



# AEROFLOAT FOOD & BEVERAGE WASTEWATER TREATMENT





## WASTEWATER IN FOOD AND BEVERAGE PRODUCTION

Managing wastewater in the food and beverage industry can be problematic for business owners. With more stringent discharge limits and subsequent rising trade waste costs, finding an affordable and effective solution can be challenging.

Aerofloat specialises in wastewater treatment for the food and beverage industry. Aerofloat's patented world-first technology uses traditional techniques combined with some clever engineering, to create low maintenance, compact and cost-effective solutions.

### **Aerofloat's wastewater treatment systems can help you reduce:**

- Suspended solids (SS)
- Fats, oils and grease (FOG)
- Biochemical oxygen demand (BOD)
- Chemical oxygen demand (COD)



## THE AEROFLOAT OFFERING

Aerofloat is an Australian company that designs, manufactures and installs wastewater treatment systems. Aerofloat's team of engineers can manage the entire treatment process in-house, from consultation and 3D CAD design, to manufacturing, installation and ongoing support.

Aerofloat offers custom designed solutions utilising patented DAF and MBBR Aerofloat technology, as well as off-the-shelf products to address a range of wastewater treatment requirements.

Aerofloat also offers competitive chemical supply contracts and system maintenance contracts.

### Aerofloat's offering includes:

- Dissolved air flotation
- Biological treatment plants
- Screening
- Sludge dewatering
- Filtration
- Desalination

## FOOD & BEVERAGE INDUSTRIES

Aerofloat specialises in treating wastewater from food and beverage manufacturers and has extensive experience across a range of industries:

- Food courts
- Dairy
- Meat and poultry
- Packaged food
- Wine and beer
- Confectionery
- Small goods
- Ready meals

# THE AEROFLOAT DIFFERENCE

## AeroDAF

### LOW MAINTENANCE

The AeroDAF has a patented scum removal system and unique double hopper design that allows it to be self-cleaning, without the need for mechanical scrapers.

### COMPACT

The AeroDAF's compact design fits into a small footprint around half the size of most traditional DAFs. Aerofloat engineers use 3D modelling to custom design a solution to address any space challenges.

### COST EFFECTIVE

The AeroDAF is designed to be mechanically simple, with a polyethylene tank and no mechanical scrapers, resulting in a cost-effective solution.

### SEALED AND VENTED

The AeroDAF is completely sealed and can be vented above the roofline, preventing any unpleasant odours.

### FLOW RATES

AeroDAF 100: 3-6 m<sup>3</sup>/hr

AeroDAF 200: 8-12 m<sup>3</sup>/hr

## Biological Treatment (AeroMBBR / AeroSBR)

### CUSTOMISABLE PE TANKS

Polyethylene tanks are customised to your needs in different MBBR or SBR configurations.

### EASY CLEANING WITHOUT DOWNTIME

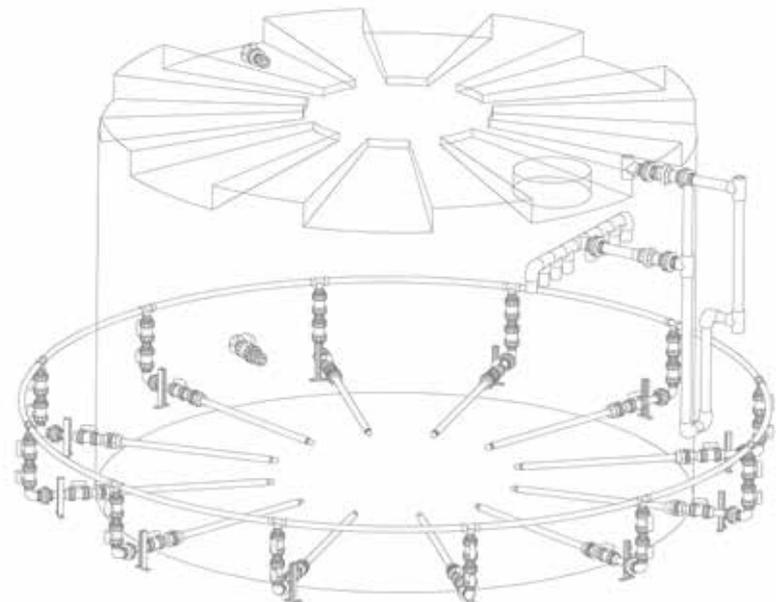
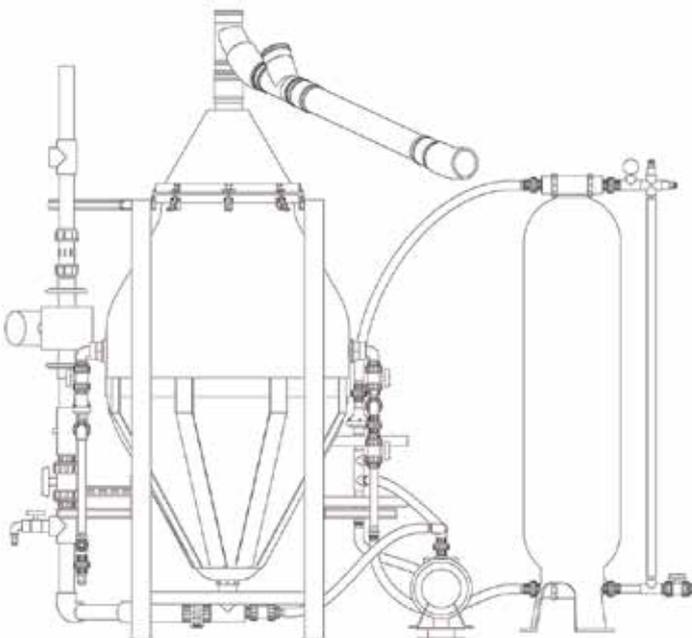
The unique design of Aerofloat's aeration lances allows them to be removed for cleaning while the process is still operating. This overcomes the need to drain the tank, remove the bio-media or shut the system down.

### SEQUENCE STEPS

The AeroSBR provides cycles of aerate, mix, settle and decant. This ensures optimal removal of nitrogen by the nitrification/denitrification process.

### AIR LOCKED SYPHON (ALS) DECANTER

Unlike conventional SBRs with lowering decanting weirs, the AeroALS decanter can be installed in covered tanks, enabling the AeroSBR to be sealed and vented, preventing any unpleasant odours escaping.



# AeroCIRC DAF

## SELF-CLEANING DAF

The AeroCIRC DAF has a rotating scraper drive and 60 degree hopper bottom, ensuring that the DAF self-cleans.

## NO CHAIN SCRAPERS

The rotating scraper makes for a very attractive product offering with no chains to maintain or replace.

## HYDRAULIC SLUDGE REMOVAL OPTION

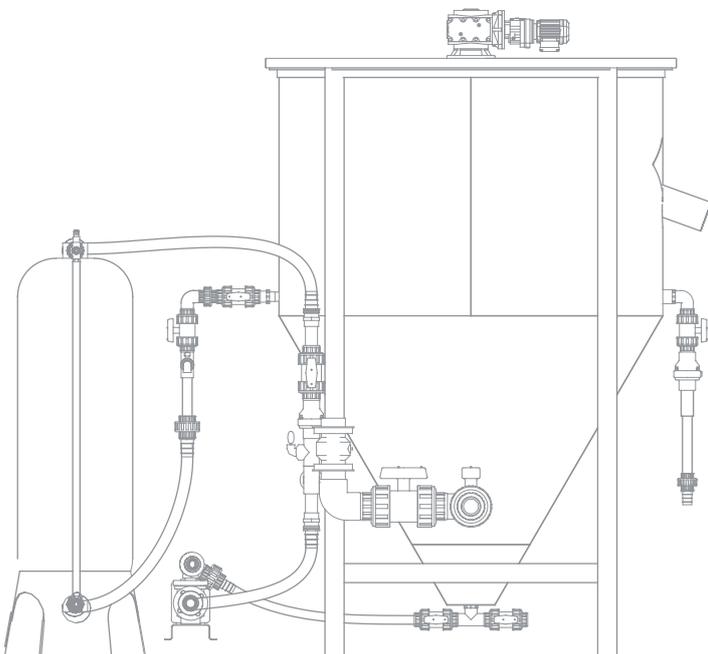
By adopting the AeroDAF patented feature of hydraulic float removal, the top of the DAF tank is periodically purged.

## SUPERIOR HYDRAULIC DESIGN

The central mixing chamber allows for an effective solids and air contact zone plus a radial downward flowpath away from the floating sludge blanket ensuring more complete solids separation.

## FLOW RATES

AeroCIRC DAF 20: 14-20 m<sup>3</sup>/hr  
AeroCIRC DAF 30: 20-30 m<sup>3</sup>/hr



# AeroVDAF

## HIGH FLOW RATE

The AeroVDAF can manage extremely high flow rates, up to 100m<sup>3</sup>/hr.

## EASY CLEANING

The AeroVDAF features integrated hoppers, making cleaning easy.

## CUSTOMISABLE, AUSTRALIAN-MADE SOLUTIONS

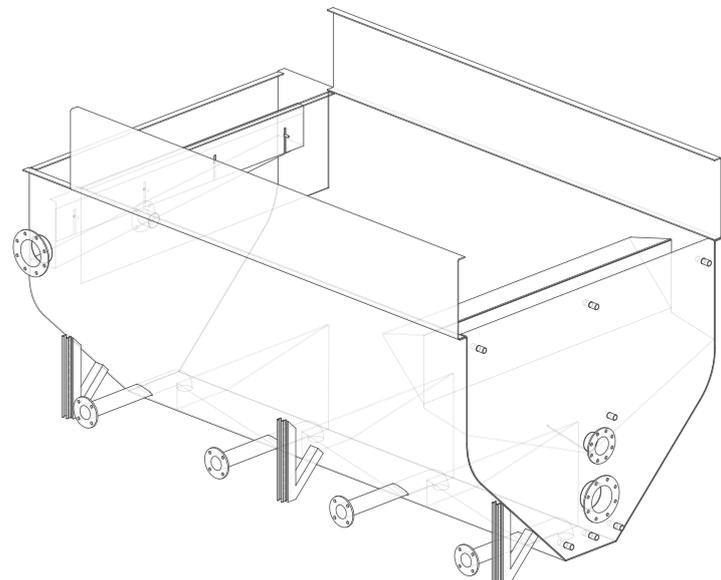
AeroVDAFs are manufactured in-house in Aerofloat's Australian workshop. They are made to order and can be customised for different requirement.

## NYLON CHAINS

The AeroVDAF utilises nylon chains instead of metal chains, providing a high design life.

## FLOW RATES

AeroVDAF 30: 20-30 m<sup>3</sup>/hr  
AeroVDAF 50: 30-50 m<sup>3</sup>/hr  
AeroVDAF 70: 50-70 m<sup>3</sup>/hr





# AFTERCARE

The Aerofloat after care team provides a range of services to ensure your wastewater treatment system will run efficiently long after installation.

## Chemical Supply

Having the correct chemistry in your wastewater treatment system is critical to achieving the required effluent quality. Aerofloat's experienced engineers hand-pick the best chemicals for use in your wastewater system to ensure optimal running results, while minimising long-term costs with competitive chemical rates.

## Servicing & Maintenance

A wastewater treatment system should be regularly maintained and serviced to minimise downtime, maximise efficiency and ensure it complies with effluent discharge standards. By engaging the Aerofloat servicing team you can prevent system outages and ensure your wastewater treatment system is working well.

## Parts & Consumables

It's easy to order parts and consumables for your wastewater treatment system through Aerofloat. Our servicing team will identify any wear and tear, and organise replacement parts when required. This will minimise any down time of your wastewater treatment system and ensure your system is running smoothly

## Remote Monitoring & Upgrades

Ageing wastewater systems are often inefficient and incompliant. Aerofloat can assess your wastewater treatment system and identify areas that would benefit from an upgrade – whether this is a full upgrade or partial upgrade that utilises existing parts.



## CASE STUDY

# WESTFIELD WESTLAKES FOOD COURT

### BACKGROUND

Strong business and clientele growth in recent years meant that the Westfield shopping precinct located in Westlakes, South Australia, needed an updated wastewater treatment system to support its busy food court.

The wastewater from the stores in the food court had grown. This meant that the series of grease arrestors in place to treat the wastewater prior to sewer discharge was no longer sufficient to meet SA Water's guidelines.

### THE AEROFLOAT SOLUTION

Aerofloat installed its patented AeroCIRC M600 DAF to ensure Westfield Shopping Centre met existing demands, whilst allowing for future business growth at the site.

"The footprint was quite small, but we had a lot of height to work with, so we custom-built stainless steel tanks that were quite tall" said Michael Anderson, General Manager, Aerofloat.

Maintaining the system was also considered in the design. "We created a platform that was suspended off the top of one of the tanks, allowing servicing access to the system from the roof," said Anderson.

Wastewater generated at the site was typically from on-site cooking facilities and general dish washing. The AeroCIRC M600 DAF system treated the high concentration of suspended solids (SS), and fats, oils and grease (FOG) in the food outlet wastewater. Aerofloat's unique design ensured minimal DAF maintenance for operators.

Aerofloat currently services and operates the system on behalf of Westlakes ensuring all discharge specifications from SA water are being met.

### RESULTS

Aerofloat's design at the Westfield Shopping Centre handled the wastewater generated from the existing restaurant and fast food outlets. The system had the capacity to treat peak wastewater flow rates of up to 36 m<sup>3</sup> per hour, well above the current flow rates. This ensured that additional wastewater generated from the expected extensions to the fresh food area in the future would be managed.



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