IDE Technologies | Your Water Partners



Water Treatment Solutions for the

ELECTRONICS & SEMICONDUCTOR INDUSTRIES

The manufacturing of semiconductors and electronic devices demands substantial volumes of ultrapure water (UPW) and results in significant wastewater production. At IDE Technologies, we specialize in providing water treatment solutions tailored specifically to the unique requirements of the semiconductor and electronics industries. Our cutting-edge technologies and innovative approaches meet the exceptionally stringent standards of these sectors.

IDE's solutions help electronic & semiconductor manufacturers manage wastewater, meet stringent water quality standards, and optimize production processes, while reducing carbon and water footprint and supporting advanced ESG policies.

IDE solutions for Semiconductor FAB process wastewater and End of Pipe (EOP) stages help Electronics and Semiconductor plants tackle their water challenges effectively - cutting costs, minimizing environmental impact, and reducing regulatory risks.

Reuse, Reclaim & Recycle Systems

Our systems treat various streams within the wafer production process, reducing effluent waste discharge, minimizing raw water consumption, and protecting the environment.

End of Pipe (EOP) Wastewater Treatment

Managing wastewater from semiconductor manufacturing presents unique challenges due to stringent discharge requirements. Our advanced technologies optimize water management for this critical stage.

IDE delivers a full spectrum of water solutions, including:

Feasibility and Water Studies
Analyzing water needs and identifying opportunities for optimizing existing facilities.

Strategic Partnerships
Providing expert guidance before and during bidding process to support decision-making processes for new water projects.

Technology Expertise
Offering engineering, procurement, and construction (EPC) services, along with operation and maintenance (O&M) solutions

Water-as-a-Service
Leveraging our technological expertise, project management skills, and strong financial partnerships to plan, finance, develop, own, and manage cutting-edge water projects

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IDE's Key Offerings

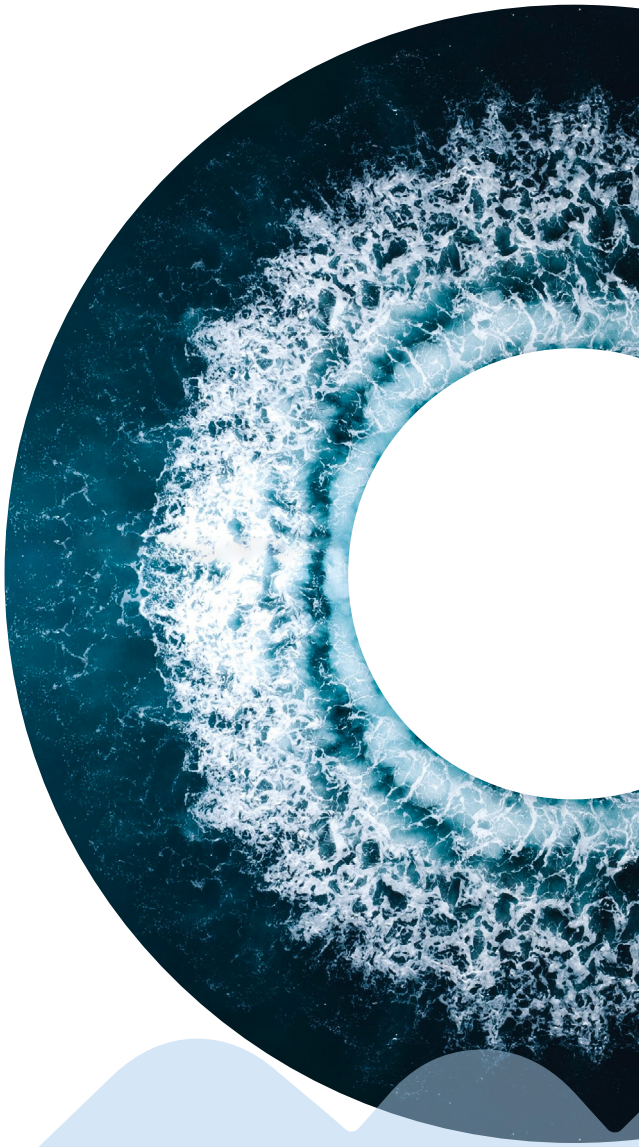
Standard Reverse Osmosis (RO) and Filtration Systems
We provide RO and filtration systems (GAC, UF, Sand Filters) to handle diverse water streams within semiconductor manufacturing processes.

Specialized Treatment for Complex Streams
For streams requiring specific treatment (such as CMP, ammonia waste, HFW plating, scrubber), we utilize a specialized treatment chain involving UF and PFRO technologies with clarifiers, focusing on reuse, reclaim, and recycle strategies.

Biological Treatment with MBR (Membrane Bioreactor)
We integrate MBR technology to efficiently treat various streams, preparing them for subsequent treatment stages.

High Recovery Reclaim Technologies
Our proprietary MaxH2O PFRO and MaxH2O Desalter systems deliver exceptional recovery rates, reduce chemical usage, enhance water reuse, lower water footprints, and facilitate efficient Zero Liquid Discharge (ZLD) implementation.

Zero Liquid Discharge (ZLD) Solutions
Essential for regulatory compliance and sustainability, our ZLD solutions, including the MaxH2O Desalter, ensure minimal environmental impact.



Innovative Project Execution with MPD
IDE excels with its unique Off-Site Manufacturing (OSM) approach, also known as Modular Pre-assembly Design (MPD). This methodology significantly reduces project timelines, ensures high-quality outcomes, and optimizes both capital expenditures (CapEx) and operational expenditures (OpEx).

Upgrades and Enhancements
IDE offers comprehensive upgrades to existing systems, including advanced MaxH2O solutions for high recovery such as PFRO and Desalter systems. We also provide custom semiconductor wastewater treatment packages where needed.

Our PFAS Removal Solutions
The EPA has recently confirmed a new PFAS (Per- and Polyfluoroalkyl Substances) roadmap which establishes legally binding maximum contaminant levels to protect against these persistent "forever chemicals" in drinking water. The CERCLA regulation designates PFAS as hazardous substances, which enables the EPA to hold parties responsible for PFAS contamination liable for cleanup costs. This regulation also facilitates federal and state cleanup actions and requires reporting of PFAS releases over specific thresholds. Industries reliant on PFAS compounds may face more heightened scrutiny and regulatory pressures in the near future. At IDE we offer a complete range of PFAS removal solutions for treating municipal and industrial wastewater prior to discharge.

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