## 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.

AVLON
Solutions Within...

# 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.

**Web: https://avlon-php.com**

**Email: hello@avloninc.com**

AVLON
Solutions Within...

# Avlon's Activated Carbon Filtration Technology

*AVLON INC, UNIT 3B, KAVI BUILDING, E. RODRIGUEZ, JR. AVE, BAGUMBAYAN, QUEZON CITY, 1110 METRO MANILA, PHILIPPINES*

Activated Carbon Filtration is an advanced adsorption process widely used for the removal of dissolved organic compounds, residual chlorine, odor, color, taste-causing substances, and trace chemical contaminants from water and wastewater. Even after primary and secondary treatment processes, water may still contain dissolved pollutants that affect water quality and usability. Activated carbon filtration provides an effective polishing stage by utilizing the extremely high surface area and adsorption capacity of carbon media to capture and retain these contaminants.

The filter typically consists of a pressure vessel filled with granular activated carbon (GAC) supported by graded gravel layers. Activated carbon is produced through the activation of carbon-rich materials such as coconut shells or coal, resulting in a highly porous structure with millions of microscopic pores. As water flows through the carbon bed, contaminants are removed through adsorption, a process where dissolved organic molecules attach to the surface of the carbon pores due to physical and chemical attraction forces.

During operation, suspended solids and organic compounds gradually accumulate within the carbon bed. To maintain effective filtration performance, the system periodically undergoes backwashing, which expands the carbon media bed and removes trapped particles. Over time, the adsorption capacity of the carbon media decreases and the media must be replaced or regenerated to restore full treatment efficiency. Proper operational control ensures long service life and consistent removal performance.

Avlon's Activated Carbon Filter systems are engineered with high-strength pressure vessels, premium-grade carbon media, optimized underdrain systems, and automated backwash control mechanisms for reliable operation and low maintenance. These filters are commonly installed as the final polishing stage following treatment units such as Lamella Clarifiers, Dissolved Air Flotation systems, and biological reactors. With extensive experience in designing water and wastewater treatment plants, Avlon provides robust ACF solutions that ensure improved water quality and compliance with DENR discharge standards and industrial water reuse requirements.

AVLON
Solutions Within...

AVLON
Solutions Within...

AVLON
Solutions Within...