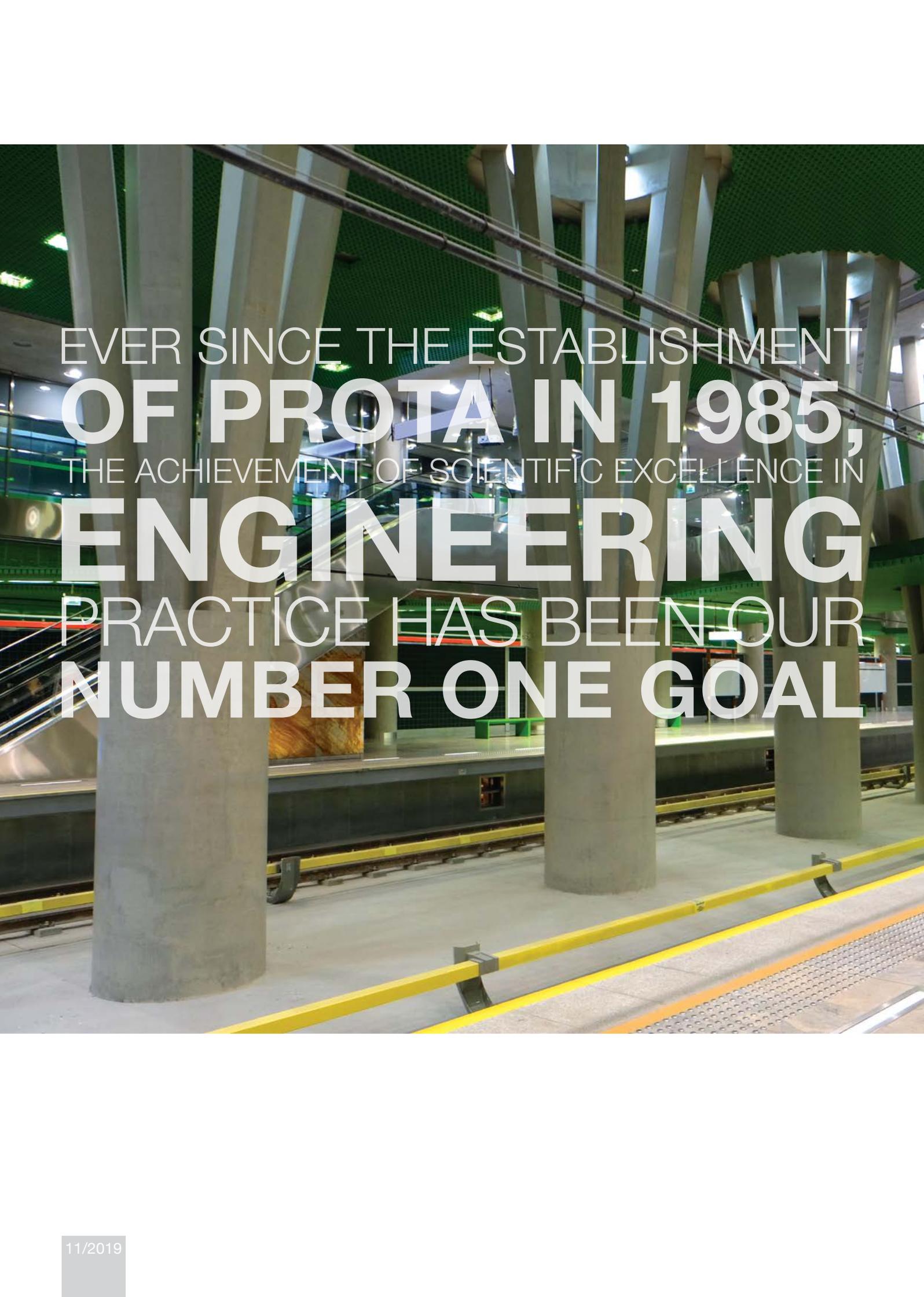


**PROTA**  
ENGINEERING



# INDUSTRY

**Reliable Industry for Future**



EVER SINCE THE ESTABLISHMENT  
**OF PROTA IN 1985,**  
THE ACHIEVEMENT OF SCIENTIFIC EXCELLENCE IN  
**ENGINEERING**  
PRACTICE HAS BEEN OUR  
**NUMBER ONE GOAL**

# FROM 1985 ONWARDS...

Prota specializes in architectural and engineering design of high-rise buildings, public buildings, sports complexes, business centers, healthcare, and educational facilities, transportation structures, and light and heavy industrial buildings, as well as execution of feasibility studies, infrastructure projects, and urban and regional planning. In addition to its extensive design experience, Prota also provides services in project, and construction management, design and construction supervision, systems engineering, quality control and contract management. So far, Prota has undertaken hundreds of projects of various scales in several different countries around the globe.

With over 300 professionally trained staff on various engineering and architectural disciplines, Prota is committed to focus on the project-specific requirements of its clients by employing most advanced technologies to develop solutions while observing the principles of social responsibility and environmental awareness.

Since its establishment in 1985, the Prota Group has continually grown by including Prota Computer within its structure in 1991, Promim in 1995, Prota Software in 2002, Prota Architecture in 2008, Prota Asia in 2015 and Prota Polska in 2019.

In addition to the Headquarters in Ankara, Prota provides its services in three well-established offices in Istanbul, Izmir and Mersin along with its Europe office in Warsaw, Poland and Asia offices in Malaysia and Singapore. Furthermore, Prota also has R&D office located in Middle East Technical University (METU) in Ankara for conducting engineering software development and research on earthquake engineering, retrofitting and seismic design.



# PRINCIPLES OF PROTA

As the pioneer in the Turkish engineering and consultancy sector, Prota has been employing business and management policies and professional values that are developed along the way. Today, “Prota Principles” focus not only on customer satisfaction but on the professional development of its staff within an environment that adopts the “Sincere at Relations, Responsive at Work” spirit.

Using its vision as a springboard, Prota aims to fulfill its social responsibility obligations by maintaining the motto, “Reinforcing the Future”. Prota’s objectives have been to provide services that are effective in the consultancy sector on both national and international levels that ensure high-level customer satisfaction and, that utilize the latest technologies. As a FIDIC member, Prota is liable to follow business policies compliant with the FIDIC Code of Ethics.

As Prota, we hereby commit ourselves to:

- Improve our knowledge and skills by following technological and scientific developments,
- Focus on research, development, and renovation projects,
- Offer reliable and timely services,
- Meet the latest quality standards in our projects and working units,
- Strictly conform to in-house training policies at all levels,
- Maintain a managerial strategy that encourages innovation and integrity and extending team spirit in this direction,
- Ensure high-level customer satisfaction,
- Achieve customer dependency,
- Abide by national and local environmental policies and current environmental management standards in all of our activities.





Prota's objectives have been to provide services that are effective in the consultancy sector on both national and international levels that ensure high level customer satisfaction and, that utilize the latest technologies.

# WHY PROTA?

Prota engineers and architects have so far undertaken several different projects having total construction area over 30 million sq. meters over 30 countries around the globe.

Prota takes an active part in the adaptation of Turkish standards and codes to EU norms, in particular regarding building design, construction materials and methods.

Continuous in-house training is an essential feature of Prota tradition.

To provide the most cost-effective architectural solutions that achieve the highest process efficiency, Prota employs many of the structural system solutions available for structures such as prefabricated concrete, reinforced concrete, steel, cabled suspended structures, composite, prestressed, and post-tensioned reinforced concrete systems.

For almost all the projects designed and managed, feasibility studies, cost and quantity estimations, technical specifications, and procurement consultancy services are provided by Prota. In some cases, Prota provides construction quality management and supervision services during the construction of the designed facilities.

Prota engineers and architects, who keep abreast of the literature and latest developments in their fields, and are well equipped to propose innovative system models in order to produce solutions that are economical and aesthetically pleasing.



A management encouraging  
innovation and integrity.

# PROTA SERVICES

Prota's success lies in its interdisciplinary nature that combines architecture, civil, structural, electrical, mechanical engineering, and landscaping design within its body, offering integrated solutions to its clients

Prota offers multi-disciplinary design and consultancy services for the entire life-cycle of a project:

## Design Phase

- Architectural BIM Design
- Engineering BIM Design (all disciplines)
- Damage Assessment and Survey Measurements
- Land Surveying
- Development of Techniques and Methodology
- Urban and Regional Planning
- Geological/Geotechnical Investigation and Design
- Research and Development Projects
- Feasibility Studies
- Technical Consultancy
- Preparation of Tender Documents and Specifications

## Procurement Phase

- Eligibility Surveys and Investigation Studies
- Tendering Support and Technical Assistance
- Bid Evaluation and Contract Negotiations Support

## Construction Phase

- Project and Construction Management
- Construction Supervision and Technical Assistance
- Commissioning Assistance
- Operation Consultancy
- Consultancy Services for Acceptance Works

## Disciplines

- Transportation Structures and Systems
- Above & Underground Rail and Road Structures
- Light and Heavy Industrial Buildings,
- High-rise Buildings,
- Warehouses,
- Underground and Earth Retaining Structures,
- Seismic Assessment and Retrofit Works
- Restoration
- Historical Structures
- Site Development
- Zoning
- Urban and Regional Planning
- Project & Construction Management
- Research and Development



# INDUSTRIAL STRUCTURES

A systematic design approach integrating theoretical and practical engineering knowledge within the process.

Generally, the client's requirements are based on efficiency, economy, and close compliance to the production processes. These requirements, as a matter of fact, makes the industrial facility designs rather complicated.

With regard to industrial buildings, Prota adopts a systematic approach that integrates theoretical and practical engineering knowledge, and employs a method that analyses different types of structural systems together with its essential subsystems. The centralized procedure we employ in the design of industrial facilities is to develop integrated solutions that perceive the complicating factors which influence structural stability, security, and serviceability.

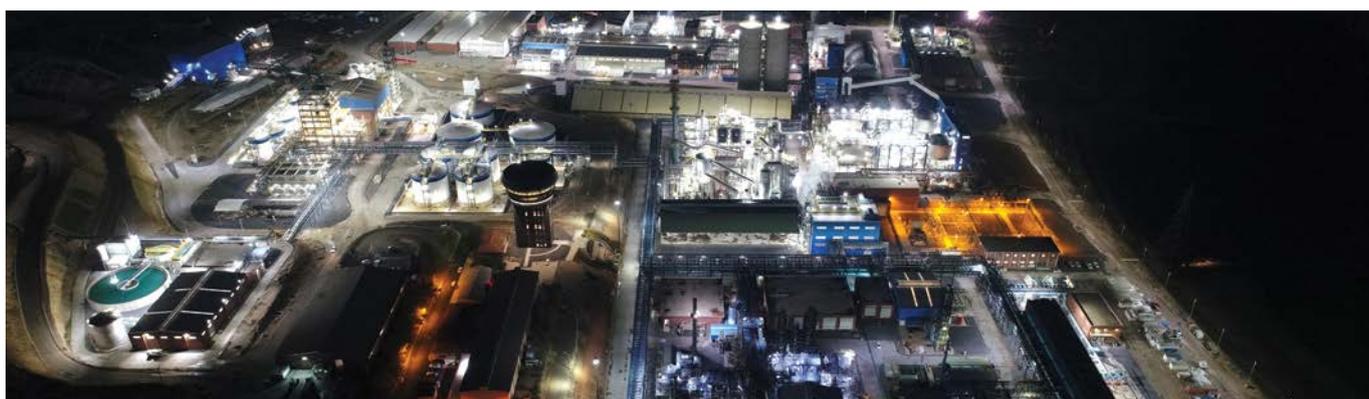
Prota Engineering has been following this approach to design numerous industrial facilities in a wide range of business sectors in the last 35 years. The facilities that Prota have designed and engineered include power plants, combined-cycle natural gas and coal plants, cement factories, gypsum and drywall production facilities, mining and crushing/sieving plants, steel profile factories, heavy and light concrete prefabricated production facilities, electrical element factories, juice and concentrated juice factories, cold storages and meat processing units, packaging facilities, flour and pasta factories, transformer and en-

ergy structures, and large warehouses.

In addition to the process design, Prota also carries out the architectural, structural, mechanical, and electrical, infrastructural, and landscaping designs of a facility. In addition to architectural and engineering services, consultancy services for system-mechanics-equipment selection are also undertaken by Prota. For almost all the projects designed and managed, feasibility studies, cost and quantity estimations, technical specifications, and procurement consultancy services are provided by Prota. In some cases, Prota provides construction quality management and supervision services during the construction of the designed facilities.

To provide the most cost-effective architectural solutions that achieve the highest process efficiency, Prota employs many of the structural system solutions available for industrial structures such as prefabricated concrete, reinforced concrete, steel, cabled suspended structures, composite, pre-stressed, and post-tensioned reinforced concrete systems.

Prota utilizes Turkish, the US, and EN codes, as well as the local codes of other countries in the design process of industrial structures.

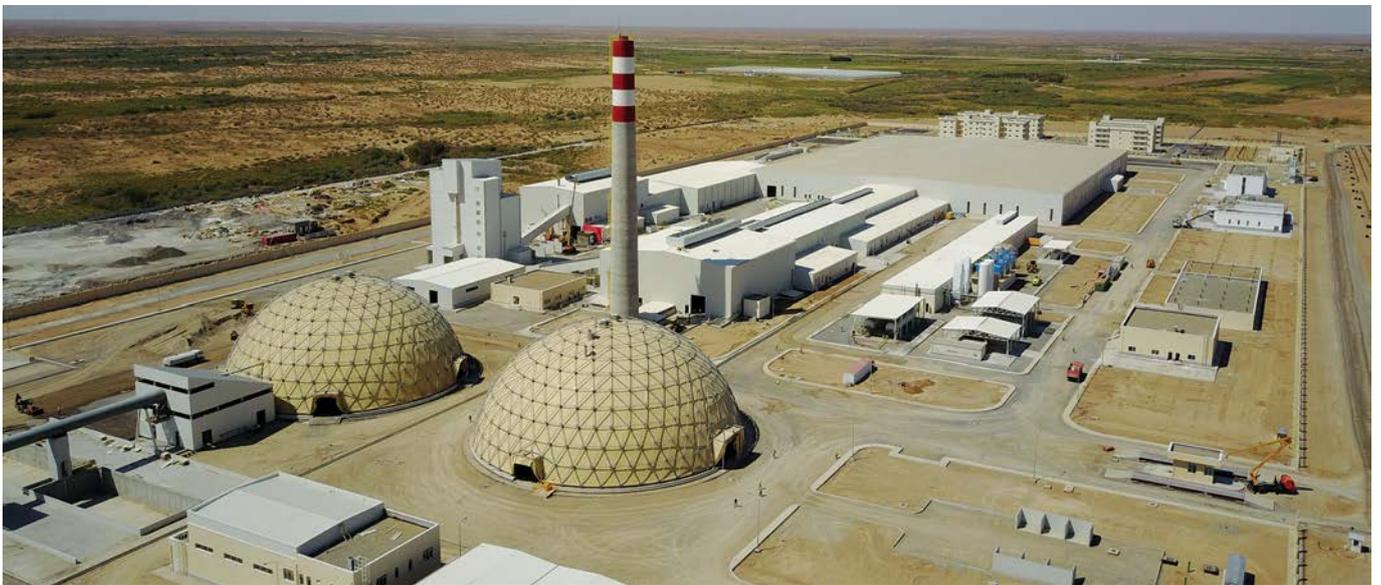


## Turkmenistan Glass Factory

Constructed by Tepe Turkmen, the glass factory is in Ashgabat, Turkmenistan. Covering about 110,000 sq. meters, the factory was opened in 2017. It was designed to produce seven types of glass products, including transparent and tinted, laminated and tempered glass with a thickness of four millimeters, and 85 million units of various transparent and colored glass containers.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Quantity Takeoff and Cost Analysis



## Kirikkale Independent Combined Cycle Power Plant

Constructed by Samsung C&T Corporation, the power plant is in Kirikkale, Turkey. Covering about 227,000 sq. meters, the power plant was opened in 2017.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents

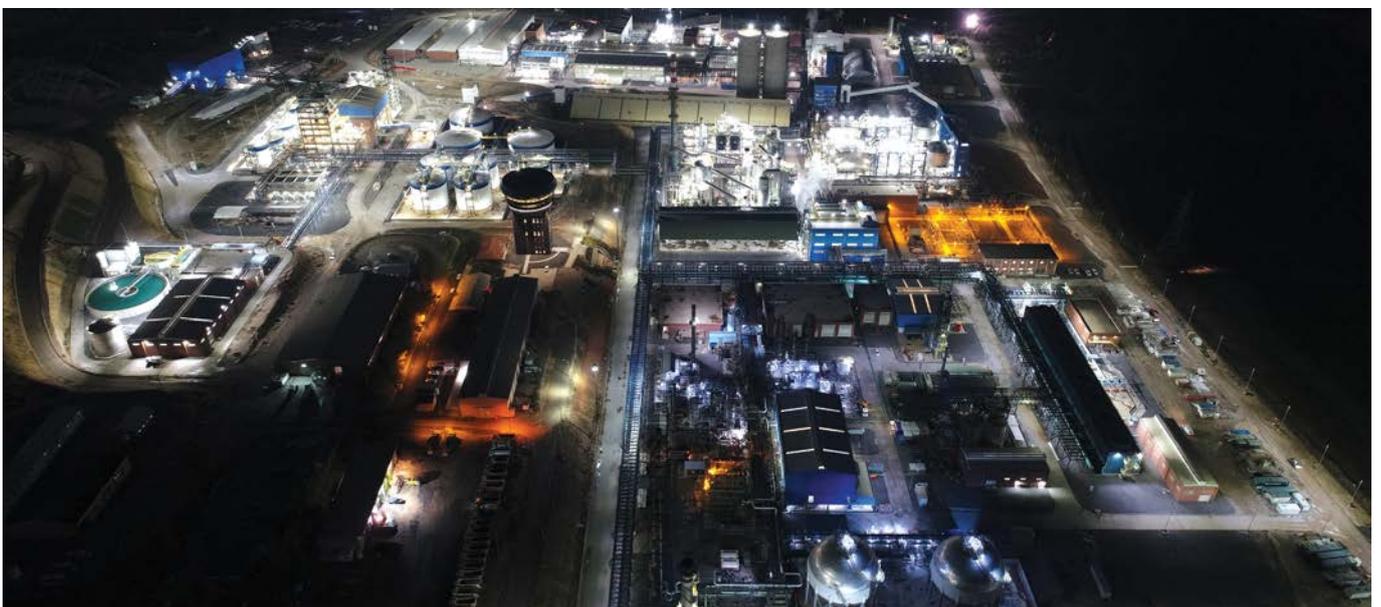


## Mardin Mazidagi Facilities

Constructed by Eti Bakir A.S., Mardin Mazidagi Facilities is in the district of Mazidagi in Mardin. Mazidagi Phosphate Plants has started its operations to: fulfill a portion of Turkey's fertilizer need, where as a country of agriculture, Turkey relies on imports; create employment, and; contribute to the economy of Turkey. The plant's capacity for producing phosphate rock is 550,000 tons per year.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Geotechnical Engineering Services
- Landscape Design Services
- Preparation of Infrastructure Projects
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents



## Samsun Combined Cycle Power Plant

Constructed by Cengiz Energy, the power plant is in Samsun, Turkey. Having 610 MW power of capacity, the plant was opened in 2016.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Technical Consultancy Services
- Quantity Takeoff and Cost Analysis

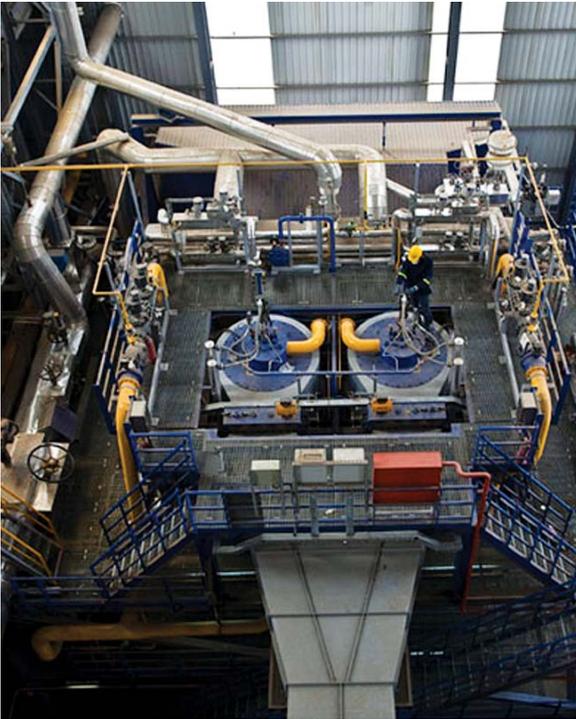


## Seydisehir Energy Facility

Constructed by ETI Aluminium, the facility is in the district of Seydisehir in Konya, Turkey. Consisting of two different buildings, the facility was opened in 2009.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Quantity Takeoff and Cost Analysis



## Samsun Tekkekoy Combined Cycle Power Plant

Constructed by Cengiz Energy, the power plant is in Samsun, Turkey. Having 240 MW power of capacity, the plant was opened in 2009.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Quantity Takeoff and Cost Analysis

## Turkcell Data Center

Constructed by Turkcell, the data center is in Izmir, Turkey. Built in accordance with international standards, Turkcell Izmir Data Center stands out with its state-of-the-art technology, as well as with the security capabilities it offers. Data center ranks among the most significant investments made in this field, with a white space of 2,400 sq. meters and an indoor area of 15,000 sq. meters.

The data center was also designed as earthquake resistant, as the center utilizes domestically produced a total of 87 seismic isolators in its floors. Furthermore, the project was also awarded a “LEED Gold” certificate that documents green building and environmental compliance.

Within the scope of the project, Prota’s services include;

- Reinforced Concrete and Steel Design
- Preparation of Seismic Isolation Projects
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents



## Tufanbeyli Thermal Power Plant

Constructed by Enerjisa, the power plant is in the district of Tufanbeyli in Adana, Turkey. Covering around 1600 hectares, the power plant is the country's largest privately owned, lignite-fired plant. Having 450 MW power of capacity, the power plant was opened in 2015.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Fire Safety Engineering and Control System Design
- Landscape Design Services
- Infrastructure Evaluation, Catenary System Design and Displacement Studies
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents



## Nuh Cement Power Plant

Constructed by Nuh Cement A.S, the power plant is in the district of Hereke in Kocaeli, Turkey. Having 40 MW power of capacity, the power plant was opened in 2005.



Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Infrastructure Evaluation, Catenary System Design and Displacement Studies
- Technical Consultancy Services
- Quantity Takeoff and Cost Analysis



## Ankara Gypsum Board Manufacturing Facilities

Constructed by Tepe Alcipan A.S., Ankara Gypsum Board Manufacturing Facilities are in Ankara, Turkey. The project was the first industrial enterprise of the country. Covering about 26,000 sq. meters, the project was completed in 1988.



Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Fire Safety Engineering and Control System Design
- Landscape Design Services
- Infrastructure Evaluation, Catenary System Design and Displacement Studies
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents

## Kocaeli Gypsum Board Manufacturing Facilities

Constructed by German Knauf AG, Kocaeli Gypsum Board Manufacturing Facilities are in the district of Kullar in Kocaeli, Turkey. Covering about 30,000 sq. meters, the project was completed in 2000.



Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Fire Safety Engineering and Control System Design
- Landscape Design Services
- Infrastructure Evaluation, Catenary System Design and Displacement Studies
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents

## Gypsum Crushing & Screening Plant

Constructed by Madinsan A.S., Gypsum Crushing & Screening Plant is in the district of Bala in Ankara, Turkey. Producing about 198,000-ton gypsum annually, the plant was opened in 2013.



Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Technical Consultancy Services
- Quantity Takeoff and Cost Analysis



## Socar Star Refinery

Constructed by TSGI Engineering, Socar's Star Refinery is in Izmir, Turkey. The refinery is the largest single-location real sector investment in Turkey's history and will be one of the biggest petroleum and gas operations in Europe, the Middle East and Africa. Covering more than 2,680,000 sq. meters, the refinery is expected to fully eliminate Turkey's need to import jet fuel, which will correspond to 7-8% of its total production.

Within the scope of the project, Prota's services include;

- Structural Reinforced Concrete and Steel Design
- Architectural Design
- Electrical and Mechanical Engineering Design
- Geotechnical Engineering Services
- Fire Safety Engineering and Control System Design



## Flour and Flour Products Plant

Constructed by UNO A.S., the plant is in Bergen-Op-Zoom, Netherlands. Covering about 18,000 sq. meters, the factory was opened in 1997. At the time it was constructed, the project was the biggest Turkish investment in the country.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Preparation of Cost Estimates, Bills of Quantities and Tender Documents

## Roketsan Tapa Facilities

Constructed by Roketsan, Roketsan Tapa Facilities is in Ankara, Turkey. Covering about 7,500 sq. meters, the facilities were opened in 2015.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Infrastructure Evaluation, Catenary System Design and Displacement Studies
- Quantity Takeoff and Cost Analysis



## Fruit Juice Concentration Plant

Constructed by Limkon, Fruit Juice Concentration Plant is in Adana, Turkey. Covering about 32,000 sq. meters, the factory was opened in 2007.

Within the scope of the project, Prota's services include;

- Reinforced Concrete and Steel Design
- Architectural Design
- Electrical Engineering Design
- Mechanical Engineering Design
- Landscape Design Services
- Infrastructure Evaluation, Catenary System Design and Displacement Studies
- Quantity Takeoff and Cost Analysis

## Solar Panel Plant

Constructed by Hanwha - Kalyon Joint Venture, the solar panel plant is in the district of Temelli in Ankara, Turkey. The project is considered a milestone in the development of domestic energy technologies. It will have a capacity to manufacture 500 megawatts of ingot casting, 650 megawatts of solar cells and 800 megawatts of solar panels. Covering 60,000 sq. meters, the facility is planned to be opened by the end of 2018.

Within the scope of the project, Prota's services include;

- Structural Reinforced Concrete and Steel Design
- Architectural Design
- Electrical and Mechanical Engineering Design
- Landscape Design
- Infrastructure Evaluation and Displacement Studies



## Kemberburgaz Waste-to-Energy Facility



Constructed by Hitachi Zosen Inova Company and Makyol Construction Joint Venture, Kemberburgaz Waste-to-Energy Facility is in the district of Kemberburgaz in Istanbul, the facility will produce electric power from coal gas, which triggers the global warming 21 times more compared to carbon dioxide. By producing 28 megawatts of energy, the facility will compensate electrical demand of approximately 1,500,000 people.

Within the scope of the project, Prota's services include;

- Structural Reinforced Concrete and Steel Design
- Architectural Design
- Electrical and Mechanical Engineering Design
- Landscape Design
- Infrastructure Evaluation and Displacement Studies

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