

3250 Harvester Road, Unit # 1
Burlington, Ontario, Canada L7N 3W9
info@kontekecology.com
Phone: 905-332-8366 or 1-877-332-8366
Fax: 905-332-8367



and fed to the level controlled Ultrafiltration tank that houses the membrane array. The suspended solids laden water is “pulled” through the 0.03 micron membranes using a self-priming vacuum pump, and the resulting permeate water that is pulled through the membrane is now solids free. Air is bubbled up through the element feed channels, actively scrubbing the membrane surface clean of the suspended solids. The membranes are periodically backwashed to remove particulate matter using UF permeate water. Water level in the tank is maintained by the VFD controlled feed pump and controlled by the systems level controller and PLC. Concentrated suspended solids are periodically drawn off of the conical bottom UF tank, transferred to a sludge thickening tower and dewatered through a Kontek filter press.



ROKON Ultrafiltration Clarifier Systems

Kontek Ecology Systems Inc. has been a leading manufacturer and pioneer in Wastewater Recovery & Treatment for over 30 Years.

Kontek RoKon Ultrafiltration Systems are designed for the clarification of treated wastewater and process water. Kontek RoKon Ultra-Filtration systems eliminate the need for clarifiers, polymers and multimedia filters for waste streams to meet critical discharge criteria (i.e. cadmium, lead, mercury) or the permeate can be further processed by a Kontek RoKon Wastewater Recovery RO system for water recovery.

Kontek Ultrafiltration Systems utilize SpiraSep membranes which are robust, submerged, back-flushable, air scoured, spiral wound UF/MF membranes that offer superior performance for the clarification of wastewater and process water. Superior membrane design, allows Kontek to utilize on line periodic back-flushing of the membrane together with 100% air scouring of the membranes. This allows the SpiraSep membrane to maintain higher sustained flux rates than typical positive pressure UF membranes which ultimately translates into less frequent cleanings of the membranes, lower operational chemical cleaning costs, and longer membrane life, all of which benefit the customer.

The Ultrafiltration Process:

Treated wastewater is collected in a feed equalization tank



Features and Benefits:

High Quality Effluent

Reduction of TSS, TOC and Color
< 0.1 NTU
< 3 SDI

Energy Efficient

- Low TMP reduces energy costs
- No recirculation pump
- No backwash pump

Lower Capital Costs & Lower O&M Costs

- Spiral construction efficiency reduces replacement costs, no fiber breakage, no potting problems
- Minimum pumping costs due to low negative pressure design
- Infrequent cleaning
- Minimum waste

Lower Installation Costs

- Small Footprint due to high membrane packing density
- Modular, Skid-mounted Designs

Low Waste Volume

- Recoveries greater than 90 %
- Low cleaning frequency

Membrane Element Components Can Be Independently Selected

- High flexibility in element construction
- Range of feed spacer / packing density combinations to accommodate varying feedwater solids

Kontek UF Systems for RO Pre-Treatment

Key parameter is Silt Density Index (SDI)

Tool for measuring degree of fouling

SDI < 3.0 ideal for RO systems

Flatsheet UF/MF provide better RO pre-treatment

SpiraSep typically has SDI < 2.0

Hollow fiber systems can have poor SDI

Fiber breakages

Potting issues

Low SDI results in lower RO CAPEX and OPEX

