Filtration and Separation Solutions
Effective Filtration for Your Industrial Processes
Veolia Water Solutions & Technologies combines innovative technology with industry experience to provide economical and effective operation of filtration and water treatment applications. Our wide range of filtration technologies offers solutions for industrial processes including gold, silver and copper mining; oil and gas production; food processing; juice and beverage processing and many others. Plus, our dedicated parts and service group has developed an unmatched reputation for the highest quality repairs and maintenance service.

Auto-Jet®
Self-Cleaning Pressure Leaf Filter System

Auto-Jet® is the premium self-cleaning leaf filter designed for efficient filtration in the most severe applications. Due to a superior, patented sluicing design, Auto-Jet maintains its full-rated capacity even where heavy, sticky or unusually tenacious cake is encountered. Engineered for filtration efficiency, Auto-Jet features uniform leaf construction for leaf interchangeability and to provide uniform precoating, filtration and cake buildup.

- Increased Efficiency - reduces cleaning costs.
- Auto-Lok Door - ensures leakproof, positive closure and quick and easy access.
- Uniform Filter Leaves - for uniform precoat and filtration.
- Positive Shaft Seal - provides pressure-tight seal on effluent manifold.
- Standard Sizes - ranging from 50-2000 ft² for a variety of applications including sanitary design.
- Wet Cake or Dry Cake - Both models available.

3FM
Flexible Fiber Filter Module

NanoENtech develops the technology to realize a clean life, clean water and a green world. Efficient filtering apparatus using flexible fiber filter modules.

Applicable Fields:
- SS removal from sewage/wastewater treatment plants.
- Treatment and reclamation of sewage/wastewater.
- Conventional sand filter alternative.
- SS removal from water for Industrial and agricultural water.
- Algae, grit and SS removal from rivers and streams.
- Algae, grit and SS removal from fish-farm wastewater.
- Preliminary treatment of drinking water.
Filtra-Matic®
Fixed Leaf High-Volume Leaf Filter System

The Filtra-Matic® is a versatile pressure leaf filter for tough filtration jobs involving large volumes of liquid. It is especially useful where a dry cake discharge is desired. Designed for operating efficiency and easy maintenance, this filter is offered in two basic models: the Filtra-Matic® RT with its unique retracting tank and the Filtra-Matic® RB featuring a retracting bundle design.

- **Automatic Wet Sluice Cleaning** - scrubs leaf surfaces clean and assists in flushing cake from vessel.
- **Cake Drying Capability** - by gas/steam injection through air inlet.
- **Quick-Opening Door Option** - for fast access to vessel interior.
- **Heavy-Duty Filter Leaves** - for maximum strength and efficiency.

Tubular Filters
Auto-Shok® and Auto-Pulse™ Systems

**Auto-Shok® Tubular Filter**
The Auto-Shok® Tubular Filter is a classical tubular filter, ideal where a high flow rate per unit of filter area is required. A backwash-type filter, Auto-Shok is simple, requires fewer valves than other types and is easily automated to fit the process. Tubes are mounted vertically, attaching to a tube sheet at the top of the tank.

**Auto-Pulse™ Bump & Run Tubular Backpulse Filter**
The Auto-Pulse™ Tubular Backpulse Filter is designed to accomplish submicron filtration without the use of precoats or filter aids. This makes it possible for small amounts of product to be recovered from waste streams and returned to the process stream without contamination. A variety of membranes are available for each application to cover the tubes and enable instant filtrate quality.
The L’eau Claire upflow deep bed media filter provides a ready solution to treatment of water used in industry. The L’eau Claire upflow filter has established an unmatched track record for performance. It delivers water with a total suspended solids content that is virtually independent of influent concentrations. This cost effective process does not use clarifiers, flocculation, sedimentation, dry chemicals or mixers.

- **Installed Cost** - Less than a conventional sedimentation basin and filter system.
- **Total Automation** - And minimal levels of chemical feed hold operating costs to a minimum.
- **Less Space** - 75% less space required than conventional systems.

**L’eau Claire Upflow Filter**

The L’eau Claire upflow deep bed media filter provides a ready solution to treatment of water used in industry. The L’eau Claire upflow filter has established an unmatched track record for performance. It delivers water with a total suspended solids content that is virtually independent of influent concentrations. This cost effective process does not use clarifiers, flocculation, sedimentation, dry chemicals or mixers.

**High-Rate and Conventional Sand Filters**

**High-Rate Downflow Filters**

The HRD sand filter offers high-performance filtration even in difficult process applications. The flux rate is typically 5-20 gallons per minute per square foot (GPM/ft²) and utilizes a proven distribution design to enable excellent hydraulic coverage during high-rate operation. The high velocity can drive the solids deeper into the media bed and achieve higher solids loading and extended run cycles. Typical media types are Silica sand, garnet and anthracite.

Our high performance filters can be used for filtration of seawater for injection systems, produced water, refinery waste water, steel mill caster water and severe applications where oil or sticky solids are present. Air scour blowers and backwash pump systems are provided for proper cleaning of the media.
Veolia Water Solutions & Technologies offers AutoFlot®, a Mechanical Induced Gas Flotation (IGF) separator. In this apparatus froth flotation occurs, which is the selective separation of solids and free oil based on the degree of surface hydrophobicity. The addition of cationic or anionic polyelectrolytes causes particles to be selectively adsorbed. This will render one particle type hydrophobic while the other stays hydrophilic.

The AutoFlot® separator may be a self-contained system with its own controls, or it could be equipped with transmitters to send signals to a control panel that oversees a complete treatment system.
MPPE Systems
Macro Porous Polymer Extraction

The Macro Porous Polymer Extraction (MPPE) system is a highly-effective, fully automated, remote-controlled and guaranteed technology for removing hydrocarbons from water by means of extraction in a Macro Porous Polymer (MPPE) bed.

MPPE systems remove dissolved and dispersed hydrocarbons with efficiencies of 99.9999%, down to below ppb level, or as specified.

MPPE systems are used for:
- Process water.
- Offshore produced water.
- Groundwater remediation.
- Wastewater.
- Onshore produced water.

Ion Exchange-Softeners

Veolia Water Solutions & Technologies is heavily involved in furnishing ion exchange equipment and auxiliaries to soften produced water for secondary oil recovery using steam generated by OTSGs (Once Through Steam Generators). Reducing the hardness (to <1 ppm) protects the expensive OTSGs from reduction in efficiency and plugging. This ion exchange equipment could be either Series Softeners with strong acid cation resin (SAC Units) or Weak Acid Cation Softeners (WAC Units) using weak acid cation resin. The TDS (Total Dissolved Solids) level of the produced water determines which unit is selected for hardness removal.

In addition, Veolia Water Solutions & Technologies also furnishes Brine Ion Exchange Softeners utilized by the Chlor-Alkali industry to remove hardness down to trace levels (<10 ppb). Removal of hardness is necessary to protect the electrolytic cells from loss of efficiency and plugging thereby reducing the production cost of chlorine and caustic. These units can be configured using either a 2 column design (Lead-Lag Operation) or, for maximum protection, a 3 column design (Merry Go Round Operation). Chelating resins are used to allow brine softening possible at such high TDS levels.
Our large inventory of spare parts lets us supply just the right part for your equipment. Profitable operation depends on properly functioning leaves and parts on your filtration equipment. At Veolia Water Solutions & Technologies, all parts and leaves are designed, engineered and manufactured to your equipment’s specifications, ensuring top performance and long-term operation. No one else can ensure proper repair and replacement better than our company.

Laser Filter Leaves-Round
Designed to be leak-proof with a positive and complete seal at the outer periphery of the leaf.

T-Bar, T-Channel Leaves
Ideal for rugged operating conditions. Typical applications include the petroleum, chemical mining, beer and food industries.

Cloth Cover Leaves
Available in a variety of porosities, materials and meshes to meet your needs.

Non-Metallic Leaves
A low-cost alternative to exotic metals. These leaves are ideal for caustic chlorine, brine and corn syrup processes.

Spare Parts
Bearings
- Glass-Filled Teflon™
- Bronze
- Carbon Steel
Spray Jets
- Stainless Steel
- PVC
- Kynar™
Filtration Media
- Sand
- Anthracite
- Garnet
- Carbon
- Support Gravel

Gaskets
- Door Gaskets
- O-Rings
- Hub Gaskets
- V-Rings
Leaf Guide Rollers
- Glass-Filled Teflon™
- Stainless Steel and Kynar™
- LBO Synthane
Ion Exchange Media
- Cation & Anion
- Mixed Bed
- Chelating
Veolia Water Solutions & Technologies combines technology innovation with industry experience to provide economical and effective operation of filtration and water treatment applications.

LEAF FILTERS:
Auto-Jet®, Filtra-Matic™, Verti-Jet

TUBULAR FILTERS:
Auto-Shok®, Auto-Pulse™

MEDIA FILTERS:
L’eau Claire Upflow
High-Rate Sand Filters

SEPARATORS:
Autoflot®, Power Clean® Systems

ION EXCHANGE/SOFTENERS

SPARE PARTS AND SERVICE