



SOLUTIONS
WATER TREATMENT CHEMICALS
SERVICE

www.polywets.com.tr

ABOUT US

Polywets aims to “provide chemical and industrial solutions that provide maximum quality and minimum operating costs” for our valued customers.

To produce customized solutions for businesses. We have been operating in the field of treatment and chemistry since 2014 in order to develop sustainable environmental systems.





INDUSTRIAL SOLUTIONS

Industrial Distilled Pure Water Systems



Our industrial distilled pure water systems are the ideal solution for businesses that require high purity water. Water is boiled and evaporated in stainless steel chambers, then cooled and condensed. This process completely removes chemical impurities and dissolved minerals. Our systems are available in capacities ranging from 0.005 m³/hour up to 5 m³/hour and alternatively membrane technologies and ion exchange resins can be used.

Areas of Use

- Laboratories and hospitals
- Pharmaceuticalcosmetics and chemical industry
- Dialysis centers and universities
- Small-scale commercial enterprises

Deionization Systems



Deionization (demineralization) systems produce high purity water by removing anion and cation from water. Thanks to ion exchange resins chemical impurities and dissolved minerals are completely removed. With capacities up to 200 m³/h, these systems operate without the need for permanent staff and are characterized by low operating costs. The effluent quality is continuously monitored by conductivity sensors and the system produces pure water with conductivity as low as 0.2 microsiemens.

Areas of Use

- Pharmaceuticalchemical and cosmetic industry
- Food production facilities
- Steam boiler feed water systems
- Metal processing and coating plants

Reverse Osmosis Systems



Reverse osmosis systems are a system in which dissolved organic and inorganic substances are removed from water by passing water through membranes at high pressure. With capacities ranging from 0.005 m³/hour to 50 m³/hour, these systems are ideal for drinking water production from seawater and industrial plants that need ultra-pure water. The efficiency of the system depends on the quality of the membranes, pumps and automation systems used.

Areas of Use

- Food and pharmaceutical industry
- Metal processing and paint coating plants
- Steam boiler feed water systems
- Textile and chemical industry

Water Softening Systems



Our water softening systems prevent scale formation by removing calcium and magnesium ions from the water. Equipped with resin tanks, these systems are available in capacities from 0.005 m³/h to 100 m³/h and are designed to reduce costs and extend the life of equipment in plants using hard water.

Areas of Use

- Industrial plants
- Heating and cooling systems
- Steam boilers and laundries
- Food and beverage production facilities

Filtration Systems



Filtration systems physically separate particles, sand, sediment and organic matter from water. Available in capacities from 0.005 m³/h to 200 m³/h, these systems are used as primary or pre-treatment solutions in plants requiring high quality water. They offer perfect solution to increase the efficiency of filtration, reverse osmosis and deionization systems.

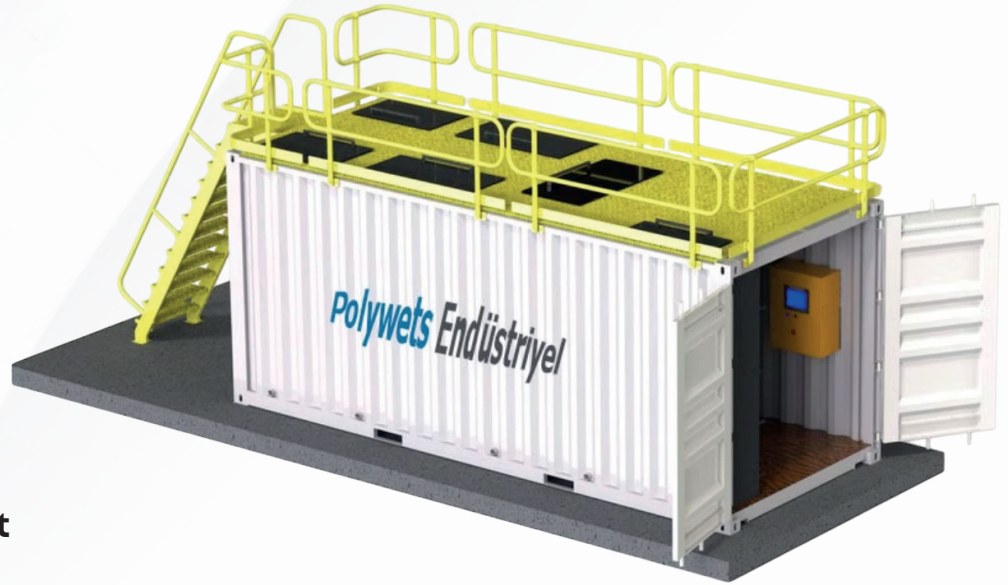
Areas of Use

- Industrial water treatment
- Food and beverage production
- Chemical and metal industry
- Agriculture and irrigation systems

Polywets a leading provider of innovative, efficient and sustainable water treatment solutions for both businesses and individual users. With our high quality systems, provide you with the purest and cleanest water, while providing environmentally friendly and cost-effective services. Whether for industrial or individual use, Polywets is always there for you!

PACKAGE SYSTEMS

Biological package treatment systems used in the treatment of domestic and industrial wastewater clean water by breaking down organic substances through microorganisms with their compact and portable structure. These systems allow water to be discharged without harming the environment and offer a sustainable solution.



Areas of Use

Summer sites and touristic facilities, Housing and public housing, Factories and industrial facilities, Schools, hospitals and military facilities Construction sites and temporary settlements.

Working Principle

Pretreatment: The wastewater is cleaned of solid particles and heavy particles are settled.

Balancing Reservoir: Balances flow and pollution fluctuations.

Biological Reactor: Microorganisms, fed with oxygen, break down organic matter. The treated water is discharged or reclaimed.

Advantages

- Compact and portable design
- Easy installation and full automation
- High treatment efficiency and low operating costs

With their flexible and modular structure, these systems offer an environmentally friendly solution suitable for different capacities and needs.

SYSTEMS

Chemical treatment is a method of removing pollutants from wastewater by precipitation, decomposition or reaction with chemicals. It is often used in combination with physical and biological treatment to effective removal of dissolved or suspended solids.

Areas of Use

Industrial Wastewater Treatment: Removal of heavy metals, oil, grease, toxic chemicals.

Domestic Wastewater Treatment: Removal of pollutants such as phosphorus and nitrogen.

Drinking Water Treatment: Removal of turbidity, heavy metals and pathogens.

Seawater Desalination: Removal of salt and minerals.

Agriculture and Livestock: Making it suitable for irrigation and drinking water.

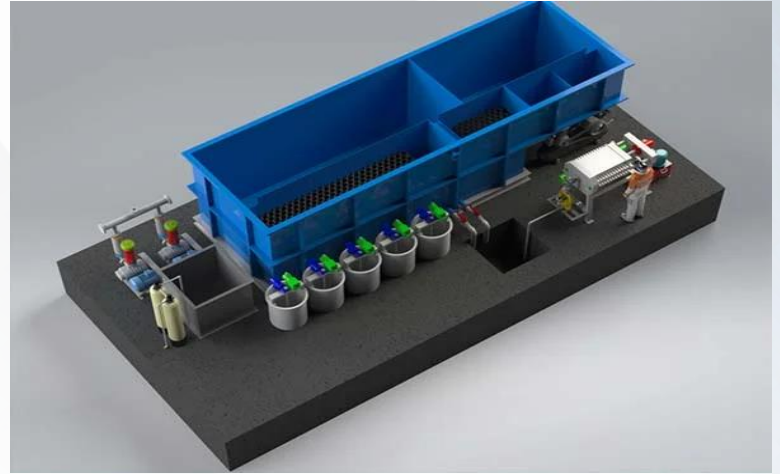
Oil and Gas Industry: Oil and grease removal.

Energy Sector: Scaling and corrosion prevention.

Advantages

- Effective removal of dissolved pollutants and heavy metals.
- Flexible structure that adapts to different sectors.
- Increases efficiency by reducing the biological treatment load.

Chemical treatment is an effective and indispensable method, especially in the treatment of industrial wastewater. The right chemical selection and design determines the success of the system.



Working Principle

Coagulation: Chemicals react with dissolved pollutants to form flocs.

Flocculation: Flocs are enlarged and sedimentation is achieved.

Chemical Precipitation: Substances such as heavy metals or phosphorus are removed from the water.

pH Balancing: The pH of acidic or basic water is regulated.

Disinfection: Microorganisms are destroyed by substances such as chlorine or ozone.

IRON and MANGAN FILTRATION SYSTEMS

Iron and manganese filtration systems improve the color, taste and odor of water by removing iron (Fe) and manganese (Mn) ions from water. These systems work on the principles of oxidation and filtration to prevent problems such as buildup in pipelines and equipment degradation.

Areas of Use

Domestic Use: Treatment of water from wells or mains.

Industrial Plants: Production processes with clean water requirements.

Agricultural Irrigation: Removal of minerals that can harm crops.

Municipal Water Systems: Drinking water treatment.



How does it work?

Oxidation: Iron and manganese ions are converted into insoluble form.

Methods: Aeration, chemical (chlorine, ozone) or catalytic oxidation.

Filtration: Particles formed by oxidation are retained by filter media.

Media used: Green sand, Birm, Pyrolusite, Anthracite.

Backwash Removes deposits by cleaning the filter media with reverse flow water.

Advantages

Effective Removal: High removal rates of iron and manganese.

Cleaner Water: Solves color, taste and odor problems.

Equipment Protection: Extends the life of pipes and equipment.

Easy Maintenance: Automatic backwashing extends the life of the filter media.

Iron and manganese filtration systems are the ideal solution to achieve clean, high quality and equipment friendly water for both domestic and industrial use.

SYSTEMS

Mobile treatment systems are compact and flexible systems that treat water on portable platforms. Mounted on trailers, containers or transportation platforms, they provide fast and effective solutions to temporary or emergency water needs.



Areas of Use

Emergency Situations: Clean water supply during natural disasters (earthquakes, floods) and water crises.

Industrial Applications: Temporary construction sites, mining projects and seasonal industrial needs.

Municipalities: Rural infrastructure problems and temporary water cuts.

Military and Humanitarian Assistance: Provision of clean water during operations or relief processes.

Agriculture and Livestock: Irrigation and animal drinking water treatment.

Seawater Desalination: Conversion of salt water into drinking water by reverse osmosis.

Advantages

Portability: Easily transported and quickly set up.

Flexibility: Adaptable to different water qualities and needs.

Fast Solution: Fast deployment in emergency situations.

Modular Structure: Expandable according to capacity and needs.

Cost Savings: Eliminates the cost of fixed plant installation in temporary projects.

Mobile treatment systems offer an ideal solution for temporary projects or emergencies, responding quickly and effectively to different water treatment needs.

How does it work?

Pre-Filtration: Removal of sediment, sand and sludge.

Chemical Dosing: Conditioning of water with coagulants, chlorine or chemicals.

Activated Carbon Filtration: Odor, taste, chlorine and organic matter removal.

Softening: Reducing water hardness with resin systems.

Ultrafiltration (UF): Removal of microorganisms. Reverse

Osmosis (RO): Removal of salts and dissolved substances.

UV Sterilization/Ozonation: Destruction of bacteria and viruses.

Waste Water Treatment: Safe disposal of the waste generated.

TREATMENT CONSUMABLES

Consumables and spare parts used in treatment systems ensure efficient operation and long life of the system. Material types vary according to the technology of the system.

1. Consumables

Filters

Sediment Filters: Retains solids, replaced every 3-6 months.

Activated Carbon Filters: Removes chlorine, taste and odor, replaced every 6-12 months.

Resins: Used for water softening, regeneration with salt solution.

Membranes: RO and UF membranes remove salt, bacteria and viruses, replaced every 2-3 years.

Chemicals

Antiscalant: Prevents calcification.

Biocide: Controls microorganisms.

Coagulant/Flocculant: Increases the settling rate.

pH Regulators: Adjusts the pH of the water.

Disinfectants: Provides microbial disinfection with UV, ozone or chlorine.

Disinfection Materials

UV Lamps: Kills microorganisms, replaced every 9,000-10,000 hours.

Ozone Generators and Chlorine: Used for disinfection.

TREATMENT COMPONENTS



2. Spare Parts

Pumps: Provides pressure and water flow (low/high pressure types).

Valves: For backwash and automatic control (manual or automatic).

These materials and spare parts are critical for improving the performance and reliability of treatment systems.

SYSTEMS

Seawater desalination systems are designed to make high salinity seawater suitable for drinking, use or industrial processes. The most common method is Reverse Osmosis (RO) technology, which provides a sustainable solution by removing salt and minerals.



Areas of Use

Municipalities and Cities: Providing drinking and irrigation water in coastal areas.

Industrial Plants: Process and boiler feed water production.

Military and Humanitarian Aid: Emergency water supply in disaster areas.

Tourism and Accommodation: Meeting water needs in islands and resorts.

Marine Vehicles: Production of drinking water on ships, boats and oil platforms.

How does it work?

Pretreatment: Removal of sediment, sand, algae and organic matter (sand filters, activated carbon and microfiltration).

Reverse Osmosis (RO): Separation of salts with RO membranes at high pressure (55-70 bar).

Final Treatment: pH regulation, mineral addition and microbiological sterilization (UV/ozonation).

Waste Water Management: Safe disposal of concentrated brine (to sea, evaporation ponds).

Advantages

Fresh Water Production: Makes high salinity water potable.

Flexibility: Applicable in coastal areas and on marine vessels.

High Efficiency: 40-60% water recovery.

Compact Design: Mobile or stationary system options.


Various Capacities: Wide range of applications from domestic to industrial and municipal systems.

With their modern and energy-efficient technologies, desalination systems offer an effective and sustainable solution to water needs in coastal areas.

INDUSTRIAL SOLUTIONS

For Detailed Information
You can read the QR Code.



A row of glass test tubes containing blue liquid, with the text "WATER TREATMENT CHEMICALS" overlaid in white, bold, sans-serif font. The tubes are arranged in a perspective view, receding into the background. The liquid inside the tubes is a vibrant blue. The background is dark and out of focus.

WATER TREATMENT CHEMICALS

1. Scale and Corrosion Inhibitors

These chemicals provide long-term performance by preventing the negative effects of scaling and corrosion on the systems. It is especially used to prevent corrosion on metal surfaces and to reduce the hardness of water.

Areas of Use

- Steam boilers
- Closed circuit cooling systems
- Textile industry



Phosphonate-based scale and corrosion inhibitor prevents scaling and corrosion in steam boilers and heating systems.

2. Disinfection and Biocides

Biocides, which prevent microbiological contamination in water systems, clean water from microorganisms such as bacteria, algae and fungi. This more hygienic and efficient operation of water systems.

Areas of Use

- Cooling towers
- Industrial water circuits
- Textile industry



Biocide to control biological growth in industrial cooling systems.

3. Oxygen Scavengers

Oxygen triggers corrosion in water systems. Oxygen scavengers prevent oxidation of metal surfaces by removing dissolved oxygen from the water.

Areas of Use

- Steam boilers
- Closed circuit heating systems



Chemical that prevents corrosion by removing dissolved oxygen in steam boilers.

4. pH Regulators

pH regulators prevent corrosion and scaling by controlling the pH balance of water. Maintaining the ideal pH level in water systems is critical for system efficiency.

Areas of Use

- Steam boilers
- Cooling systems
- Textile sector



A pH-boosting corrosion inhibitor keeps water at the ideal pH level and prevents scaling.

5. Acids and Bases

Acids and bases are used to control the pH level of water and balance the chemical structure of the system. They also play an important role in dissolving sediment and organic contaminants in the water.

Areas of Use

- Textile industry
- Chemical industry
- Industrial water treatment



An acid-based cleaning chemical improves efficiency by dissolving sediment and mineral deposits in water treatment systems.

6. Coagulants and Flocculants

Coagulants and flocculants to clarification by precipitating suspended solids in water treatment processes. They are especially effective in the treatment of industrial wastewater and textile dyeing wastes.

Areas of Use

- Waste water treatment plants
- Textile industry
- Chemical industry



A high-performance flocculant, suitable for the textile industry and used for the treatment of effluents from dyeing processes.

7. Antifoam (Defoamers)

Defoamers control the foam that forms in water-based systems. It has an important place especially in chemical production processes and textile dyeing lines.

Areas of Use

- Chemical industry
- Textile production lines
- Waste water treatment



An effective antifoam agent used in the chemical and textile industries that quickly removes foam formation.

8. Boiler Protection Chemicals

Chemicals used to prevent problems such as scale and corrosion in steam boilers increase boiler efficiency and save energy. These chemicals prevent the formation of deposits in boiler pipes and extend the life of the system.

Areas of Use

- Steam boilers
- Heating systems



A chemical that prevents the formation of lime and sediment in boiler pipes and increases energy efficiency.

9. Membrane Protection Chemicals

Protection of membranes used in reverse osmosis and ultrafiltration systems vital for system efficiency. Membrane protection chemicals prevent membranes from clogging and fouling and extend their lifetime.

Areas of Use

- Reverse osmosis systems
- Ultrafiltration systems
- Textile industry water recovery systems



Protective chemical that prevents fouling of reverse osmosis membranes and enables membranes to work efficiently for a long time.

WATER TREATMENT CHEMICALS

For Detailed
Information and Sample Request
You can read the QR Code.





INDUSTRIAL SERVICE



Our company provides comprehensive and professional services for your industrial water treatment and pure water systems, guaranteeing uninterrupted and efficient operation of your systems. Water treatment systems are critical equipment, especially in industrial plants, that must operate at high performance at all times. Therefore, periodic maintenance, rapid intervention and repair services are vital for the long life and trouble-free operation of the systems.

1. Installation and Commissioning

Our expert team ensures that the water treatment and pure water systems you purchase are installed and commissioned in the most accurate way. During the installation phase, all parameters such as water source, pressure values, outlet water quality are carefully analyzed and the system is ensured to operate at the highest efficiency.

2. Periodic Maintenance Services

Water treatment systems require regular maintenance. Our periodic maintenance services cover all technical details such as filter changes, membrane checks, resin renewals, valve and sensor calibrations to ensure that the system operates at its first day performance. Periodic maintenance prevents unexpected downtime by preventing systems from malfunctioning reduces your operating costs in the long run.

3. Emergency Response and Repair Services

Stoppage of water treatment systems in industrial plants can negatively affect the production process. Our company provides fast and effective intervention in case of any malfunction. In case of malfunctions, our technical team ensures that the system is recommissioned as soon as possible by making on-site repairs and spare parts replacements in a short time.

4. Membrane and Resin Replacement

Membranes and resins used in reverse osmosis and deionization systems lose performance after a certain period of use. Our company ensures that the membranes and resins in your system are replaced at specified periods. In membrane and resin replacements, the most suitable models are used and necessary tests are performed after the replacement.

5. Filter Change and Spare Parts Supply

Pre-filters used in water treatment systems should be changed periodically according to the pollution rate. Our company provides all necessary spare parts for your system along with filter replacement service. Filters are critical to the sustainability of water quality and our company offers replacement services using only the highest quality filters.

6. Automation Systems and Calibration

The correct operation of automation systems is of great importance for your water treatment systems to work efficiently. Regular calibration and control of your automation systems are performed. Conductivity sensors, gauges and other digital control elements are calibrated by our expert team to ensure optimum working conditions.

Why Work with Us?

- **Expert Staff:** Specialized in water treatment technologies, our team can quickly solve even the most complex problems.
- **Fast and Effective Intervention:** We minimize downtime with rapid intervention in malfunctions.
- **High Quality Standards:** We offer world-class solutions in spare parts and equipment.
- **Customer Oriented Service:** We act according to the needs and expectations of our customers in all service processes.

With our services, we ensure that your water treatment systems are constantly operating at peak performance, reducing your operating costs and making your systems last longer.





**POLYWETS
ENDÜSTRİYEL**

With you for all your
industrial service
needs.



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