POLATOĞLU

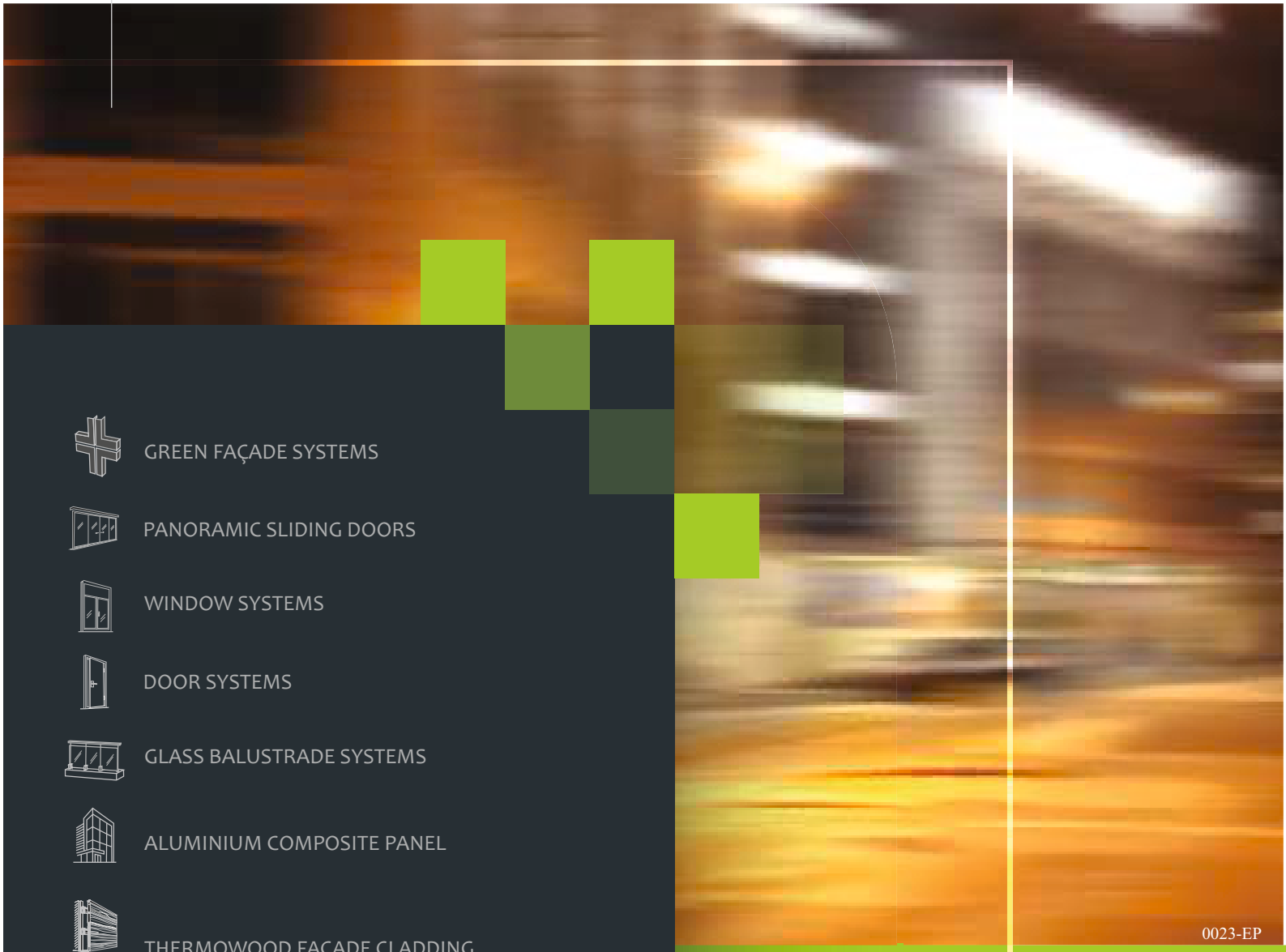
SCHÜCO
Premium Partner

DIVERSITY FORM VARIETY

MODERN façade

ENERGY EFFICIENCY

Vision of the Polatoglu is to be at every point of construction sector



- GREEN FAÇADE SYSTEMS
- PANORAMIC SLIDING DOORS
- WINDOW SYSTEMS
- DOOR SYSTEMS
- GLASS BALUSTRADE SYSTEMS
- ALUMINIUM COMPOSITE PANEL
- THERMOWOOD FACADE CLADDING
- TERRAZZO PRECAST PANELS
- GFRC / FIBER PRECAST PANELS
- MESH FAÇADE CLADDING

0023-EP

ESTABLISHED 2009

contra

2026

CORPORATE PROFILE

Polatoglu Metal was officially established in **Istanbul in 2016**, building upon years of international façade and construction experience gained since 2009 in Azerbaijan.Today, the company operates as a multidisciplinary façade contractor and engineering partner, delivering high-performance architectural envelope solutions across residential, commercial, hospitality, and public developments.

By combining engineering expertise, advanced manufacturing technologies, and on-site execution experience under one structure, **Polatoglu Metal** provides integrated solutions from concept development to final installation.

REGIONAL EXPERIENCE

Since its first project in **Azerbaijan** — the Central Clinic Hospital in Baku — **Polatoglu Metal** has successfully completed numerous façade and construction projects in collaboration with leading regional contractors and developers.

PRODUCTION & ENGINEERING CAPABILITY

Our production facility in Baku includes:1,000 m^2 indoor manufacturing area1,000 m^2 outdoor operational areaMore than 100 skilled personnel.

Production and installation capabilities include:

Aluminium façade systems
Doors & windows
GFRC systems & free-form cladding
Aluminium composite panels
Thermowood & terrazzo panels
Steel structures
Bespoke architectural metal works - MESH

DIGITAL ENGINEERING & FREE-FORM SOLUTIONS

Polatoglu Metal specializes in advanced **GFRC façade systems** and complex free-form architectural applications.Using Rhinoceros 3D, engineering-driven workflows, and advanced 8-axis robotic CNC manufacturing technology, complex geometries and parametric surfaces are transformed into precise, fabrication-ready production data.

This integrated digital workflow enables highly accurate mold production for double-curved surfaces, free-form façades, and custom architectural elements.

ENGINEERING COMMITMENT

Every project is managed through detailed engineering review, coordinated shop drawings, production planning, and disciplined site execution. Our façade systems are developed to meet architectural intent, structural requirements, and long-term performance expectations while maintaining buildability, efficiency, and cost control.

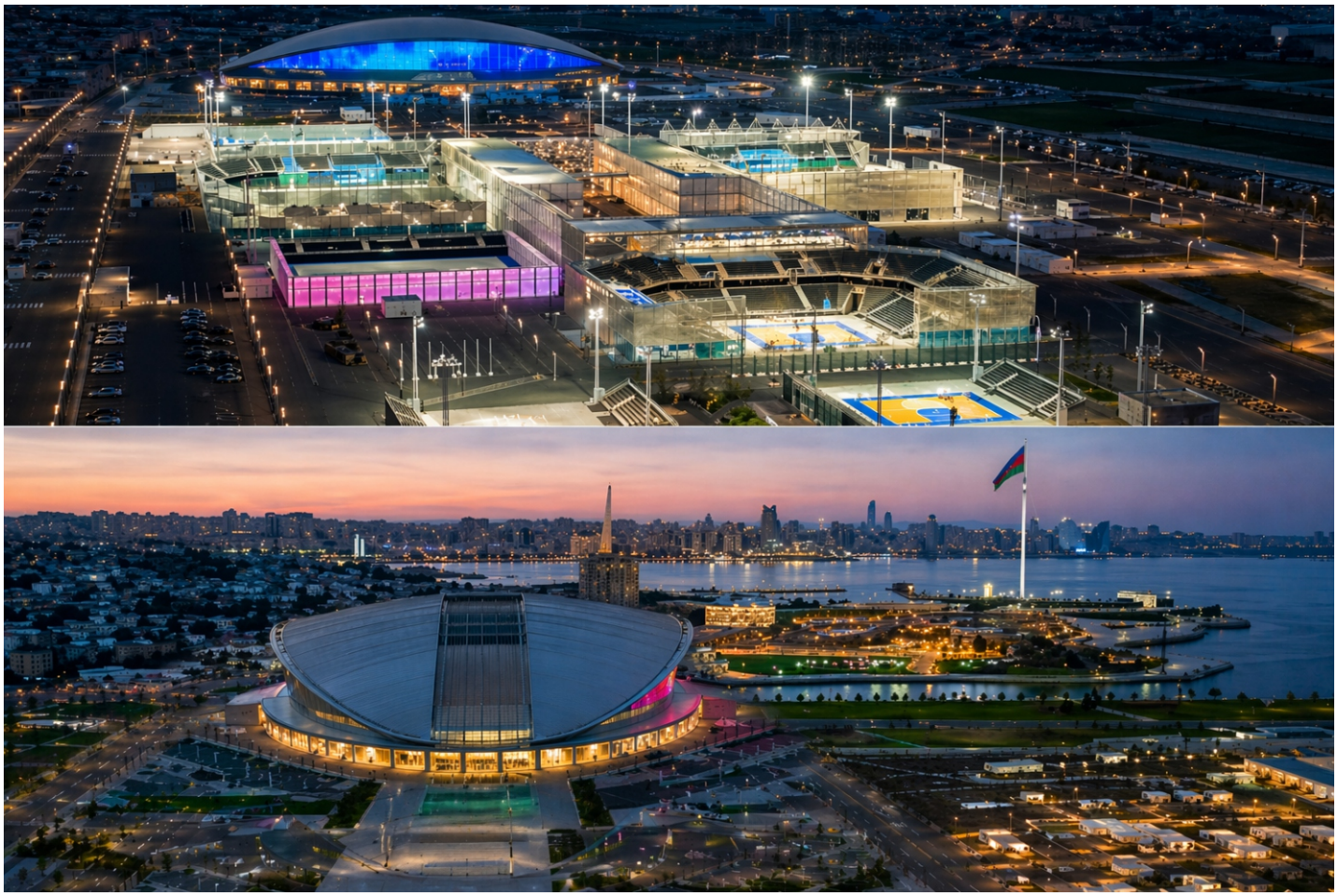
STRATEGIC VISION

Driven by engineering precision, advanced manufacturing, and attention to detail, **Polatoglu Metal** continues to deliver reliable, innovative, and long-lasting façade solutions across the region and international markets.

SCHÜCO PREMIUM PARTNER

As of 2026, **Polatoglu Metal** proudly marks its 11th consecutive year as an official **Schüco Premium Partner,** reflecting long-term trust, technical capability, and engineering excellence.

BAKU AQUATICS CENTRE



PROJECT DETAILS
Architect: Pujol Arquitectura, Barcelona
Location: Baku / Azerbaijan
Contractor: DDLAR GROUP
Fabricator: Polatoglu Metal Co. Inc.
System: Schüco
Completed: April 2015
Total Square Footage: 20,500 m²

Built as one of the flagship structures of the 2015 European Games, the Baku Aquatic Center features a high-performance façade by Polatoglu Metal using Schüco systems, complemented by premium 316L stainless steel railing solutions.

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BAKU SHOOTING CENTER

PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: DDLAR GROUP
Fabricator: Polatoglu Metal Co. Inc.
System: Schüco FWS 50 SG – AD UP DS
System: Compact Laminate
Glass: Guardian Glass
Completed: September 2015
Total Square Footage: 25,580 m²

"One of Europe's largest shooting complexes, this prestigious project's entire exterior façade was completed by Polatoglu Metal using Schüco systems."

BAYILBAY RESIDENCE

PROJECT DETAILS
Architect: Mauro Lipparini Architecture in Florence
Location: Baku / Azerbaijan
Contractor: DDLAR GROUP
Fabricator: Polatoglu Metal Co. Inc.
System: Schüco
Completed: April 2019
Total Square Footage: 26,550 m²

QUANTITIES
Schüco Aluminium Covered Façade Systems: 8,000 m²
Schüco Aluminium Sliding Doors: 2,500 m²
Window & Door Systems: 850 m²
Mitsubishi ALPOLIC® Aluminium CPS Systems: 6,000 m²
Ceramic Cladding: 5,500 m²
Steel Construction Works: 1,500 tons / 3,700 m²

"The exterior façade of Bayilbay Building in Baku was engineered and completed by Polatoglu Metal using advanced Schüco systems, delivering precision, durability, and modern architectural performance."

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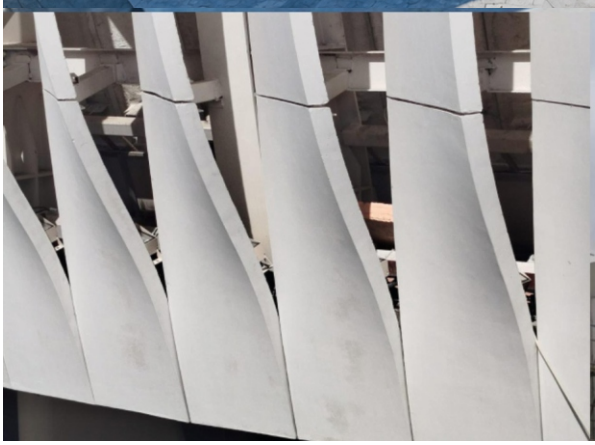
VICTORY PARK BAKU

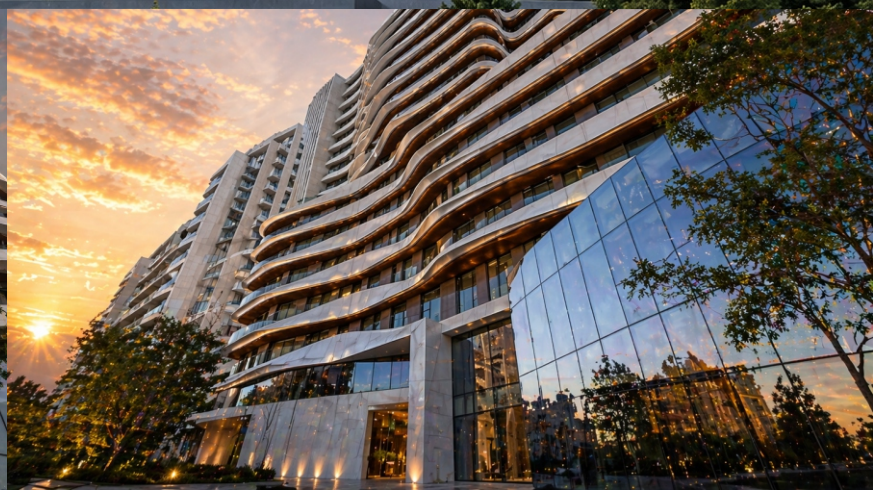


PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: PMD Projects
Fabricator: Polatoglu Metal Co. Inc.
Completed: 8 November 2024
Total Square Footage: 3,200 m²

QUANTITIES
GFRC Fiber Concrete Louvre Panels: 3,200 m²
GFRC Fiber Concrete Seats: 3,500 linear meters
Heavy Steel Structure: 120 tons

"Victory Park, dedicated to the martyrs of Azerbaijan and completed in 2024, was created as a sacred memorial park. The project's complex free-form GFRC precast panels were proudly produced by Polatoglu Metal."

SABAH RESIDENCE BAKU



PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: Qala Group
Fabricator: Polatoglu Metal Co. Inc.
Completed: December 2023
Total Square Footage: 20,123 m²

QUANTITIES
Aluminium Profile Systems: 16,800 m²
Aluminium Composite Panel Systems: 1,100 m²
Sinterflex Curtain Wall & Aqua Panel: 11,123 m²

"One of the most prestigious residential projects in Baku, Sabah Residence was developed by Qala Group and is located in the exclusive Bayil district. The project offers one of the city's finest panoramic views, with all aluminium façade works completed by Polatoglu Metal."

PORT BAKU WALK WAY GARDEN

PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: North West Construction
Fabricator: Polatoglu Metal Co. Inc.
Completed: February 2024
Total Square Footage: 23,350 m²

"A pioneering project in Baku, Port Baku Walkway Garden introduced the first-ever terrazzo exterior panel system to the city, successfully engineered and delivered by Polatoglu Metal despite its highly complex execution requirements.."

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GANJLIK RESIDENCE

PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: DDLAR GROUP
Fabricator: Polatoglu Metal Co. Inc.
Completed: July 2016
Total Square Footage: 22,500 m²

QUANTITIES
Aluminium Door & Window Systems: 8,550 m²
Aluminium Composite Panel Systems: 12,400 m²
Steel Construction Works: 120 tons / 1,550 m²

"Located in the prominent Ganjlik area of Baku, this modern residence project commissioned by the Ministry of Youth and Sports features full façade solutions executed by Polatoglu Metal."

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BRAVO NGA HYPERMARKET

PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: Pasha Construction
Fabricator: Polatoglu Metal Co. Inc.
Completed: October 2018
Total Square Footage: 22,430 m²

QUANTITIES
Aluminium Covered Facade Systems: 3,500 m²
Aluminium Composite Panel Systems: 8,500 m²
Aluminium Door & Window Systems: 250 m²
Ceramic Cladding: 500 m²
Automatic Door Systems: 80 m²
Thermowood Works: 500 m²Glass
Balustrade Systems: 1,500 m²
Aluminium Mesh Panel Systems: 6,000 m²
Aluminium Panel Systems: 1,600 m²

"Awarded by Pasha Construction, the NGA Bravo Hypermarket project was successfully delivered by Polatoglu Metal with a modern and durable façade solution.."

LIGHTHOUSE SEA BREEZE RESIDENCE

PROJECT DETAILS
Location: Baku / Azerbaijan
Contractor: Terra Structure
Fabricator: Polatoglu Metal Co. Inc.
Completed: September 2019
Total Square Footage: 5,470 m²

"As one of the earliest signature developments of the Sea Breeze area, Lighthouse Residence had its full exterior façade scope completed by Polatoglu Metal with premium quality standards."

PROJECT PORTFOLIO

BOULEVARD RESTAURANT
PROJECT DETAILS

Location: Baku / Azerbaijan
Contractor: Uni Const.
Fabricator: Polatoglu Metal Co. Inc.

Total Square Footage: 6,560 m²

BRAVO AIRPORT
PROJECT DETAILS

Location: Baku / Azerbaijan
Contractor: North West Const.
Fabricator: Polatoglu Metal Co. Inc.
Completed: March 2019

Total Square Footage: 3,223 m²

BRAVO 20 YANVAR
PROJECT DETAILS

Location: Baku / Azerbaijan
Contractor: North West Const.
Fabricator: Polatoglu Metal Co. Inc.
Completed: March 2019

Total Square Footage: 3,8,380 m²

PROJECT PORTFOLIO

OFFICE BUILDING OF STAR CEMENT
PROJECT DETAILS

Location: Sumqayit / Azerbaijan
Contractor: Star Cement Plant
Fabricator: Polatoglu Metal Co. Inc.
System: Alcas
Completed: March 2015

Total Square Footage: 1,815 m²

LINK BUILDING OF CRYSTAL HALL
PROJECT DETAILS

Location: Baku / Azerbaijan
Contractor: DDLAR GROUP
Fabricator: Polatoglu Metal Co. Inc.
System: Schueco
Completed: March 2015

Total Square Footage: 2,930 m²

SHOOTING CENTER BAKU HOTEL BUILDING
PROJECT DETAILS

Location: Baku / Azerbaijan
Contractor: DDLAR GROUP
Fabricator: Polatoglu Metal Co. Inc.
System: Schueco
Completed: April 2015

Total Square Footage: 1,718 m²

GABALA MILK FACTORY
PROJECT DETAILS

Location: Gabala / Azerbaijan
Fabricator: Polatoglu Metal Co. Inc.
Completed: August 2012

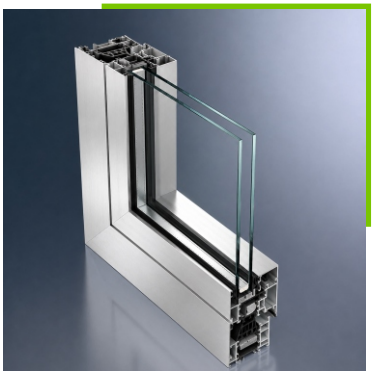
Total Square Footage: 1,020 m²

WINDOWS & DOORS

THE POTENTIAL FOR SAVINGS IS ENORMOUS.
Do not compromise on the insulation for your home. Windows guarantee you maximum energy efficiency. This is how you ensure markedly lower heating costs. You can make further savings with targeted ventilation. Here too, Schueco has the right solution.

MAXIMUM INSULATION VALUES
With Uf-Values from 0.8 to 1.6 W/(m2K) Windows achieve maximum thermal insulation values. These outstanding values, e.g. in the area of metal fabrication, are achieved through an enlarged insulation zone with foam-filled insulating bars, an optimised centre gasket and a new type of thermal insulation in the glazing rebate.

YOU CAN SAVE:
For a family home with a surface area of 143.8 m2and a window area of 26.4 m2, which was constructedin about 1980 there would be, a saving of 51 kWh/(m2a) or 730 litres of heating oil per year. The consumption of 730 litres less oil reduces CO2 emissions by two tonnes per year. This corresponds to a journey of about 10,000 km by car or a Co2 volume of 1250 m3).



70.HI - Highly thermally insulated aluminium window system.

Window combines efficient solutions for a wide variety of functional, architectural and design requirements in one system:
a high level of thermal insulation, narrow face widths and attractive vent contours as well as concealed, classic manual or integrated electromechanical fittings for inward and outward-opening windows.

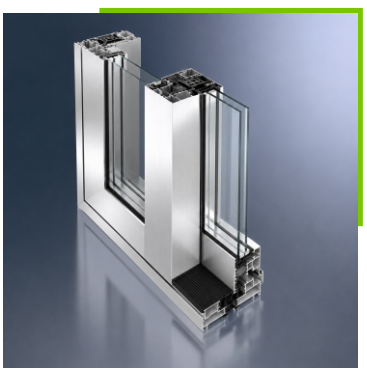
Uf value of 1.6 W/(m²K) with a face width of 117 mm

SLIDING SYSTEMS

In winter, the cold stays outside. In summer, the heat. Sliding doors from thermally insulated to passive house standard and therefore create an internal climate that is pleasant at all times. For a clear conscience when heating your home. For low air conditioning costs at high outside temperatures. In short: for responsible use of energy.

Saving energy does not just mean contributing towards climate protection; it is also about saving money. In the face of soaring energy costs, this is in the interest of every client.

Sliding and folding sliding doors must meet high requirements in terms of thermal insulation – especially if large constructions are required. This creates a high level of comfort in your home by maintaining a constant, agreeable room climate; it also saves valuable energy and prevents high costs. And this is not only on cold days, but also in summer. Then, the heat stays outside and the cost of air conditioning can therefore be considerably reduced. Optimum comfort and enormous potential for saving energy – a perfect match.



70.HI lift-and-slide door

The aluminium profiles, which are thermally broken by insulating bars, are fitted with isolators and efficient gaskets.

Together with high quality insulating glass, the best thermal insulation results are achieved.

The ASS 70.HI lift-and-slide door therefore fulfills the requirements of EnEV with ease.

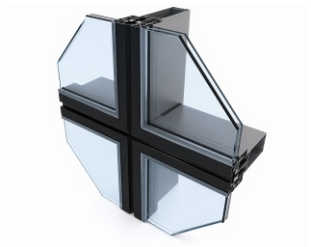
ENERGY EFFICIENCY

ALUMINIUM PANEL FACADE SYSTEMS

The building shell made with aluminum curtain wall systems is to be formed by a modular technique. All the components forming the panel facade modules are converted into finished products in the controlled factory environment and assembled at the site site.
Advantages of panel façade application
High quality product
Quick mounting possibility
The water extraction and ventilation items have been solved and tested in the system.
The independence and technical performances of the sample prepared according to the relevant standards of air, water impermeability and wind resistance tests, the samples with international Qualanod and Qualicoat surface treatment certificates, all system materials supported with 10 years liability insurance, Systems that can be tested in an approved and approved test center.

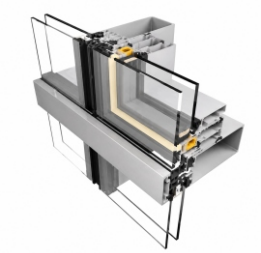
Aluminum Covered Panel Facade Systems
Aluminum, Structural Silicone Panel Facade Systems
Aluminum Semi-Lid (Two Side) Panel Facade Systems
Aluminum Cascade Panel Facade Systems

STRUCTURAL SILICONE FACADE SYSTEMS



Feature of the silicone facade systems is that from outside aluminum profiles are invisible and only used glasses and 15mm joints between glasses are visible. There are silicone sealant between panels, as space between glasses panels are provided with Epdm sealing gaskets. According to the structure of the building, geographical region and climatic conditions, used profiles can again heat insulation properties as a barrier system.

SEMI – STRUCTURAL FACADES



Structural (silicone) facades are visible structure and no distinctive difference between the external opening and unopened portiont.The joint between the glass is filled with rubber or silicone seal. Typical of the structural performance of the facade is that exterior glazing with glass bearing is affixed by a special silicone to aluminum tape, whereby the assembly is on aluminum supporting structure of the facade. Systems of this type of walls allow light assembly and disassembly of glazing which,combined with elegant design of new buildings, makes it the preferred option for façade solution.

Semi- structurul facades are glass with frame of aluminium profile which are hung on pre-assembled column and beam.

OFFICE PARTITIONING SERVICES

Polatoglu offers partitioning services for residential and commercial facilities.We supply and install high quality glass partitions,MDF partitions, aluminium partitions, frameless glass partitions and demountable partitions.

Solid Partitions They ar of two types:

Plasterboard panels: A single skin plasterboard panel, gives a 30-minute fire rating, and a double skin, which gives a 1 hour fire rating.

Composite panels: The composite panel is made with a 27mm honeycombed core and faced off with 9.5mm of plasterboard to either side.
This type of panel is usually used in our demountable partitioning systems.

Glazed Demountable Partitions: This is an extremely versatile, non-load bearing, re-locatable partitioning system for internal use. Contained within a 50mm aluminium framework this system is light and durable.

Glazed partitions offer the ideal solution to your temporary or longer-term office requirements.

Made of aluminium or plastic sections to create single and double glazed modules, these panels can be faced in vinyl, melamine, veneer or steel and can be satin anodised or powder coated to any colour in the BS or RAL ranges.

The skirting can be made from plastic or aluminium from 75mm to 150 mm in height.

Glazed partitions are particularly useful if there is a need to maximise light or increase visibility in an office.

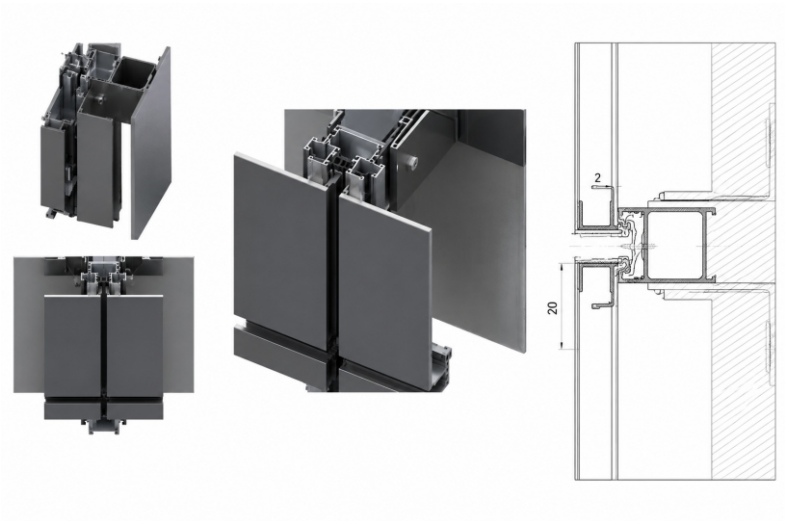
What are the benefits of using office partitioning over traditional building techniques?: The principal benefits of office partitioning over traditional building techniques are speed and flexibility. Partitions can be erected, demounted and re-erected very quickly and without the mess or noise disruption associated with other forms of re-modelling. In addition, in most cases, there is no need to close the office whilst the work is being carried out.

What choice of office partition finish is there? There is a choice of timber veneer, glass, vinyl steel or MFC (melamine faced composite).
The decision on which material to use should be based upon its intended purpose

What choice of door finish is available?: You can choose a door finish from timber, veneer, glass, steel, or laminate.

ALUMINIUM COMPOZITE PANEL SYSTEMS

Transparent facade systems are connected with glass as a cladding material, stainless steel, clamping elements and specially designed stainless steel handles (spider holder). Glazing units are connected vertically or horizontally to the main structural systems made from wood columns, stainless steel, glass column and steel tie rods with glass holders with spherical joints (ball joints) and point holders (spiders).
In this system, glass units that provide quality and desired performance value can be used in different combination such as double side tempered and laminated or double-glazing. In system, seal is provided with ultraviolet resistant silicone in horizontal and vertical joints.



COMPACT LAMINATED PANEL SYSTEMS

Compact Laminate: is being produced from 2mm up to 20 mm, very rarely up to 40 mm thickness by laminate method. Due to the pressure and temperature exposed during the production of compact laminate growth of the bacteria becomes impossible. Compact laminate: is being preferred due to its following features- in addition of being decorative and in various design, it is easy for installation; not being connected to other structural elements, being anti- bacterial and hygienic; being above the floor; not containing bacteria; no need for maintenance; as all needed accessories are exist there is no need on other structural elements; applicability in wet; adapt to all kinds of places; characterized the first day protection for many years without being deformed; resist to antibacterial chemicals in places such as shopping centers, hotels, schools, hospitals, and so on; being easily used in small areas for saving space; being more durable than other products against impact and scratches; being more resistant to water and humidity; easy for cleaning; not being affected by chemical influence and air pollution; non-flammable and flame retardant.

TRANSPARENT FACADE SYSTEMS

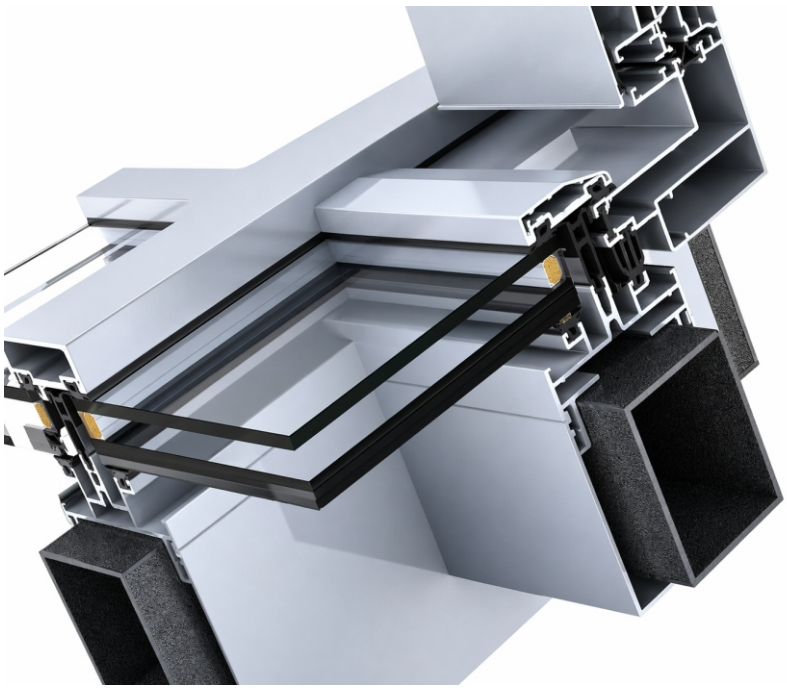
Transparent facade systems are connected with glass as a cladding material, stainless steel, clamping elements and specially designed stainless steel handles (spider holder). Glazing units are connected vertically or horizontally to the main structural systems made from wood columns, stainless steel, glass column and steel tie rods with glass holders with spherical joints (ball joints) and point holders (spiders). In this system, glass units that provide quality and desired performance value can be used in different combination such as double side tempered and laminated or double-glazing. In system, seal is provided with ultraviolet resistant silicone in horizontal and vertical joints.

SUN LOUVRE SYSTEMS

In facades directly reflected by sun light with solar shading feature providing insulation without cutting sun light, protecting facade from all weather conditions, used in exterior of all kind of projects, adding value to the stylish view of facade, is more common system in Europa.

SKYLIGHT ROOFING SYSTEMS

Skylight systems due to the feature of reinforced steel can easily pass the distance. Skylight system has structure to take out both condensation and water leakage in system and condensation water, that can occur on the inside glass surface due to the condenser channels in the bracket profile.
In skylight system it is possible to put wings opening in every position, to equip this wings with motor mechanisms and by sensor or manually ventilation and smoke extraction can be performed automatically.



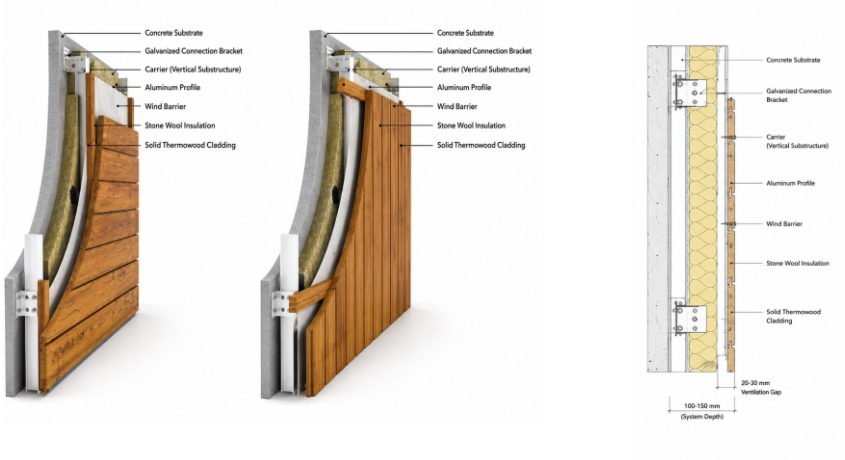
- Designed to create bright spaces using natural light.
- Can be applied with or without conduit channel.
- It can be applied with horizontal - vertical cover or horizontal silicone with vertical cover.
- Designed to accommodate large openings; Application and manufacturing is a practical system.
- There are alternatives to the inner cover that can be used to cover the steel substructures that carry the system.
- It is possible to apply glass and polycarbonate sheet.
- It is economical at the same time as it has a wide range of products.

THERMOWOOD FACADE SYSTEMS

Thermo wood, is heat treatment method for protecting the natural and perfect form of the wood.
Thermo wood process" is heating of the material up to 180C and projecting by vapor.
Thermo wood process: except protection wood by vapor, reveal chemical changes occurring in wood.

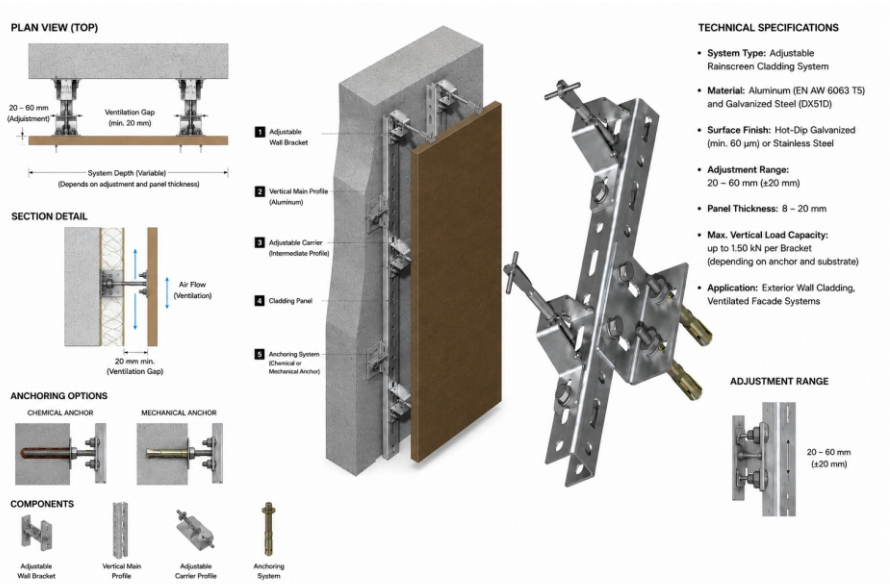
THERMOWOOD PROCESSING STAGES

Thermo wood Heat Wood process can be divided into three main stages:
Stage 1: Drying; Oven temperature is being reached 100C by using heat.
Then, the temperature is being raised in a continuous manner to 130C, wood is dried during this time and humidity is reduced to zero.
Stage 2: Heat treatment; heat in wood is being raised by water vapor to 180C (Thermo S) and 212C (Thermo D). When target temperature is reached, this period continuous for 2-3 hours.
Stage 3: Cooling and humidification; In the last stage wood heat is being reduced up to 80C - 90C by using water spray system and humidity of the wood is being reduced to 4-6%' or shall continue until it reaches.



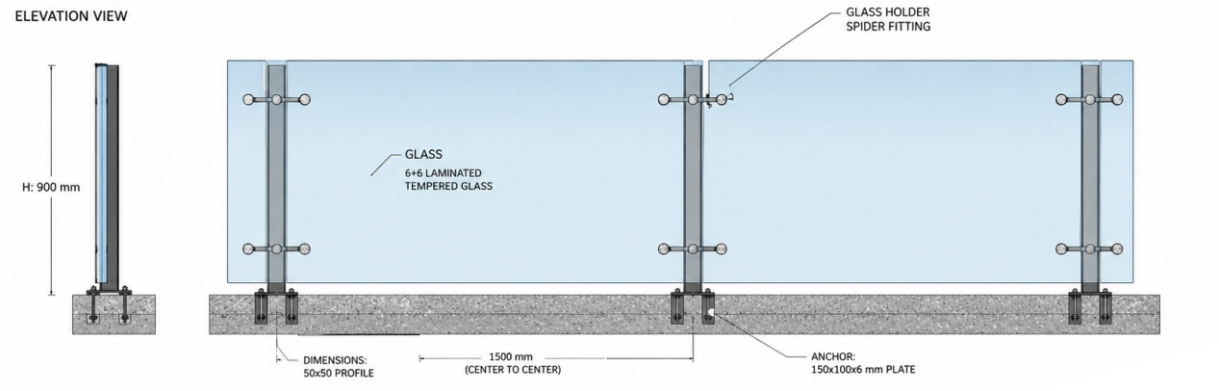
MECHANIC SERAMIC FACADE SYSTEMS

Mechanical system is screwing of the marble by stainless steel pins and hooks to the structure. In mechanical systems space between marble and wall allows the marble and wall to act independently from one another.
This case minimizes the stress between material.in addition, space between structure and façade protects building from external factors and this space allow building to be covered with required insulation material.In case of building affected by natural movement this system protects marbles from breaking in such method ceramic and like coating can also be applied to the building as mechanical system.



GLASS RAILING SYSTEM

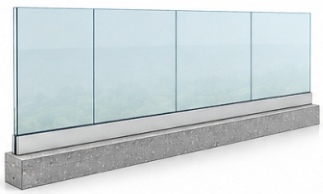
ELEVATION VIEW



BASE MOUNTED GLASS RAILING SYSTEM

TECHNICAL INFORMATION

This document provides technical information about the performance, loads and regulations for the base mounted glass railing system.



GLASS SPECIFICATIONS

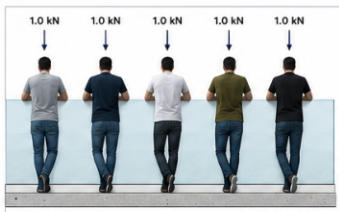
Glass Type	Laminated Tempered Glass
Glass Configuration	6+6 Laminated + 1.52 PVB + 6+6 Tempered
Total Thickness	17.52 mm
Edge Finish	Polished
Impact Resistance	Complies with EN 12600
Safety Class	Complies with EN 12150-1

BASE PROFILE SPECIFICATIONS

Base Profile	Aluminum Base Profile (Extruded)
Profile Height	120 mm
Profile Finish	Anodized / Powder Coated
Installation	Surface Mounted (Base Mounted)
Drainage	Integrated Drainage Channels
Glass Setting	Dry Glazing with Gaskets

1. PEOPLE LOAD (HORIZONTAL LOAD)

The system is designed to resist horizontal load caused by people leaning on the railing.



Applied Load (5 People Leaning)

q_k = 1.0 kN/m (EN 1991-1-1)

Total Load on 5.0 m Length

Q_k = 5.0 kN

NOTE: The system is designed with a safety factor in accordance with the relevant standards.

2. WIND LOAD (HORIZONTAL LOAD)

The system is designed to resist wind pressure acting on the railing.

SYSTEM PERFORMANCE

Category	Public & Residential Areas
Application	Indoor / Outdoor
Maximum Glass Height	Up to 1100 mm *
Maximum Panel Width	Up to 1500 mm
Serviceability Limit State	Deflection ≤ H/300
Ultimate Limit State	Safety factor according to EN 1990
Durability	Corrosion resistance suitable for exterior use

* May vary depending on project conditions and glass configuration.

STANDARDS & REGULATIONS

EN 1990	Basis of Structural Design
EN 1991-1-1	Actions on structures – General actions – Densities, self-weight, imposed loads for buildings
EN 1991-1-4	Actions on structures – General actions – Wind actions
EN 1993-1-1	Design of steel structures – General rules
EN 1999-1-1	Design of aluminum structures – General rules
EN 12150-1	Thermally toughened soda lime silicate safety glass
EN 12600	Pendulum test – Impact test method and classification
TS 11758	Building hardware – Glass railing systems – Requirements

WIND LOAD EXAMPLE (EN 1991-1-4)

Basic wind speed ($v_{b,0}$)	:	28 m/s (Example)
Terrain category	:	II
Height above ground (z)	:	10 m
Peak velocity pressure (q_p)	:	$0.5 \times \rho \times v^2 \times c_e$ = 0.62 kN/m² (Example)

Design wind pressure on railing (q_d) = $q_p \times c_f$

$q_d = 0.62 \times 1.5 = 0.93$ kN/m² (Example)

ρ: Air density (1.25 kg/m³) c_e: Exposure coefficient c_f: Force coefficient (1.5)

TECHNICAL NOTES

- The installation must be carried out by qualified personnel.
- All fixings and anchors must be tightened according to the manufacturer's instructions.
- The structural adequacy of the mounting surface must be verified.
- Regular inspection and maintenance are recommended.
- Local regulations and project specifications must be followed.

SAFETY
Designed to provide maximum safety under imposed and wind loads.

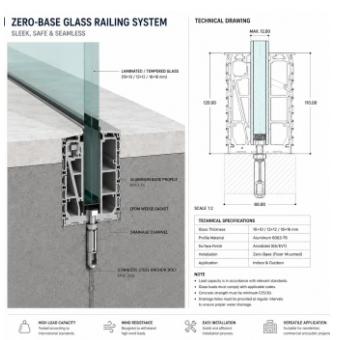
WIND RESISTANCE
Engineered to resist wind loads according to EN 1991-1-4.

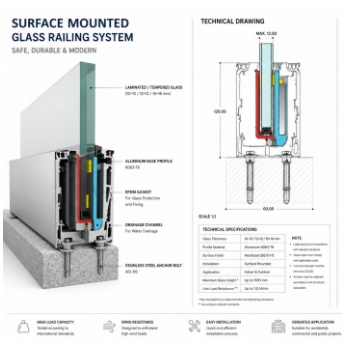
PEOPLE LOAD
Resistant to horizontal loads caused by people leaning.

DURABILITY
High quality materials ensure long term performance.

EASY INSTALLATION
Modular components allow fast and secure installation.

COMPLIANCE
Designed in accordance with European standards.





GFRC Cladding Panels | 8-Axis CNC – Industrial Robot
Construction: GFRC structural elements, architectural models.
Robotic Machining Center (8-Axis CNC – Industrial Robot) High-Precision and Flexible Manufacturing Solutions

All 3D panel geometries are developed using advanced parametric modeling software such as Rhinoceros (Rhino), enabling precise free-form surface design, dimensional control, and mold optimization. The finalized digital models are then converted into CAD/CAM production data and transferred directly to CNC-controlled robotic machining systems for mold fabrication.

This fully integrated digital workflow ensures maximum accuracy, repeatability, efficient production processes, and a seamless transition from design concept to physical manufacturing.

Terrazzo Façade Stone | Material Composition | Chemical & Mineral Structure

Terrazzo façade panels are composed of mineral-based and cementitious materials, including:

Calcium Carbonate ($CaCO_3$) → Derived from marble aggregates
Silicon Dioxide (SiO_2) → Found in quartz and sand components
Aluminum Oxide (Al_2O_3) → Contributes to hardness and durabilityIron
Oxides (Fe_2O_3 / Fe_3O_4) → Used as natural pigments for color variations
Calcium Silicates (C_3S / C_2S) → Main binding phases in cement matrix
Polymer Modifiers (Acrylic / Latex-based compounds)
→ Improve adhesion and flexibility
Water (H_2O) → Controls hydration and workability of the mix

Optional Performance Additives
Depending on performance requirements, the mix may also include:

Titanium Dioxide (TiO_2) → UV resistance and color stability
Zirconium Compounds (ZrO_2) → Enhanced abrasion and surface resistance
Silica Fume (Microsilica) → Increased density and reduced porosity

PRODUCTION PROCESS

1. MIXING
Natural aggregates, cement, pigments and additives are mixed.

2. CASTING
The mixture is poured into molds with vibration for compaction.

3. SURFACE FINISHING
The surface is leveled and textured according to the design.

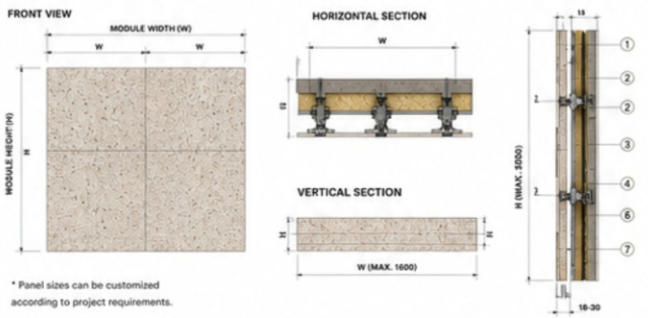
4. CURING
Panels are cured under controlled humidity and temperature.

5. POLISHING
Surface is polished to achieve the desired finish.

6. QUALITY CONTROL
Each panel is inspected for dimensions and surface quality.

7. PACKAGING
Panels are packed with protection for safe transportation.

SYSTEM OVERVIEW & DETAILS



* Panel sizes can be customized according to project requirements.

APPLICATION EXAMPLES

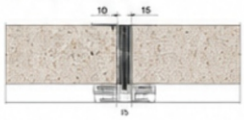
TERRAZZO STONE PANEL FACADE APPLICATION

PANEL & BRACKET CONNECTION DETAIL

CONNECTION DETAIL

HORIZONTAL JOINT DETAIL

VERTICAL JOINT DETAIL



TECHNICAL SPECIFICATIONS

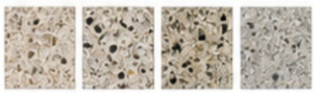
Panel Thickness	18 – 30 mm
Max. Panel Size (W x H)	1600 mm x 3000 mm
Weight (Approx.)	45 – 70 kg/m²
Fire Performance	Non-combustible (A1)
Water Absorption	≤ 5%
Flexural Strength	≥ 8 MPa
Impact Resistance	High
Freeze – Thaw Resistance	Excellent

ADVANTAGES

- Elegant and natural appearance
- High durability and long service life
- Resistant to UV, weather and pollution
- Low maintenance
- Precision-engineered for safe and fast installation
- Sustainable and recyclable materials

MATERIAL OPTIONS

AGGREGATE OPTIONS



FINISH OPTIONS

Polished Honed Bush Hammered Sandblasted

TYPICAL APPLICATIONS

- Office Buildings
- Commercial Complexes
- Hotels & Resorts
- Institutions
- Residential Projects
- Public Buildings

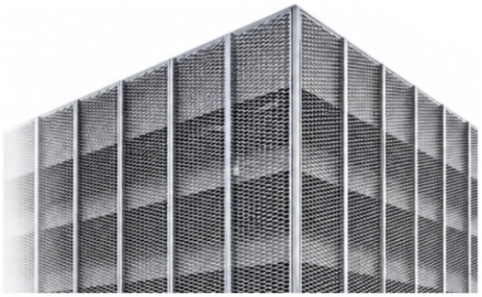
MESH FACADE PANELS

aluminium facade company

Vision of the Polatoglu is to be at every point of construction sector

Mesh Façade Panels | Architectural Metal Systems – Application Areas (Industries)
Architecture & Construction: Secondary façade systems for modern buildings.
Commercial & Retail: Sun-shading and decorative façade applications.

Manufacturing System (Mesh Panels)
Mesh panels are produced through cutting, perforating, or expanding metal sheets using industrial processes.Panels are then shaped, framed if required, and prepared for façade installation.This ensures consistent geometry, structural stability, and efficient production.



SYSTEM FEATURES

LIGHTWEIGHT & DURABLE
High strength-to-weight ratio ensures long-term performance with minimal maintenance.

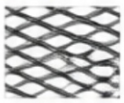
TRANSPARENCY & AESTHETICS
Mesh patterns provide visual permeability, daylight control and a modern architectural look.

WIND & WEATHER RESISTANCE
Engineered to withstand wind loads and environmental effects.

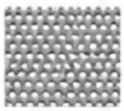
VERSATILE APPLICATION
Suitable for façades, sunscreens, railings, ceilings and custom architectural applications.

SUSTAINABLE SOLUTION
Recyclable materials and optimized production processes for environmentally responsible design.

MESH TYPES

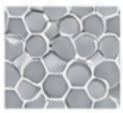


EXPANDED MESH
High strength and rigidity. Ideal for façade, railing and screen applications.



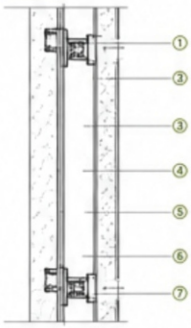
WOVEN MESH
Elegant appearance with precise openings. Perfect for decorative and architectural use.

PERFORATED MESH
Different hole patterns and open area options for sun shading and ventilation applications.



DECORATIVE MESH
Custom patterns and unique designs for architectural identity.

TYPICAL MESH PANEL DETAIL



① MESH PANEL
② VERTICAL SUPPORT (Aluminum / Steel)
③ HORIZONTAL SUPPORT (Aluminum / Steel)
④ CONNECTION BRACKET (Aluminum / Steel)
⑤ ANCHOR BOLT (Stainless Steel)
⑥ INSULATION (Optional)
⑦ MAIN STRUCTURE (Concrete / Steel)

OUR ENGINEERING PROCESS

01 CONCEPT & REVIEW
Evaluate architectural intent, performance requirements and design conditions.

02 ANALYSIS & DESIGN
Develop mesh pattern, panel dimensions and support system in accordance with project requirements.

03 DETAILING
Produce shop drawings, connection details and material specifications.

04 VERIFICATION
Check structural performance, fixing systems and fabrication criteria.

05 PRODUCTION SUPPORT
Provide technical support during manufacturing and installation.

MATERIAL OPTIONS

MATERIALS
- Aluminum
- Stainless Steel
- Galvanized Steel
- Corten Steel

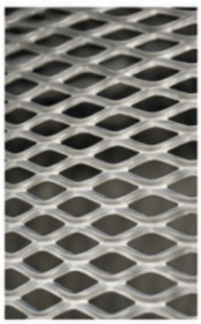
SURFACE FINISHES

Powder Coating
Wide range of colors and high durability.

Anodized Finish
Corrosion resistance and premium appearance.

PVDF Coating
Excellent weather resistance for exterior applications.

Special Finishes
Custom textures and metallic effects.



TYPICAL APPLICATIONS


BUILDING FACADES


SUN SHADING SYSTEMS


BALCONY & RAILING SYSTEMS


CEILING & INTERIOR SYSTEMS

OUR COMMITMENT

Polatoğlu delivers mesh panel solutions with engineering precision, aesthetic integration and sustainable performance.

PRECISION ENGINEERING
Advanced analysis and precise design for reliable performance.

QUALITY MANUFACTURING
High-quality materials and strict production control.

AESTHETIC INTEGRATION
Tailored solutions for unique architectural visions.

LONG-TERM PARTNERSHIP
End-to-end support from design to installation.

MANUFACTURING FACILITY

aluminium facade company

Vision of the Polatoglu is to be at every point of construction sector

27

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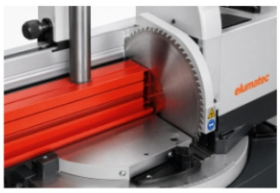
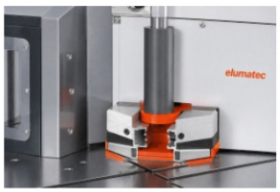
DOUBLE MITRE SAW DG 104





Description

The optimal double mitre saw for series production as well as for special applications
The universal pivoting and tilting of both saw units allows cutting of high and wide profiles as well as every type of compound mitre.
Consequently, many profiles can be cut without support blocks
External-dimension cuts possible for all cutting variants. Consequently, no complicated length calculations are necessary.
This is a big advantage when cutting special angles
Pivoting range with digital angle display
Safety hoods
Equipped with saw blades as standard
Equipped with digital display E 111 as standard
Pulsed coolant system

Technical specifications

Minimum cutting length at 90° 350 mm
Minimum cutting length tilted at 45° 350 mm
Pivoting range inwards 90° - 45°
(up to 22.5° manual with digital display)
Tilting range inwards pneumatically 90° - 45°
For cutting range, see cutting diagram
Saw blade diameter 420 mm
Saw blade speed 2,800 rpm
Power supply 230/400 V, 3~, 50 Hz
Power output per motor 4 kW
Compressed air supply 7 bar
Air consumption per working cycle 40 l without spraying, 64 l with spraying

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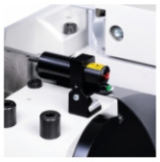
NOTCHING SAW AKS 134/00

Description

Variable notching possibilities for mullion and transom combinations, e.g. for curtain walls, conservatories, sky lights, and special designs.
Precise and safe notching is ensured because the workpiece is fixed and only the saw units move. Both saw units are adjusted in height simultaneously by means of a hand wheel (analogue display on the hand wheel)

The cutting depth is set using an analogue display. Manual angle adjustment of the saw blades using a digital display of the tilting angles
Support table with compound slide and pivoting back fence is manually adjustable for optimal use of the cutting rangeThe angle of the pivoting back fence is shown on a digital display. Horizontal and vertical profile clamping.

Automatic working cycle at a 90° pivoting angle (two-hand control when cutting special angles) Hydro-pneumatic saw feed.



NOTCHING SAW AKS 134/10
See AKS 134/00, however:

Equipped with a 4-axis controller for automatic adjustment of the horizontal and vertical saw blades for angle cutting, as well as for height adjustment and notching depth. Values from design drawings can be entered directly via the keyboard.

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END MILLING MACHINE AF 223/01

Description

For routing transoms and door profiles made of aluminium or PVC
Large cutting range of up to 400 mm
Continuously adjustable table height
Automatic work sequence
Tool diameters of up to 280 mm can be used
The material stop can be pivoted up to 70° to the left and right.
Notching up to 30° (acute angles, left and right). Detent at 90° with index pin.
Two installation positions for the material stop
With quick tool change system and "Spindle Lock" for easy tool changing
Precise, smooth-action and low-wear recirculating ball guides
Horizontal and vertical pneumatic material clamping provides flexibility
Depth stop for four different notching depths
Pulsed coolant system

Options

Extraction system
4-fold turret stop for table height
Digital display
Router
High performance cutting fluid

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CORNER CRIMPER EP-120

Description

For pressing profiles with a height of up to 68 mm
Extremely high pressing force due to large-volume bellows cylinder (maintenance free)
The machine is easy to adjust and operate
Counter bearing can be positioned pneumatically, mechanical locking
Support arms and pressing blades included as standard

Options

Additional support
Special pressing blade

SCHÜCO

ISOMAT 5 TAPPING & ROLLING MACHINE

ISOMAT 5

For rolling the Schüco AWS and Schüco ADS system profile as well as special profiles and V8 components together with the insulating bars and for rolling down the angles on various profiles from the Schüco facade and skylight constructions.

We reserve the right to make changes to dimensions and designs in the interests of technical progress.Illustrations may differ from the original and/or contain options which would incur an additional charge.

Operating speed: 34m/min
Monitoring speed: -
Adjustment of rollers: different roller

natal CNC Alüminyum İşleme Makineleri

ND442L - PANEL 3 +1 AXIS CNC MACHINING

Description

CNC 3 + 1 axis milling, 3 axes (X, Y, Z) and tool change axis (C) are fully CNC controlled;
Aluminum composite, aluminum profile, plexiglass, compact laminate and stainless steel panels on all kinds of joint opening, sizing, milling, drilling operations;
All kinds of angular and circular processes are applied on the panels. It works with standard 2D CAD CAM graphics and optimization software,
but instead of this software, 3D CAD CAM graphics and optimization software can be installed in the system.

Sertifika
Certificate

POLATOĞLU

Polatoğlu Metal Anonim Şirketi

TS EN ISO 14001:2015
Çevre Yönetim Sistemi
Environment Management System

mrtsistem

Sertifika
Certificate

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Certificate

POLATOĞLU

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TS EN ISO 14001:2015
Çevre Yönetim Sistemi
Environment Management System

mrtsistem

CERTIFICATE OF INCORPORATION OF A PRIVATE LIMITED COMPANY

Company Number **10907563**

The Registrar of Companies for England and Wales, hereby certifies that

POLATOGLU METAL LIMITED

is this day incorporated under the Companies Act 2006 as a private company, that the company is limited by shares, and the situation of its registered office is in England and Wales.

Given at Companies House, Cardiff, on **9th August 2017**.

The above information was communicated by electronic means and authenticated by the Registrar of Companies under section 1115 of the Companies Act 2006

Companies House

REGISTRAR OF COMPANIES FOR ENGLAND AND WALES

THE OFFICIAL SEAL OF THE REGISTRAR OF COMPANIES


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Polatoğlu Metal A.Ş.
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Baku/Azerbaycan
Tel: 00994124125323
Web: www.polatoglu.org
2026
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Genel Müdür


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2023
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2016
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Polatoglu Metal Co. Inc.

QUALITY POLICY

Polatoglu Metal Co. Inc. is committed to achieving the highest standards in the field of aluminum facade works. Our primary goal is to enhance customer satisfaction and pursue continuous improvement. The fundamental elements of our quality policy are outlined below:

Customer Focus
Understanding the needs and expectations of our customers is our priority. We aim to provide high-quality products and services, taking customer feedback into account to foster a culture of continuous improvement.

Quality Management
We effectively implement our quality management system in all our processes and strive for continuous improvement. By providing necessary training, we enhance the competencies of our employees to meet quality standards.

Sustainability
We strive to minimize our environmental impact and adopt sustainable practices. We prioritize energy efficiency and waste management in our production processes.

Supplier Collaboration
We collaborate with reliable suppliers to procure quality raw materials and services, regularly evaluating supplier performance.

Continuous Improvement
We continuously review and improve our quality management system. By monitoring our performance indicators, we take necessary actions to achieve our objectives. This quality policy must be embraced and implemented by all our employees.

We are committed to providing all necessary resources to achieve our quality goals and take the required steps for continuous development.

Regards,

ERÇİN POLAT
Managing Director

MODERN BROCHURE

POLATOĞLU

aluminium facade company

Unite to make planet Earth pollution-free.

Design.
Engineering.
Facades.

Polatoglu Metal Co. Inc.

Head Office | ISTANBUL

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E-Mail: info@polatoglu.org

Call Us: ***2300**

www.polatoglu.org/contact

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