



# Industrial wastewater

## Virat Nanobubble Generators 1000 m<sup>3</sup>/hr) and above

Our company offers tailored solutions utilising nanobubble technology for various stages of production processes where water usage is crucial. Our presence spans the entire supply chain, offering solutions for equipment and surface cleaning and CIP and wastewater treatment. Our objective is to minimise water and energy consumption, decrease chemical usage and odors, and enhance contaminant removal.

### Aeration in Membrane bioreactor

Nanobubble offers enhanced organic load removal, decreased energy use, improved aeration efficiency. The removal of biochemical oxygen demand (BOD) in the membrane bioreactor (MBR) would slow down if the oxygen-transfer system fails to provide the needed dissolved oxygen (DO) to support the living system. The cost of expanding or upgrading an insufficient aeration system can be significant, typically resulting in minimal or no financial gain over the anticipated lifespan of the equipment. Nevertheless, the utilisation of nanobubbles in wastewater treatment offers a cost-efficient method of providing additional aeration for MBRs.

### Odour control

The majority of disagreeable odours emitted in wastewater are the result of the gaseous byproducts generated from the decomposition of organic materials such as H<sub>2</sub>S. An effective method for addressing smells, such as H<sub>2</sub>S, involves preventing the water from becoming anaerobic by elevating the levels of dissolved oxygen (DO) Nanobubbles, an efficient gas-injection technology, provide a substantial amount of air or oxygen nanobubbles. This prevents the production of odorous compounds by avoiding anaerobic situations.



### Improved performance of DAF

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