



WATER TREATMENT

At Avlon Inc., we are driven by a singular vision – delivering smart, sustainable, and scalable engineering solutions that address the critical needs of water, energy, and environment. With a proven track record across the Philippines and Southeast Asia, we specialize in technologies that serve industries, communities, and the planet.

In water treatment, we offer advanced filtration, softening, disinfection, and reverse osmosis systems designed for industrial and institutional applications. These systems ensure consistent water quality while optimizing resource use and operating costs.



Who We Are

About Us

With over 35 years of expertise in wastewater treatment plant, air pollution control equipment's, industrial steam boiler including power plants and oil refinery design, engineering, construction and commissioning, AVLON has been a trusted industry leader since 1980. Renowned for excellence, we have played a key role in pioneering projects across India's oil and refinery sector, setting new standards in quality and innovation.

In 2015, AVLON expanded its operations to the Philippines, establishing itself as a premier integration contractor in the Energy and Environmental Sector. We operate with a strong infrastructure, including state-of-the-art heavy lifting and construction tools, a full-scale fabrication shop, a vast warehouse, and an advanced design and engineering facility.

With a commitment to excellence and innovation, AVLON continues to lead the way in shaping the future of the Energy and Environmental Sector in Philippines.

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Avlon's Advanced Ultrafiltration (UF) Membrane Technology

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Ultrafiltration is a pressure-driven membrane separation process widely used for the removal of suspended solids, colloidal particles, bacteria, viruses, and high molecular weight organic compounds from water and wastewater. Unlike conventional filtration methods that rely solely on media depth filtration, ultrafiltration operates as a physical barrier, allowing only water molecules and very small dissolved substances to pass through the membrane pores. This makes UF an extremely reliable technology for producing high-quality water with very low turbidity and microbial contamination, making it ideal for drinking water production, industrial process water, wastewater reuse, and pretreatment for reverse osmosis systems.

Ultrafiltration membranes typically consist of hollow fiber, tubular, or flat sheet configurations, with pore sizes ranging from approximately 0.01 to 0.1 microns. During operation, feed water is pumped through the membrane modules under moderate pressure. The clean water that passes through the membrane is known as permeate, while the retained contaminants form a concentrated stream known as reject or concentrate. Because the membrane pores are extremely fine, UF systems can effectively remove bacteria, viruses, algae, and fine suspended solids while allowing dissolved salts and small molecules to pass through.

To maintain stable performance and prevent fouling, UF systems incorporate automatic backwashing and periodic chemical cleaning procedures. During backwashing, filtered permeate water is flushed in the reverse direction through the membrane fibers to dislodge accumulated particles from the membrane surface. In cases where organic fouling or scaling occurs, chemical cleaning solutions such as mild acids or alkaline agents are circulated through the system to restore membrane permeability. Proper system design, including optimized flux rates and hydraulic control, ensures long membrane life and consistent treatment efficiency.



Avlon's Ultrafiltration Systems are engineered with high-performance membrane modules, automated backwash systems, intelligent control panels, and energy-efficient feed pumps to deliver reliable and continuous water purification. Our modular UF units are designed for easy integration with upstream treatment processes such as multimedia filtration and activated carbon filtration, and downstream systems such as reverse osmosis plants. With extensive experience in industrial water and wastewater treatment projects, Avlon provides robust ultrafiltration solutions that deliver superior water quality while supporting compliance with industrial water reuse standards and environmental regulations.

