



eplas

LEADER OF  
SURFACE  
TREATMENT  
TECHNOLOGIES

PLATING PLANTS | GALVANOTECHNIK



LEADER OF SURFACE TREATMENT TECHNOLOGIES

eplas

**Passion, experience, and customer focus: Our secret to success!**

With our skilled team of specialists in Bursa/Turkey and our 20 years of engineering and chemistry experience in the field of surface treatment technologies, we design, manufacture, and activate turnkey plating plants and accessories to meet the needs of your business, increase your productivity and help you reach your business goals!



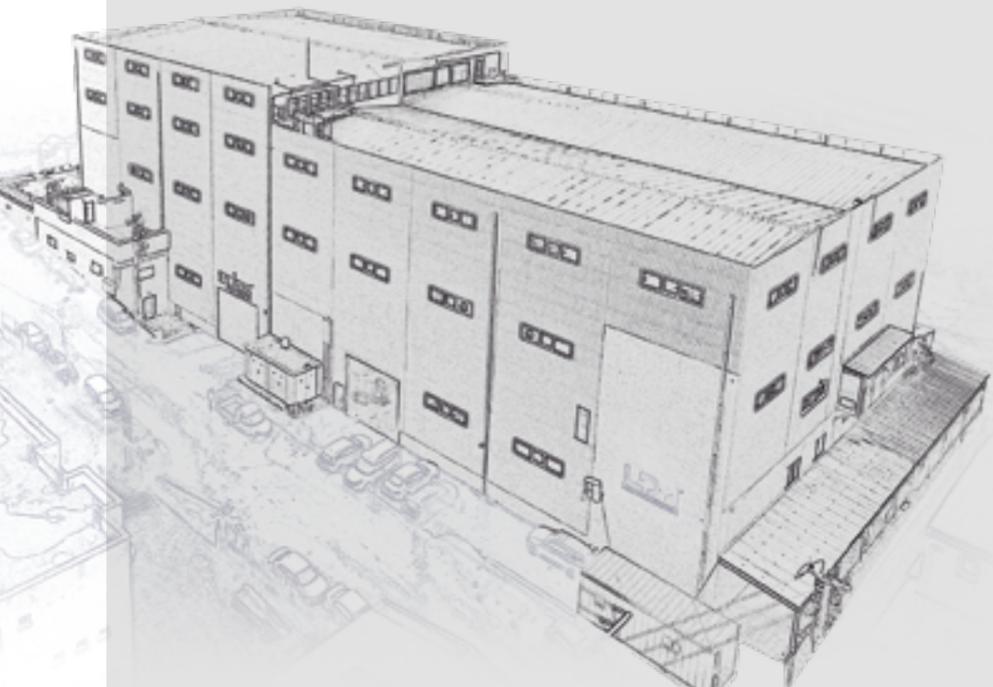


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## **LEADER OF SURFACE TREATMENT TECHNOLOGIES**

**With our skilled team of specialists in Bursa/Turkey and our 20 years of engineering and chemistry experience in the field of surface treatment technologies, we design, manufacture, and activate turnkey plating plants and accessories to meet the needs of your business, increase your productivity and help you reach your business goals**

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We manufacture surface treatment plants for customers all around the World. Our headquarters, production facilities and warehouse co-exist in Bursa on top of an approximately 4000 m<sup>2</sup> factory area.

We help our customers with all the technical services needed, from A to Z. We start with the process design based on the parts in scope, plan the full project together with the customer and also help with other needs such as chemicals and other auxiliary equipment, such as wastewater treatment and DI-water preparation plants.

All plants we manufacture are empowered with a user-friendly automation system that is not only simplified for our user needs, but advanced enough to reach your technology and quality requirements.

Finally, we offer state-of-the-art technologies in surface treatment with the most competitive price possible.

Our clients operate in different sectors: Automotive, defense, furniture, metalworking, etc. We design the right plating plants with robot-controlled automation for each customer's unique needs. We also provide the necessary training along with the manufacturing and assembly, as we ensure to provide a turnkey solution to our customer.

Our aim is to optimize your chemical process by analyzing your parts and capacity targets, to prevent errors by predicting them in advance, to reduce your operational costs and to increase the quality and efficiency of your system.

Once you are an official customer, from that moment, we start treating you as a partner and we commit to being always on your side whenever you have issues or questions.

Feel free to ask us for references about our previous or current clients and let them share their success stories with you!

## OUR APPROACH TO WORK



### SPECIAL FOCUS TO EVERY PROJECT AND CUSTOMER!

After receiving your inquiry, we take note of your expectations regarding the plating quality, capacity targets, available space and other environmental regulations.

Once this is clear, we arrange meetings with our mechanical engineers and chemical specialists to clarify everything before preparing the right process, layout, target dates and payment plan. These are all customized for your needs and explicitly call out in our offers.

After we shake hands, we start the production of your system components in our factory in accordance with the planned schedule.

During the production process, we will regularly keep in touch with you, keep updating you about the status, and we will be more than glad to respond to your requests in regards to any change requests on your project.

You are most welcomed to visit our factory any time during the production or even for the pre-acceptance, and we would be more than happy to host you in our factory and in our city.

Before we ship and assemble the components at your place of choice, we perform the required tests, including automation and purification, in order to obtain success during and after production and detect any issues in advance.



#### PRODUCTION

We will continuously be in touch with you throughout the production phase, inform you about the status of your project and answer your questions. You are also welcome to visit our factory any time before and during the production.



#### QUALITY CONTROL

Before shipping the entire system, we perform quality checks and ensure that it matches the agreed commitments.



#### INSTALLATION

Our technical staff, who is responsible for the installation, will be in continuous contact with you and carry out the professional and timely installation of all the system components we manufacture.



#### DEPLOYMENT

Our deployment staff checks all mechanical, automation, and software after assembly and prepares the system for operation.



#### TRAINING

Our team provides theoretical and practical training to your personnel on all relevant subjects and prepares them for the operation.



#### DOCUMENTS

After activation, we will delivery to you all necessary qualification and documentation including CE certificates.



# OUR SERVICES



**ZINC PLATING PLANTS (RACK)**



**ZINC PLATING PLANTS (BARREL)**



**NICKEL CHROME PLATING PLANTS**



**CATAPHORESIS PLATING PLANTS (E-COATING / KTL)**



**ABS PLATING PLANTS (CHROME ON PLASTIC)**



**HARD CHROME PLATING PLANTS**



**PHOSPHATE PLATING PLANTS**



**CHEMICAL-NICKEL PLATING PLANTS (ELECTROLESS)**



**HARD ANODIZE PLATING PLANTS**

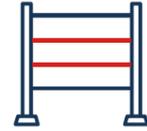


**ALLOY ZINC NICKEL PLATING PLANTS**



**WASTE GAS TREATMENT SYSTEMS**

## ZINC PLATING PLANTS (RACK)

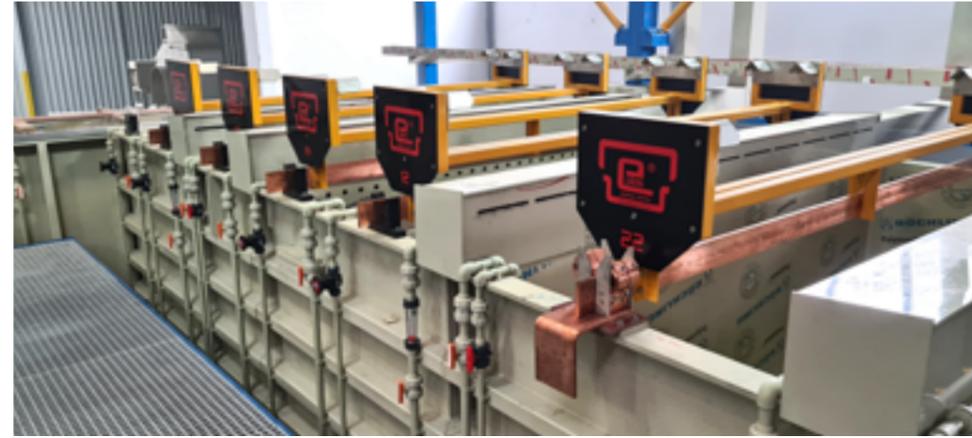


Zinc plating lines is preferred especially in sectors where quality expectations and target capacities are high such as automotive and home appliances.

The most common application of zinc plating for ferrous metals is by electrolytic methods which are economical, increases the corrosion resistance, and creates a decorative appearance.

Zinc coating (+3) friction and corrosion resistance can be increased with chrome passivation and different varnish-based applications.

According to client's request, zinc plated blue, yellow and black (+3 chrome) passivation can be included in the process.



## ZINC PLATING PLANTS (BARREL)



Zinc plating plants with drums (barrels) is preferred especially by the fastener, bolt, and nut manufacturers.

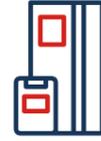
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## NICKEL-CHROME PLATING PLANTS



Nickel-chrome plating is used especially in kitchen appliances, home appliances and bathroom accessories where aesthetic and corrosion expectations are high. End results promise very high corrosion resistance, have white coloring with highly glossy surface.

To achieve optimum results, it is critical to choose the right equipment and do the right process design. Capacity targets, software automation, current efficiency (Filters, pumps, eductors, rectifiers, cascading techniques) are only some of the parameters that need to be calculated precisely for best efficiency.



## CATAPHORESIS PLATING PLANTS (E-COATING / KTL)



Cataphoresis Plating is preferred especially in the automotive industry due to the superior corrosion resistance (Over 1000 hours of salt spray tests).

However, it is also possible to apply cataphoresis plating to automotive spare parts that are affected by harsh environmental conditions.

Cataphoresis coating is an excellent treatment for automotive parts such as vehicle body, grift shaped parts, which have high corrosion expectations. These parts require homogenous coating, and this is not achievable with spray paint applications, only achievable through cataphoresis plating.



## ABS PLATING PLANTS (CHROME ON PLASTIC)



Abs, Pp, Psu, Ptfе, Pc, Mrn plating plants on plastic

It's not possible to directly coat industrial plastic materials with insulating properties by electrolysis method.

Through ABS plating on plastic with some special pre-treatments, it is possible to form a metal film layer on the surface of the plastic material with high conductivity. To achieve this, the surface is abraded with chemicals containing high abrasiveness ( $H_2CrO_4$ ) chromic and ( $H_2SO_4$ ) sulfuric acid and surface activation is done using metal salts with high conductivity. After that, a metal coating is applied by dipping.

A decorative appearance such as chrome, copper, or nickel can be obtained by electrolysis method on the coated surface.



## HARD CHROME PLATING PLANTS



Hard Chrome Plating Production is preferred in materials and machine parts where anti-magnetism, low surface roughness, corrosion and wear resistance are required, such as pistons and hand tools.

It is used for special purposes, where the hardness varies between 950-1100HV and the thermal resistance of the chromium element helps reach these goals thanks to its high resistance to abrasion and corrosion.



## PHOSPHATE PLATING PLANTS



### ZINC PHOSPHATE/MANGANESE PHOSPHATE

Phosphate plating plants are preferred by the companies operating in sectors like the automotive, white goods, space/defense, etc.

Phosphate plating is used as a pretreatment before plating, to increase corrosion resistance and to provide a better adhesion surface for coating systems. When used alone or with oil, phosphate reduces the friction characteristics of moving components or gear parts. It can be applied together with zinc or manganese.



## CHEMICAL-NICKEL PLATING PLANTS (ELECTROLESS)



Chemical nickel plating is a system that provides hardness up to 500-600 HV (48- 52 HRC) for products in a wide range of alloys such as aluminum, steel, bronze, and brass.

It is a special plating method. After applying chemical nickel plating, to prepare the coated parts for its purpose, it is possible to harden (up to 55-65 HRC) with special heat treatment applications from 550-610 HV to 900-1200 HV in cases where more hardness is required.

As it is an immersion based chemical treatment, thanks to homogenous thickness application, it provides high corrosion resistance.



## HARD ANODIZE PLATING PLANTS



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For the areas that require hardened surfaces, hard anodizing plating plants are used extensively. It is preferred by the companies operating in the following industries: Textile Machinery, Defense Industry, Weapon System and Biomedical devices.

It has different options such as natural anodized Coating, anodized plating on casting and black anodized Plating.

It is done by oxidizing aluminum alloy products with special formulated chemicals. An anodic film layer with a thickness of 40-80 microns and a hardness of 800-850HV is achieved through hard anodize plating treatment.



## ALLOY ZINC-NICKEL PLATING PLANTS



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Nickel alloy zinc plating is a type of plating with a wide range of applications, which can be colored with chrome (+3) blue, yellow and black options designed as alkaline or acidic, and whose corrosion resistance can be further increased with lacquer treatment.

Nickel content is approximately around 11-16%



## WASTE GAS TREATMENT SYSTEMS



Waste Gas Treatment Systems contain and treat the most concentrated forms of many different chemical products with aggressive acids and basic characters. Waste gas treatment systems are needed for almost all types of plating plants to ensure environmental safety and healthy working environment.

Acid / Alkali / Solvent Vapour Treatment and Ventilation Systems (Scrubber): Harmful vapors and gases produced in surface treatment plants are passed through a custom-designed tower, and using special nozzles and liquid sprays, the gas/steam/solvent is released from the opposite direction after being purified.

Scrubbers are expected to dispose harmful gases and solvents with a rate over 99% and eliminates the harmful effects of chemicals on the environment.





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