran, Iran



06

MOGHADDAS ARDEBILI
OFFICE

Tehran, Iran



07

ARNDTSTRASSE RESIDENTIAL
BUILDING

Vienna, Austria



08

ARIAN MOTOR FACTORY

Arak, Iran



09

AUTO MALL SKYLIGHT

Tehran, Iran



10

PHARMACEUTICAL FACTORY

Al-Diwaniyah, Iraq



11

FANAP CAMPUS COMPLEX

Tehran, Iran



12

YAS SHOPPING MALL

Tehran, Iran

01

AVA CENTER SHOPPING MALL

Tehran, Iran · 2020 — 2021

Best Special Steel Structure in Iran, 2020



A doubly curved steel and glass roof over the central atrium, rationalised from a parametric surface into a fabricable panel set.

FREE-FORM SKYLIGHTS

A free-form skylight is not a larger rooflight. Once the surface stops being flat or spherical, every panel is different, every node resolves at a different angle, and the structure has to be found rather than selected from a range.

For Ava Center the surface was modelled parametrically, then rationalised into a panel set that could be cut, glazed and installed without improvisation on site. The steel was engineered around that set, not the other way round.

Bespoke geometry

Doubly curved surfaces rationalised into a fabricable panel and node set.

Material to suit span

Glass, polycarbonate or ETFE, specified against span, climate and load.

Daylight, measured

Illuminance and glare modelled, so the roof performs as well as it reads.

ARCHITECTURE FIRM

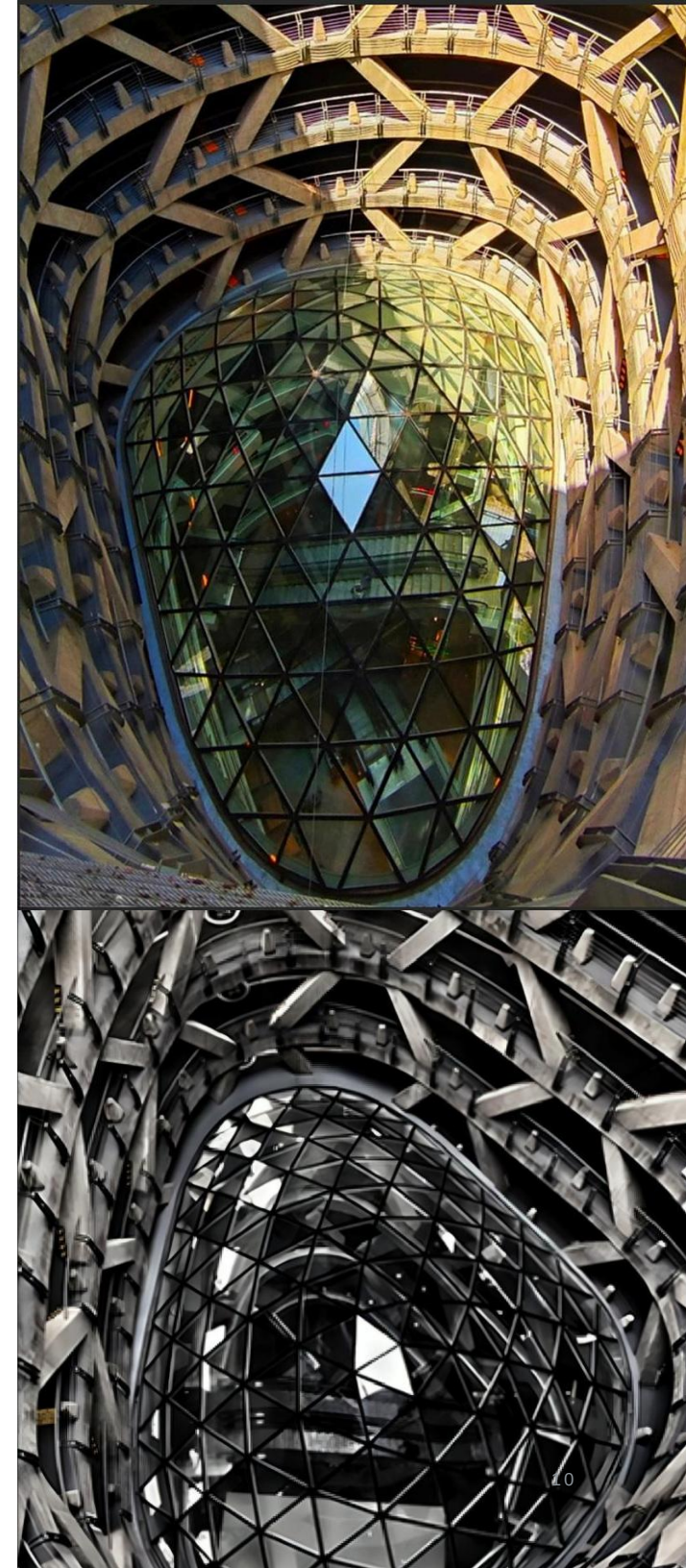
Fluid Motion Architects

ARCHITECTS

Catherine Spiridonoff, Reza Daneshmir

SCOPE

Free-form skylight



02

SOBHAN BIOTECH COMPANY

Tehran, Iran

Curtain wall and diagonal louvre across a biotechnology campus at Pardis Technology Park.



CLIENT

Sobhan Recombinant
Protein Company

MAIN CONTRACTOR

Paya Takht Jamshid

ARCHITECT

CORTEX Façade Group

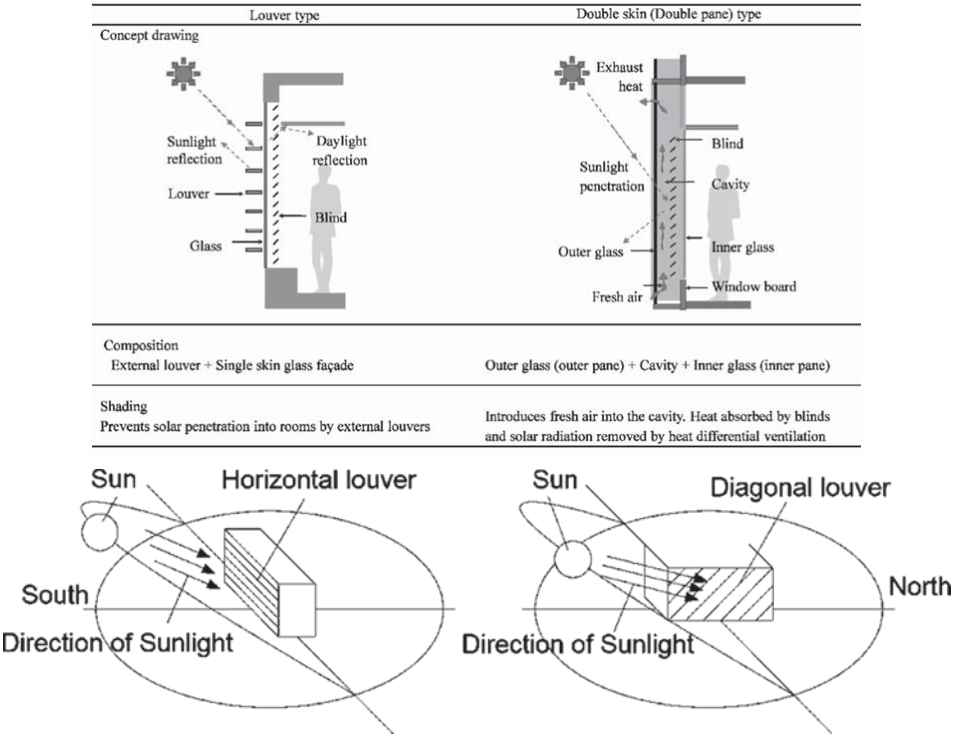
SYSTEMS

Curtain wall and louvre,
dry view

DIAGONALLY ARRANGED LOUVRES

Diagonal louvres do two jobs at once. They brace the façade against seismic movement and they moderate solar gain. They are also frequently drawn and then deleted, because clients fear dark interiors and blocked sight lines.

We built the field at full scale before committing to it. The mock-up let us measure interior illuminance directly and correlate the readings against the daylight model, and it settled the question of external appearance in a way no render can.



The completed louvre field at Pardis Technology Park.

CLIENT	Sobhan Recombinant Protein Company
MAIN CONTRACTOR	Paya Takht Jamshid
ARCHITECT	CORTEX Façade Group
SYSTEMS	Curtain wall and louvre, dry view
LOCATION	Pardis Technology Park, Tehran
AREA	4,400 m²



A regular vertical rhythm carried across every elevation, in one family of profiles.

03

ANSAR CULTURAL CENTER BUILDING

A stick-built curtain wall and aluminum window system across a cultural building in eastern Tehran. The elevation is disciplined rather than decorative: a regular vertical rhythm, consistent sight lines, and a single family of profiles carried across every face.

CLIENT	Mr. Jaber Ansari
MAIN CONTRACTOR	Paya Takht Jamshid
ARCHITECT	Dr. Riahi
SYSTEMS	Curtain wall and aluminium windows
LOCATION	Piroozi, Tehran
AREA	2,000 m ²



04

NOOR HOSPITAL

Qom, Iran

Twenty thousand square metres across six envelope systems — ceramic, composite, curtain wall, cable-supported glazing, cement board and dry façade.

CABLE-SUPPORTED CURTAIN WALL

High-tension cables replace mullions. The glass is point-fixed, the structure very nearly disappears, and the wall comes as close to open air as a sealed envelope reasonably gets.

Because the system carries its load in tension it is light, which reduces demand on the primary structure and gives the architect room to work — an atrium wall, a lobby, a skylight, all in the same vocabulary.

Transparency

Maximum daylight and uninterrupted views with minimal structural interference.

Light structure

Tension members replace heavy framing, freeing capacity in the frame behind.

Specification

Glass build-up, cable layout and finishes tailored to the project.

Flexibility

Adapts to façades, atria and skylights across a wide range of geometries.

Stability

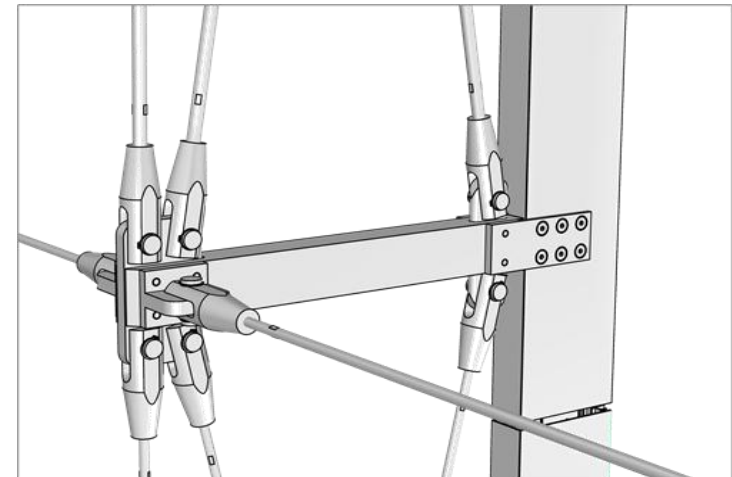
High-tension cables resist wind and seismic load within controlled deflection.

Efficiency

Reduced material use and high-performance glazing lower the envelope's footprint.



Point fixings and tension rods at the cable-supported wall.





05

MIDDLE EAST PLANT RESEARCH CENTER

Tehran, Iran

MAIN CONTRACTOR
PAYA TAKHT JAMSHID

ARCHITECT
CORTEX Façade Group

SYSTEMS
Free-form skylight

LOCATION
Velenjak, Tehran



05 MIDDLE EAST PLANT RESEARCH CENTER

WHAT A CURVED ROOF DEMANDS

A doubly curved roof asks four questions before it asks anything else. Answering them early is the difference between a structure that goes up in sequence and one that is redesigned on site.

Geometry

Every component is unique. Precision comes out of the model, not off the workshop floor.

Thermal movement

Joints must absorb expansion, or the glass will find the stress on its own.

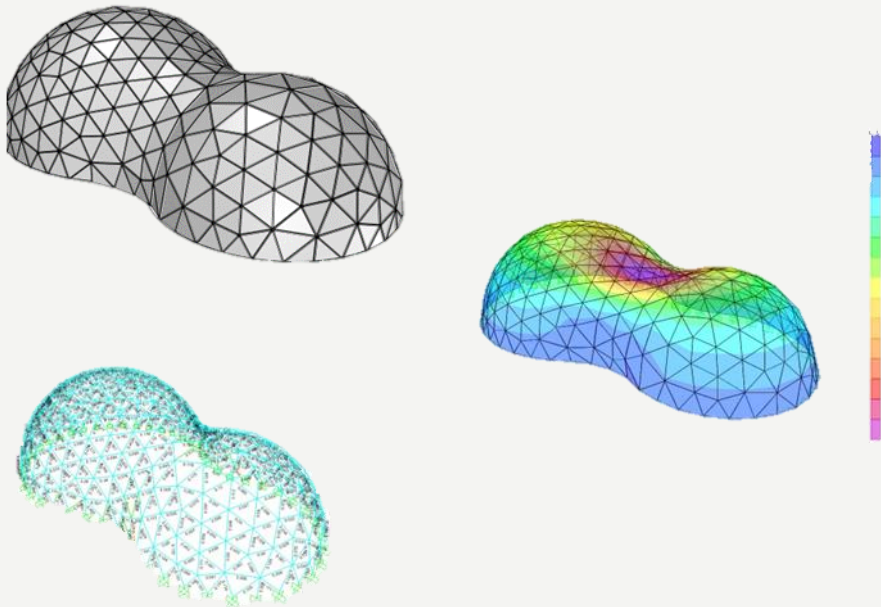
Water

Complex surfaces drain in more than one direction. Sealing is designed, not applied.

Erection

Long spans need a temporary support strategy fixed before the first piece arrives.

The completed roof from above. Two intersecting domes over a single plan.



WHAT IT RETURNS

Identity

The roof becomes the building's signature rather than a service above the ceiling.

Daylight

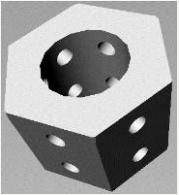
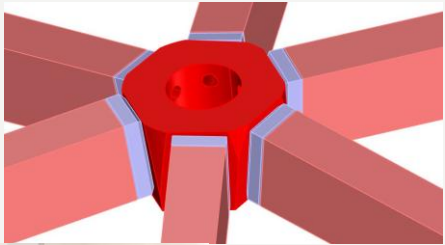
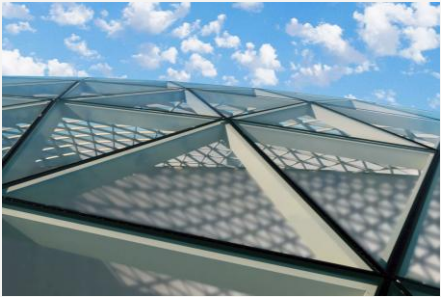
Maximised penetration cuts the artificial lighting load through the working day.

Fit

Geometry answers the plan beneath it instead of imposing a grid on it.

Efficiency

Solar control and thermal performance designed in from the first surface iteration.



06

MOGHADDAS ARDEBILI OFFICE

Tehran, Iran

A cable-net wall to the street elevation, with the frame set back behind the glass line.



PROJECT

Moghaddas Office

LOCATION

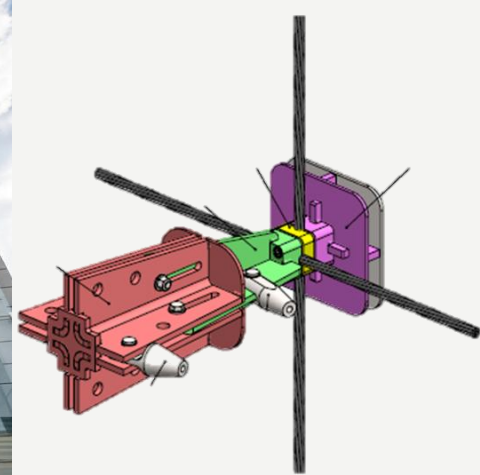
Tehran, Iran

ARCHITECT

Armin Mohsen Daneshgar

SYSTEMS

Cable-net curtain wall



Point fixings clamp the glass to the net; the cable carries the load back to the anchorage.

06 MOGHADDAS ARDEBILI OFFICE

CABLE-NET CURTAIN WALL

A cable-net curtain wall replaces the frame with tension. Stainless steel cables are stressed between anchors in the primary structure, and the glass is fixed to the net at its corners with spiders, clamps or bolts. What is left is glass and a grid of cable.

The trade is transparency for engineering. Deflection under wind is larger than a mullion wall, so the anchorage, the cable pre-tension and the glass fixings have to be calculated together rather than in sequence.

06 MOGHADDAS ARDEBILI OFFICE

MAIN COMPONENTS

- 1 **Primary structure**
The building frame or support steel that receives the cable loads.
- 2 **Cable net**
High-strength steel cables tensioned vertically, horizontally, crossed or diagonally.
- 3 **Glass**
Tempered, laminated or insulated units, generally point-fixed at the corners.
- 4 **Fittings**
Spider fittings, bolts, clamps and brackets connecting glass to net.
- 5 **Anchorage**
Transfers cable tension into the main structure. Critical to stability and safety.



07

ARNDTSTRASSE RESIDENTIAL BUILDING

Vienna, Austria

A restrained aluminium envelope on a corner site, where every tolerance is visible because there is nothing else to look at.



07 ARNDTSTRASSE

MINIMAL FAÇADE DESIGN

Minimalism in a façade is not the absence of detail. It is detail resolved until it stops asking for attention — flush lines, concealed fixings, a joint that reads as a shadow rather than a gap.

That standard is unforgiving. Every tolerance is visible because there is nothing else to look at, which is precisely why the discipline belongs to fabrication as much as to design.

Restraint

A limited material palette, held consistently across every elevation.

Line

Continuous sight lines through windows, balconies and terraces.

Landscape

Planted terraces and courtyards treated as part of the envelope, not applied to it.

08

ARIAN MOTOR FACTORY

Arak, Iran

A clear-span space frame over the production hall, erected from prefabricated members and nodes.



PROJECT

Arian Motor Factory

LOCATION

Arak, Iran

ARCHITECT

CORTEX Façade Group

SYSTEMS

Space frame structure



WHY A SPACE FRAME

A space frame earns its place in an industrial building for one reason above the others: it removes the columns from the middle of the floor. Everything else follows from that.

Clear span

Production halls, warehouses, hangars and sports floors work better without intermediate columns interrupting them.

Three-dimensional load path

Force finds many routes rather than a few, improving behaviour under wind, snow and seismic action.

Prefabrication

Members and nodes arrive finished. Assembly is fast, repeatable and largely independent of weather.

Form

Flat, curved, domed or combined. The system does not impose a shape on the building.

Weight

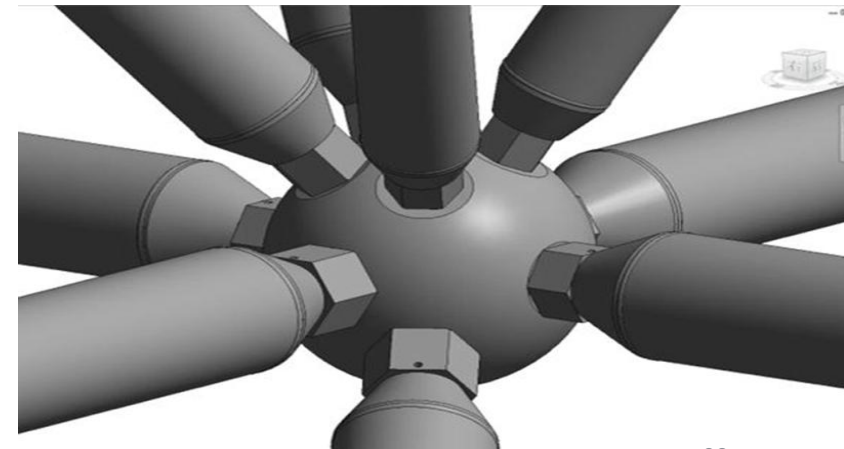
Efficient material distribution lowers self-weight, and with it the cost of the foundations below.

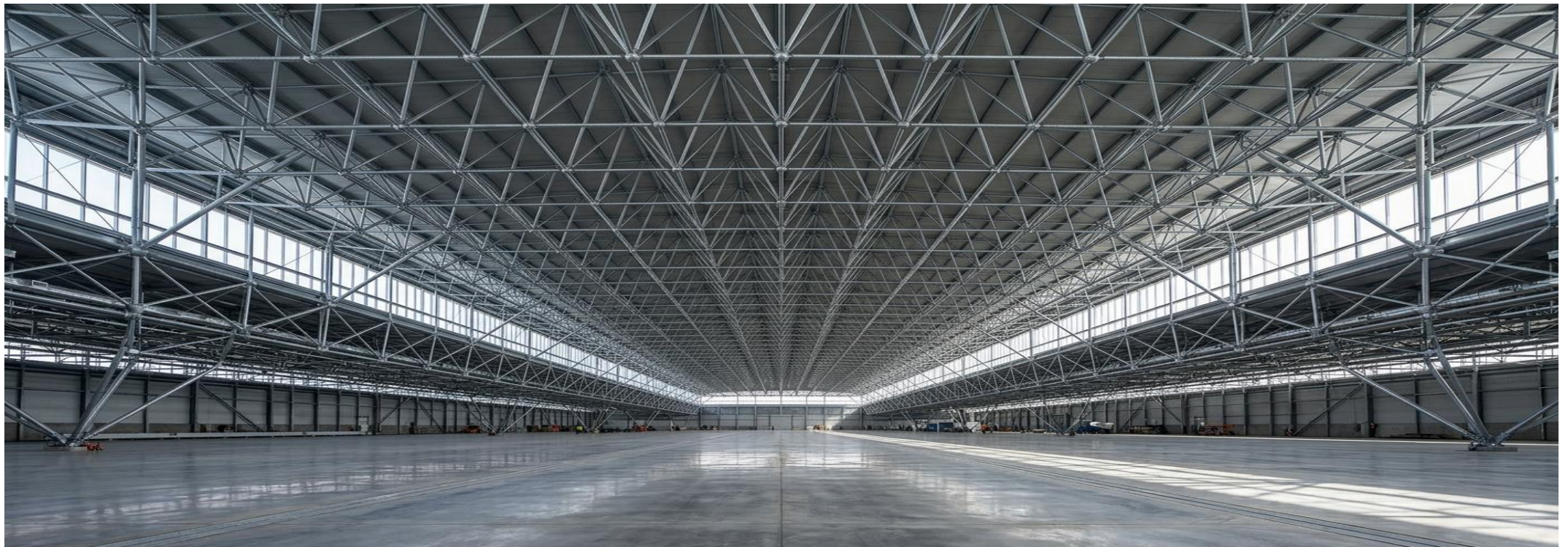
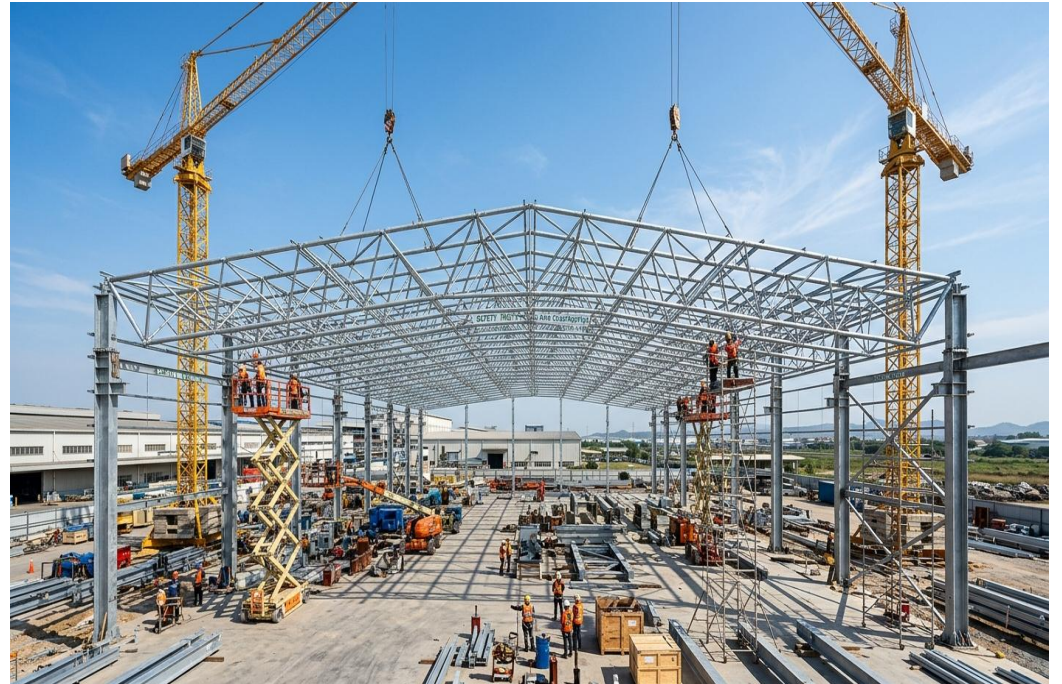
Extension

Modular geometry makes later expansion more straightforward than in traditional framed construction.



Erection in progress, and a typical node. Members and connectors arrive finished; assembly is repetition rather than fabrication.





09

AUTO MALL SKYLIGHT

Tehran, Iran



Two thousand four hundred square metres of free-form roof glazing over the concourse, installed above a live city block.



A free-form glazed roof over the full length of the mall concourse.

09 AUTO MALL SKYLIGHT

INTELLIGENT GLASS

Switchable glazing lets a skylight change its mind. Transmission is controlled electrically, so solar gain and glare are managed inside the glass rather than by blinds, shades and the hardware that dates an atrium within a decade.

CLIENT Sepah Bank

MAIN CONTRACTOR PAYA TAKHT JAMSHID

ARCHITECT CORTEX Façade Group

09 AUTO MALL SKYLIGHT

Energy

Cuts both the artificial lighting load and the cooling load it would otherwise create.

Privacy

Achieved in the glass, with no fabric, track or motor above the occupied space.

Control

Automatic by sensor or manual by zone, adjustable through the day.

Comfort

Glare controlled at source; interior temperatures held within a narrower band.

UV

Blocked before it reaches the floor, protecting finishes, furniture and stock.

Appearance

The clean line of the roof survives, because nothing has been hung beneath it.



10

PHARMACEUTICAL FACTORY

A curtain wall and vertical louver envelope for a pharmaceutical plant in southern Iraq, assembled dry and detailed to keep dust and thermal load out of a controlled interior.

CLIENT

Dr. Ranaee

MAIN
CONTRACTOR

505 Construction
Company

ARCHITECT

Dr. Armin Daneshgar

SYSTEMS

Curtain wall and louver,
dry view

FAÇADE PARTS

Vertical louvres

Line lighting

Entrance

Entrance canopy

Surround glazing

Suspended mirror roof



11

FANAP CAMPUS COMPLEX

Tehran, Iran

Best Special Steel Structure in Iran, 2022

A cable-reinforced flat skylight over the central courtyard of the campus.



11 FANAP CAMPUS COMPLEX

CABLE-SUPPORT SKYLIGHT

A flat roof puts its members into bending, and bending is the least efficient thing you can ask a steel section to do. Sections grow to cope, and the view of the sky the skylight existed to provide begins to disappear behind them.

Adding a cable system changes the load path. The steel works in tension and compression, the sections come back down, and the roof reads as a lattice rather than as structure. Around eleven thousand turned components were fabricated to complete the system.

CLIENT	Fanap Company
MAIN CONTRACTOR	PAYA TAKHT JAMSHID
ARCHITECT	Boompad Consulting Engineers
SYSTEMS	Cable-supported skylight
LOCATION	Science and Technology Park, Tehran

≈ 11,000

turned components fabricated to complete the cable system

12

YAS SHOPPING MALL

Tehran, Iran

Skylight, curtain wall and punched metal on one elevation, Pasdaran, Tehran.



CLIENT

Honare Tasisat

MAIN CONTRACTOR

PAYA TAKHT JAMSHID

ARCHITECT

CORTEX Façade Group

SYSTEMS

Skylight, curtain wall, punched metal



The completed building in context, Pasdaran.



Faceted glazing over the atrium, seen from below.

12 YAS SHOPPING MALL

THREE SYSTEMS, ONE ENVELOPE

A skylight, a curtain wall and a punched metal screen meet on the same building. The value is in the junctions: three systems with different tolerances, movement and fixing logic, resolved into one continuous line.

CLIENT	Honare Tasisat
MAIN CONTRACTOR	PAYA TAKHT JAMSHID
ARCHITECT	CORTEX Façade Group
SYSTEMS	Skylight, curtain wall, punched metal
LOCATION	Pasdaran, Tehran



2020



2022

RECOGNITION

AWARDS

2020

Best Special Steel Structure in Iran

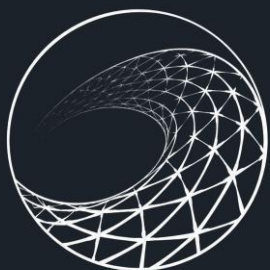
Ava Center Skylight — free-form steel and glass roof, Tehran

2022

Best Special Steel Structure in Iran

Fanap Cable-Support Skylight — cable-reinforced flat skylight, Tehran

Both awards were made for steel-and-glass roof structures engineered, fabricated and installed by CORTEX.



CORTEX

FAÇADE ENGINEERING COMPANY

Send us the geometry that is causing the argument. We will tell you how it gets built, what it weighs, and what it costs — before anyone commits to a system.

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