ROXIA
PERFORMANCE — DRIVEN BY PEOPLE

info@roxia.com
www.roxia.com

Roxia Floating Aerator™

BENEFITS

- High efficiency
- Low energy consumption
- Easy & fast installation
- Low initial investment
- Effective water circulation

Roxia Floating Aerator™

Turbine surface aerator for treatment of industrial & municipal wastewater

Roxia Floating Aerator™ brings together high efficiency, low initial investment and low energy consumption. Aeration of wastewater or natural water is effective with no need for complex infrastructure, keeping the costs and maintenance low.

High Efficiency & Low Costs

New Roxia Floating Aerator efficiently transfers and disperses oxygen into the wastewater. The floating design allows fast and easy installation without costly construction. The aerator's features keep the operating and maintenance costs low.

- Effective water circulation: under-water intake pipe is optimized according to the water depth. This ensures efficient mixing of oxygen-enriched water.
- Clogging prevention: wide intake pipe and simple construction keep the maintenance minimal.
- No compressed air: lower investment and operation costs, no need for expensive compressor and diffuser infrastructure.

Wastewater aeration does not need a complex infrastructure. Roxia Floating Aerator is an effective and cost-efficient solution.

Smart Aeration System

Add Automation & Increase Flexibility

Roxia Floating Aerators can be delivered as a fully automated Smart Aeration System with Roxia Malibu™ digital platform. The system can be customized according to site-specific requirements.

Smart Aeration System benefits:

- Energy efficiency: Easy optimization of aeration power according to target values in changing conditions.
- Reduced maintenance: Automation software can be programmed for automatic impeller cleaning cycle. This keeps the aerator clean and helps to reduce maintenance requirements.
- Online access to real-time information: Operating data is collected and accessed online through Roxia Malibu platform. The Malibu is easy for anyone to view and use as data is presented through visual 3D model of the actual plant.
- Advanced monitoring: System can be equipped with additional process sensors to monitor pH, oxygen levels and other parameters.

Roxia Floating Aerators can be connected into a fully automated Smart Aeration System.

Aeration Turned Smart

Landfill leachate aeration.

Customer:

EKJH Waste Management Company

Products:

Five 1,5 kW Roxia Floating Aerators
Application: Water aeration in the equalization basin

Benefits:

- No more odour problem caused by low oxygen level
- Freezing problem eliminated
- Remote monitoring saves operators' working hours
- Improved discharged water quality

In a nutshell:

Waste management company had a problem with disturbing odour and wintertime freezing of the equalization basin. Roxia delivered and installed a Smart Aeration System. The aerators are enhanced with advanced automation for optimized performance control and monitoring. Since the installation, the odour has disappeared and basin stays ice-free during cold Finnish winters.

Solution for bad odour

The customer had good previous experience with Roxia's design and installation of a new smart automation system for the pumping station. Next, looking to reduce the odour and improve the state of the equalization basin, they reached out to Roxia again.

As a solution, Roxia recommended and later implemented a Smart Aeration System. It consists of five 1,5 kW Roxia Floating Aerators, located in the equalization basin.

Since the commissioning of the Smart Aeration System, the odour problems have virtually disappeared. The basin stays ice-free through the winter. Adding oxygen to the equalization basin has also improved the discharged water quality.

Automated cleaning cycles

Roxia Floating Aerators are integrated into the automation system. Their operation is automated based on ambient temperature measurement. The system also includes an automatic cleaning cycle where the impeller rotation direction is reversed periodically.

Online access to live-view

Via Roxia Malibu™ portal, plant staff can remotely access real-time information about aerators' performance with any device with internet connection (e.g. smart phone, laptop). The online view replicates the real environment through a 3D model of the actual plant, which makes it easy for anyone to read the data without prior training. Monitoring of the operation and condition of the aerators is faster and easier than ever.

" Online support improves performance and realiability "

Our customer: EKJH Waste Management Company

EKJH Waste Management Company is located in Lappeenranta, Finland. It is responsible for recycling and utilizing the wastes from 9 surrounding municipalities. In the waste handling facilities landfill leachate is collected in an equalization basin before being pumped to the local municipal wastewater treatment plant.

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Ideal Applications

“ Best Solution for Shallow Basins “

Focus Areas:

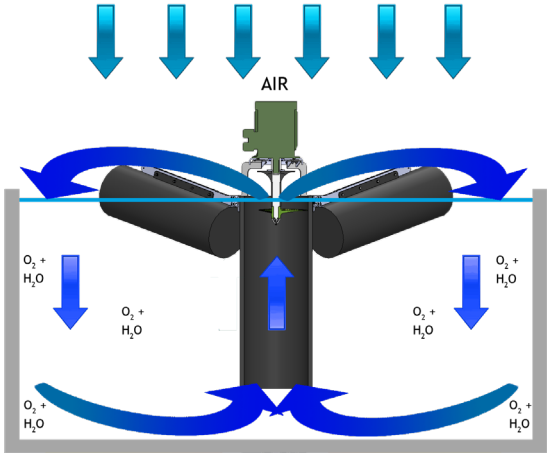
- P&P, chemical, food, beverage
- Landfill leachate
- Mining wastewaters
- Decentralized wastewater treatment, point source treatment

Target applications:

- Aeration basins and lagoons
- Equalization tanks, pre-aeration
- Retrofit and replacement projects
- Odour control
- Simultaneous cooling of hot industrial waters

Performance data	
Aerator unit size	1,5 – 22 kW*
Liquid depth	1 – 6 m*
Standard Aeration Efficiency (SAE)	2 – 2,2 kgO2/kWh
Water flow	69 – 890 l/s

** Standard, other sizes available upon request*



The aerator transfers oxygen into wastewater and then disperses and effectively mixes the oxygen-enriched water in the basin.

Water aeration in an equalization basin.

About us

Roxia delivers high-tech dewatering, industrial automation and environmental technologies. Specializing in mining, minerals, metallurgy, chemical, food and pharmaceutical industries, our team generates best performing solutions for each specific need.

We offer our support from Australia, Chile, China, Finland, Germany, Peru, Russia, South Africa, Sweden and the United States.

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Roxia Oy
Myllykallionkatu 2, FI-53101 Lappeenranta, Finland
Tel. +358 201 113 311

info@roxia.com
www.roxia.com