

# Spidflow™

## A new generation of rapid flotation

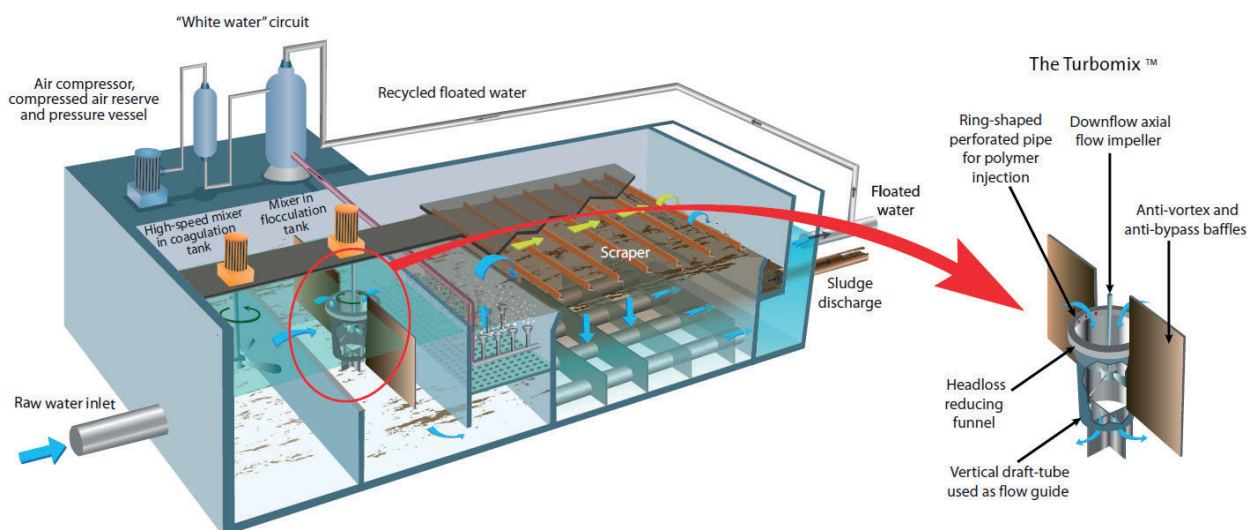
Clarification of water containing low density particles is a delicate step.

This is why Veolia Water Technologies has developed Spidflow™, a new generation of rapid and compact flotation units that can produce high-quality process or drinking water.

No matter the kind of water resources to be treated, Spidflow™ effectively removes colour, organic matter and algae, even when present in high concentrations.

### The Spidflow™ process

- Spidflow™ comprises a coagulation stage, followed by a flocculation step and a clarification phase through fast flotation. The flocculation stage may also use a Turbomix™ when dealing with cold water.
- The fine air bubbles, formed by pressurising air in water (at pressures of 5 to 6 bar) when producing white water, are injected into the Spidflow™ flotation units through a dedicated distribution system. This ensures the separation of Suspended Solids (SS), algae, oil, and hydrocarbons, which are trapped in hydroxide flocs formed by the addition of coagulant.
- The hydraulic sequencing of the various compartments of the Spidflow™ process has been designed in accordance with specific Computerized Fluid Dynamics (CFD) type studies. Spidflow™ has a floor for the distribution of flocculated water, which is located before the mixing step with
- This unparalleled process optimisation ensures that Spidflow™ achieves levels of treatment efficiency which allow it to operate at clarification rates between 30 and 50 m/hour.
- Combined with Veolia MBBR process, Spidflow™ can deliver treated water without chemical addition.



## Applications

- Spidflow™ is an excellent solution for:
  - Clarification of MBBR process in a chemical free environment
  - Clarifying surface water (from lakes, dams, or rivers), containing up to 80 mg/l of SS in occasional peaks, into drinking water.
  - Severe cyanotoxine and/or pesticide issues management. Spidflow™ can in this context be used in association with Powdered Activated Carbon (PAC). The addition of PAC noticeably increases Spidflow™ range of use and enables various organic micropollutants to be removed by adsorption.
- To meet the needs of large capacity production plants, Spidflow™ is installed in concrete works. The process is also available as Spidflow™ Package Plant, in a metal, modular and compact version. This specific product range is ideal for industrial installations with small treatment capacity.



## Advantages

- Even without the additional use of polymers, Spidflow™ provides unequalled watertreatment efficiency by eliminating:
  - Over 98% of total suspended solids
  - Over 99% of algae
  - Over 50% of organic matters
  - Over 90% of colour
  - And over 90% of oils and hydrocarbons, making Spidflow™ an excellent protection system for installations in locations that are sensitive to unplanned petrochemical releases (hold blasting and ballast discharges).
- A significant reduction of the clogging ability of water, thanks to excellent clarified water SDI.
- A direct concentration of floating sludge of 30 g/l on average, which does not require an additional thickening stage.
- A flexible and highly reactive solution to variations in the quality of water to be treated, thanks to full and extensive automation.
- Competitive operating costs, thanks to a well-managed energy consumption and a moderate use of chemicals.
- Limited footprint, allowing Spidflow™ to be installed in treatment plants of all sizes, including during retrofitting of installations.
- Full-time operating reliability as well as simplified maintenance and operation.

### **Veolia Water Technologies Canada Inc.**

2000 Argentia Road • Plaza IV, Suite 430 • Mississauga, Ontario • L5N 1W1 Canada  
tel. 905-286-4846 • fax 905-286-0488

**salescanada@veolia.com • www.veoliawatertechnologies.ca**