

# **Prasinos Tech Innovations**



## **General Product Brochure**











**Clean Energy** 



Water Management & Recycling



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# **Cavitation Technology**



#### Nanobubble Generator

Advance Nanobubble System

Nanobubble-based water treatment technology designed to enhance oxygen transfer, improve water quality, and support aquatic ecosystems. By generating ultra-fine bubbles, it effectively removes contaminants, boosts microbial activity, and promotes sustainable water management. Nanocav is ideal for industries, agriculture, and aquaculture, ensuring ecofriendly and efficient water solutions

## Static Hydrodynamic Cavitator

Static Cavitation devices

The static cavitation device uses engineered geometries to create localized pressure drops in a fluid, inducing cavitation without moving parts. The collapsing cavitation bubbles generate intense energy, promoting mixing, emulsification, and chemical reactions. It's widely used in water treatment, water disinfection, and industrial processes for efficient and energy-saving operations.





### **Dynamic Cavitation Device**

Rotating Cavitation Systems

The rotating cavitation device generates controlled cavitation through rotating components, such as impellers or rotors, to create high-energy microbubbles. These bubbles collapse violently, producing intense local pressure and temperature. Widely used in wastewater treatment, chemical reactions, biodiesel production, biogas process intensification, homogenization, it enhances mass transfer, mixing, and pollutant degradation efficiently.

### **Cavitation based Steam Generator**

Cavitation assisted Steam Generation

A cavitation-based steam generator utilizes controlled cavitation to produce steam efficiently. By inducing rapid formation and collapse of vapor bubbles in water through rotational cavitation method, it generates localized heat. This process achieves near-instantaneous water heating, offering energy-efficient, compact solutions for industrial applications like sterilization and power generation.



# **Ultrasound Technology**

## **Ultrasonic Device for Algae & Biofilm Control**



Solar Powered Ultrasound System

Ultrasonic device offers an eco-friendly solution for algae and biofilm control in water bodies. By emitting precise ultrasonic waves, it disrupts algae cell structures, preventing their growth without harming aquatic life. Ideal for lakes, reservoirs, and industrial systems, it ensures cleaner water, reduced maintenance costs, and a sustainable environment.

#### **Ultrasound De-scaler**

Ultrasound based scale removal system for industries

An ultrasonic pipe de-scaler uses high-frequency sound waves to prevent and remove scale build up in pipelines. By creating microvibrations, it disrupts the adhesion of mineral deposits, improving flow efficiency and reducing maintenance costs. This eco-friendly, chemical-free solution enhances pipe longevity and ensures optimal system performance across industries.



### **Ultrasound Detector**





The ultra sound detector is designed for a quick and precise Detection of Ultrasonic Signal produced by Ultrasonic Algae Control Equipment. These simple to use 9V Battery power ultrasound detectors will indicate the extent of coverage you are getting from your ultrasound algae control equipment. Ideal for ensuring optimum positioning of the Ultrasonic Equipment / Transducer

### **Ultrasonic Probe Sonicator**

Ultrasonic probe for sonochemistry

An ultrasonic probe sonicator is a high-frequency device used for efficient liquid sample processing. It generates ultrasonic waves through a probe immersed in the liquid, enabling cell disruption, emulsification, homogenization, and nanoparticle dispersion. Widely applied in biotechnology, chemistry, and material sciences, it ensures precise, rapid, and consistent results for advanced research.



# **Ozone Systems**



#### **Ozone Generator**

Advanced Ozone System

An ozone generator is a device that produces ozone by converting oxygen molecules using electrical discharge. Widely used for air purification, water treatment, and industrial processes, it eliminates pollutants, odors, and microorganisms. Its advanced oxidation capabilities make it a key technology for sustainable environmental applications.

#### **Ozone Air Sterilizer**

Ozone baser Air disinfection System

An ozone air sterilizer is a device that uses ozone gas (O<sub>3</sub>) to eliminate airborne bacteria, viruses, mold, and odors. Ozone's strong oxidizing properties effectively neutralize pathogens, ensuring cleaner air. Ideal for hospitals, offices, and homes, it provides a chemical-free sterilization method but requires proper safety measures due to ozone's toxicity.





### **Industrial Oxygen Concentrator**

Ultrasonic wave detection machine

The Industrial Oxygen Concentrator utilizes PSA Technology to generate oxygen, drawing from ambient air as its source. Engineered for a continuous, concentrated oxygen flow, it combines advanced features with the reliability of a time-tested technology and exceptional quality. With a simple plug-in and turn-on process, it ensures consistent delivery of high-purity oxygen with dependability.

### **Ozone Air Purifier for Car**

Ozone based car air sterilizer

An ozone car air purifier removes odors, bacteria, and allergens by generating ozone gas, which neutralizes pollutants. It's effective for eliminating smoke, mold, and pet smells. However, prolonged exposure to ozone can be harmful, so proper usage guidelines must be followed. Ideal for deep cleaning, it ensures a fresher driving experience.



## **Ozone Systems**



### **Ozone Dis-infection Chamber**

An ozone disinfection chamber utilizes ozone gas, a powerful oxidizing agent, to sterilize surfaces, air, and objects. It effectively eliminates bacteria, viruses, fungi, and odors by breaking down their cell walls. Compact and eco-friendly, these chambers are ideal for sanitizing medical equipment, tools, and personal items without harmful chemical residues.

PTFE tube

### **Other Ozone Accessories**

Water flow meter

Other ozone accessories include Ozone mixing pump, Venturi Injector, Ozone stand, Static mixer, Water trap, Pressure gauge, Water flow meter, PTFE tube.



## **Membrane Systems**



### **Flat Sheet Membrane Casting Machine**

A flat sheet membrane casting machine is specialized equipment used for producing flat-sheet membranes. It precisely casts polymer solutions onto a substrate or conveyor, followed by phase inversion through immersion in a coagulation bath. Commonly used in water treatment and filtration industries, it ensures uniform thickness and high-quality membrane production.

### **Hollow Fiber Membrane Spinning Machine**

A hollow fiber membrane spinning machine produces hollow fiber membranes used in applications like water filtration, gas separation, and biomedical devices. The machine extrudes polymer solutions through a spinneret to form fibers with a hollow core, which are then solidified through coagulation and drying processes, ensuring precise diameter and uniformity.





### Membrane Testing Skid (RO/UF/FO/MD)

A **Membrane Testing Skid** is a compact, versatile system designed for evaluating reverse osmosis (RO), ultrafiltration (UF), forward osmosis (FO), or membrane distillation (MD) performance. It enables precise control over operational parameters like pressure, flow, and temperature, facilitating membrane optimization, fouling analysis, and scalability assessments for water treatment or industrial applications.

### **Pervaporation Test Skid**

A **Pervaporation Test Skid** is a compact, pilot-scale system designed to evaluate pervaporation membrane performance. It separates liquid mixtures by selective permeation through membranes, driven by partial vapor pressure differences. Commonly used in solvent recovery, dehydration, and organic separations, it enables process optimization before large-scale implementation in industries.



## **Membrane Systems**



#### **Membrane Bio-Reactor Test Skid**

Advanced Ozone System

A Membrane Bioreactor (MBR) Test Skid is a compact, pilot-scale system designed for evaluating MBR technology's efficiency in wastewater treatment. It integrates biological treatment with advanced membrane filtration, ensuring superior contaminant removal. Ideal for testing under real conditions, it provides insights into operational parameters, scalability, and membrane performance for industrial applications.

#### **Membrane Test Cell**

A membrane test cell is a laboratory device used to evaluate the performance of membranes under controlled conditions. It helps measure parameters like flux, rejection, fouling, and cleaning efficiency. Commonly used for reverse osmosis, ultrafiltration, and nanofiltration studies, it provides valuable insights into membrane durability and process optimization.





### **Membrane Characterization Equipment**

Membrane characterization equipment is designed for precise analysis of membrane properties such as porosity, permeability, surface morphology, and chemical composition. Equipped with advanced imaging, filtration, and spectroscopic tools, it ensures accurate performance evaluation, enabling innovations in water treatment, bioprocessing, and industrial separations.

### **Industrial & Commercial RO System**

Industrial and commercial reverse osmosis (RO) systems are advanced filtration technologies used to remove impurities, salts, and contaminants from water. These systems are widely employed in industries like pharmaceuticals, food and beverage, and manufacturing, ensuring purified water for production processes, quality control, and environmental compliance.



## **About Us**

Prasinos Tech Innovations Pvt Ltd is a Clean-Tech Start-up pioneer in developing and promoting breakthrough scientific innovations and working towards translational research for Sustainable development and circular economy.

















They are currently focusing in the area of Process Engineering and Intensification from a commercialization point of view, thereby attempting to connect the dots between know-why and know-how using their own patented technologies.

Prasinos consists of a unique team of professionals and technocrats having several decades of experience in the chemical industry, innovation and troubleshooting, technology development & commercialization.

At Prasinos, we are committed to deliver innovative technological solutions considering the environmental regulations, which are practically cost-effective and eco-friendly.







Research at Prasinos Tech drives cutting-edge solutions through exploration of emerging technologies such as Ozone Systems, Hydrodynamic Cavitation, Ultrasound Sonochemistry, Nanobubble Technology, Renewable Energies. Our focused R&D team transforms innovative ideas into real-world applications, ensuring our services stay futureready and impactful for clients.

At Prasinos, we are committed to provide uninterrupted support with our services available 24/7. This ensures that our clients can access expert assistance, guidance and solutions whenever they need them, regardless of time zones or business hours. Whether it's troubleshooting maintenance, or critical updates, our dedicated team is always on standby, ensuring smooth and efficient operations for your business around the clock.

## **Our Prestigious Clients**

















