

Activated Carbon Filtration

Product Brochure

Product overview

Removal of organic compounds (VOC), taste, odor, chlorine, and micro-pollutants from drinking water and industrial process water using granular or powdered activated carbon media.

Activated carbon filtration is one of the most proven and versatile technologies for removing dissolved contaminants from water. Etaniv designs, builds, and maintains activated carbon systems that purify drinking water and industrial process water by trapping organic compounds, chlorine, and a wide range of micro-pollutants within the carbon's vast internal pore network.

Treatment performance depends on three factors: the carbon's surface area (typically 500–1500 m²/g), its pore-size distribution, and the chemical affinity between the carbon surface and the target contaminant. Removal occurs through physisorption (physical capture of organics such as VOCs), and surface catalysis (breakdown of chlorine and chloramine). Etaniv selects the carbon type and configuration to match each site's water chemistry and regulatory targets.

Key features

Key technical and commercial advantages:

- Superior adsorption capacity — engineered carbons with surface areas up to 1400 m²/g for high contaminant loading and long service life
- Effective removal of chlorine, taste, odor, organic compounds, and micro-pollutants
- Rapid adsorption kinetics, allowing compact system designs and shorter contact times
- Chemical stability across varying pH and in the presence of oxidizing agents
- Carbon type matched to the application — coal-based, coconut-shell, or wood-based media

Typical applications

Typical application types include:

- Municipal drinking water — chlorine, taste & odor control and organics removal (coal-based GAC: >95% chlorine removal, 18–24 month service life)
- Industrial & process water — ultra-pure water for pharmaceutical and electronics manufacturing (coconut-shell carbon: >99.9% trace-organics removal)
- Pesticide, herbicide, and color reduction in surface and groundwater (wood-based carbon)
- Pre-treatment ahead of reverse osmosis and ion exchange systems

Technical specifications

Flow rate (m³/hr)	Tailored to project at any flow rate
Carbon type (GAC / PAC)	Granular (GAC) standard; powdered (PAC) available. Coal-based, coconut-shell, or wood-based to suit the application
Vessel dimensions	Sized per flow and contact time; FRP or carbon/stainless steel vessels
Contact time (minutes)	Empty-bed contact time depending on contaminant load
Media service life	depending on contaminant load and type
Backwash requirements	Periodic backwash to declassify the bed and remove accumulated solids
Materials of construction	FRP, carbon steel or 316 stainless steel — selected per water chemistry
Operating pressure (bar)	Typical 2–6 bar; designed to site hydraulics
Temperature range (°C)	Effective across normal water-supply temperatures; carbon stable over a wide pH range

Product photo



Why Etaniv

Etaniv B.Y. Ltd is an Israeli manufacturer and integrator of environmental technologies for water, wastewater, and odor control. We design, supply, install, and maintain our systems in-house — backed by 20+ years of field experience and international technology partnerships.

- Full lifecycle service — design, installation, and maintenance by one team
- Own manufacture — quality controlled from design to delivery
- Compliant with Israeli Drinking Water Standard
- Backed by international technology partnerships
- 50+ active clients across Israel

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