



Taking care
of the world's water

SIEMENS

Water Technologies
for Industry

Providing answers
for your water cycle:
Complete control
of quality, supply
and cost.

Water – the world's resource no. 1. An essential element in any industrial process and vital to your product quality, your production efficiency and economic success. So when you are looking to maximize this success, it pays to talk to the leader:
Siemens Water Technologies.





Our mission:
Taking care of the
world's water.

A mission we take seriously. What do we do? We help you manage your water safely and economically. So you can turn a cost factor into a competitive advantage. We'd love to show you how.







Complete
control of your
water cycle.
With answers
that fit your
needs exactly.

Answers that are born from a combination of industrial expertise, breadth of portfolio and global presence that is unique to only one company in the water industry: Siemens.



As a water manager you know what you need: complete control. Over costs. Over results. Over the whole process. Siemens, incorporating USFilter, has a proven track record as a leading technology partner to the world's water industry. As a company with in-depth knowledge of the processes and demands of just about every industry segment, our water solutions match your requirements precisely. Whether it's about observing regulations, meeting economic targets or recycling and reusing water, we've got what you need to succeed in a tough business. Water management answers from Siemens prove their worth daily in industries like:

- Automotive
- Biopharmaceuticals
- Chemicals
- Food & Beverages
- Hydrocarbon Processing
- Metals
- Microelectronics
- Oil and Gas
- Power
- Pulp and Paper

Our solutions are the industry standard in applications all over the world in raw water, process water, high purity water, wastewater, water reuse, zero liquid discharge and sludge management.

You can rely on them to deliver exactly what you need to perform: reliable water supply and disposal to keep your production flowing, precise water quality, cost-efficient systems. You can depend on assured regulatory compliance without compromising the effectiveness of your plant. You can deliver what your business requires: minimized water costs. And you can relax in the knowledge that our proactive and effective service support is right at your side, backing you up everywhere in the world. We call it „taking care of the world's water.“ It's our mission.

*Keep the water flowing. And your production. Safe.
Reliable. Sustainable. And most of all: cost-efficient.
At Siemens we know your requirements inside out.*



Keep production
flowing. Make
the most of your
investment.
Concentrate on
your core business.



Trendsetting water technologies are only as good as the expertise used to employ them. Our services make the decisive difference. We're at your side with great ideas, sound support. Wherever. Whenever.



We're on the job – taking care of every aspect of service to make you more productive and profitable. We provide the people, the experience and the ideas that make our service uniquely proactive. Everywhere in the world.

What can we do for you? A lot, actually.

Because we not only offer the world's most complete portfolio of innovative systems, components and technologies – we know that it takes a good deal more to ensure your success in a difficult and constantly changing environment. An environment where perfect, totally integrated service is not an option that's nice to have – it's absolutely essential for assured and economic production. So we take care of it – with a new level of service: proactive. Committed. As goal-oriented as you are. And extremely cost-efficient. From designing your new plant to pilot operation, construction and commissioning to migration, maintenance and upgrading, we're at your side with people, expertise and ideas. Together we can take water management further. On towards integrated systems of solutions, technologies and services. With reliable, well-proven tools that do more for you and your profitability.

- Good service begins before your plant is even built. In the **planning** phase. Highly qualified industry professionals help you meet and exceed your objectives, while paying particular attention to scheduling and financial feasibility. With our extensive network of partners, we find the best financing for your every need, from equipment and leasing to sophisticated project and export plans. From the beginning our objective is to make your investment and R.O.I. totally secure over the whole plant life cycle.
- After laboratory testing, pilot operation and commissioning, we keep your process water flowing: with innovative, highly integrated, optimized **maintenance** concepts from telemonitoring to field and on-line services. Our integrated plant maintenance services have proven their reliability in countless industries around the globe. Operational management systems seamlessly integrated into your plant processes help tailor maintenance to meet your business goals. We have widespread experience you can count on when looking to outsource water treatment, including build-own-operate models. And in the case of emergencies we're at your side instantly, providing quick solutions with mobile treatment systems that take the load off ailing plants – a convenient service also for planned downtimes. Carbon and resin regeneration are another example of our proactive service.
- With innovative, completely integrated **migration** and **modernization** services from Siemens, you'll stay ahead of the competition. Always. We analyze your plant, identify your upgrade and modernization needs and help you implement new systems and improved processes with minimum production downtime and maximum assured R.O.I. Always with the goal of utilizing as much as possible of your existing infrastructure and operator expertise, making for a smooth transfer and still more economic efficiency.
- To manage water efficiently you need lots of **information**. Fast. Get it: Our integrated Process Control Systems make for a seamless integrated information landscape across the entire facility, as their open interface architecture works just as smoothly with third-party automation as it does with Siemens systems. For real-time information that makes for better management decisions and assured production performance. Innovative visualization and analysis tools make our process control systems user friendly and inform you of problems before they even occur.

Complete integration of all mission-critical parameters along all three performance-critical dimensions: Vertically, letting information flow from the field to the boardroom. Horizontally, along the entire process chain, integrating not just components and software but also maintenance and monitoring. And along the life cycle, including emergency support, migration and modernization. It's not just nice to have – it's essential. And it's from Siemens: We take care of it.

Reflecting the complete spectrum of water technologies. And your needs. No matter how demanding they are.

We supply the world's water managers with answers. From single products to entire systems, from reverse osmosis and membrane bioreactors to electrode-ionization. From build-own-operate services to mobile water treatment. We're with you. And we provide you with the tools to succeed.

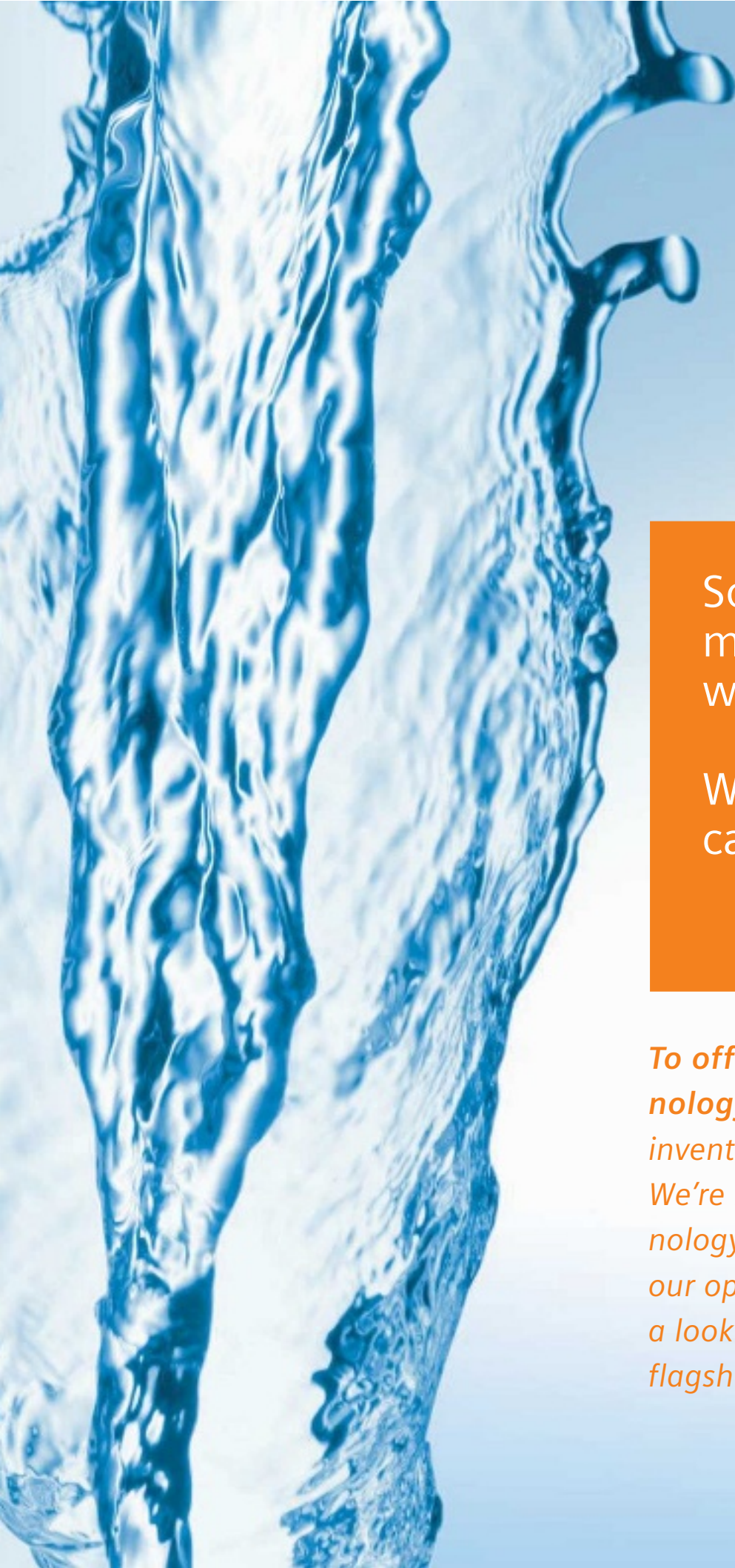
We provide the answers you require from a complete spectrum of solutions encompassing every capability and technology you might need to get your water cycle running smoothly, economically and safely. With a clear focus on innovation and technological change, we present the complete spectrum: Water treatment technology from physical and chemical to biological treatment and membrane microfiltration. Intelligent instrumentation, monitoring and IT technology, like Process Control Systems and Process Visualization. We provide optimized automation and communication systems as well as drive systems that take your efficiency to new levels. Our emissions control, disinfection, ultrapure water and residuals management technologies have risen to countless challenges in all kinds of industry applications. Mobile treatment plants are on hand to bridge planned or unplanned plant downtimes. Outsourcing solutions for the complete industrial water cycle take economy and efficiency to a new level. Whether it's advanced UV treatment technology you require, integrated process control or entire wastewater treatment systems commissioned, designed and built in just months – we deliver.

And each product, solution, component and system is characterized by the complete expertise and commitment of Siemens Water Technologies. We know your production process. We know H₂O – from raw water to process water, from high-purity water to wastewater and groundwater. We're completely familiar with your requirements along the entire process chain from water procurement through treatment, transportation and recycling up to the removal of undesirable by-products and environmentally safe disposal. We have the knowledge. The experience. And we have the tools. Because where water is concerned in the world's industry, Siemens takes care of it.



Cutting-edge technology that covers every need of the world's water managers – enabling them to choose from a complete, seamlessly integrated spectrum of water treatment solutions.





Some of industry's most exciting water projects.

We helped take care of them.


To offer the best water technology, you need to constantly invent and innovate. We do. We're known for advanced technology, responsive services and our operational expertise. Have a look at some of our global flagship projects.

Proven capabilities – and an impressive track record concerning the implementation of advanced technology and reliable delivery of exciting performance. Whether it's in the oil and gas or chemical industry, for bottled water, on the set of James Cameron's *Titanic* or advanced pharmaceutical reactors – we're on site, finding productive, cost-efficient answers and turning them into performance. These are just some examples:

- A large bottled-water company in the U.S. is getting the most out of their facility thanks to a well-applied combination of our technology and service support. They needed to get the plant up and running right away, before the permanent water treatment system (consisting of our continuous microfiltration and reverse osmosis technologies) could be installed. Our service network came up with the answer via a fleet of mobile trailers that operated around the clock for nine months to ensure the high-quality bottled water got to market at the earliest opportunity.
- For a Spanish chemical processor we provided a wastewater treatment plant incorporating Zimpro® wet air oxidation, PACT®, and Hydro-Clear® sand filters for its new 678,000-ton-per-year polypropylene oxide/styrene monomer (PO/SM) and chemical production facility, producing effluent that could be discharged to the Mediterranean Sea.
- For a U.S. petrochemical refiner we provided oil/water separation, aeration and clarification equipment to increase wastewater flow capacities associated with major process expansions, while maintaining existing net load discharge levels. The equipment for the new plant needed to be designed and shipped to the job site within four and a half months of the order award. We delivered.
- A new energy center in the Netherlands faced some unusual challenges: The raw water supply for the plant comes from a canal on the tidal Maas River. The level of total dissolved solids in the canal can fluctuate widely, and conductivity of the water fluctuates extremely in a matter of days. Plus, the raw water intake lies just 20 meters from a petroleum unloading pier, where ships stir up the bottom of the river. We designed a 1,288 m³/hr (5,667 gpm) water treatment system to supply clarified cooling tower water and high-purity boiler feed water at the new gas-fired plant.
- A major pharmaceutical manufacturer in the U.S. needed to expand a USP Purified Water distribution system with proper change control and validation procedures. The expansion had to be implemented with minimal system downtime. We got the job done on a total turnkey basis including engineering services, saving the operator hundreds of thousands of dollars and many months of time compared to having to install a new system.
- In Nanning, China, Siemens designed and constructed a wastewater and sludge treatment plant for the chemical industry with two parallel lines. A physical-chemical pretreatment and preclarification process is followed by aerobic biological wastewater treatment with modified BIOHOCH treatment reactors and selectors. An aeration system for the deep tanks with radial flow jets produces fine air bubbles for extremely high oxygen utilization.
- Siemens provided media filtration technology for the giant water tank in which James Cameron's *Titanic* was shot.

Environmental challenges in Spain, difficult water-supply conditions in the Netherlands, or an innovative wastewater treatment solution for China's chemical industry. We take care of it. Every time.





Let's take care
of water. Together.

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