

## EnviroDAF™ Technology

Dissolved Air Flotation

### Key features & benefits

- DAF designed for food, beverage and WAS thickening
- Heavy-duty scraper system designed for continuous use
- Robust construction designed to suit each application
- Stainless steel construction

### How we create value

- Most reliable dissolved air system on the market
- Unique Counter-Current sludge removal system with high loading capacity
- Cost-effective design removes and thickens solids automatically



# EnviroDAF™ Technology

## Dissolved Air Flotation (DAF)

The EnviroDAF™ system is a clarification process for the separation of solids, grease and oils. It works by producing a stream of micro-fine air bubbles that attach to solids and float them to the surface, where they can be removed by a surface scraping mechanism.

DAF is ideally suited to particles and flocs that are of neutral density, slow-settling or buoyant. This is particularly relevant to food and other industries where wastewater frequently carries large volumes of low density solids, unsuited to settling. DAF also takes up considerably less space than settling methods: generally less than 25% of the equivalent surface area is required.

For efficient separation of solids with a wide-range of densities, incorporating economy of space, DAF is the most appropriate process to employ for many trade waste applications. Our high-quality EnviroDAF systems are specially engineered to suit each application. Most are constructed from stainless steel, although other materials can be used to suit unusual or highly corrosive environments.

An EnviroDAF system is just one of the separation systems that form part of a complete wastewater treatment plant. Generally the design also incorporates: collection wells, pumping systems, primary screening, chemical dosing systems, equalizing tanks, sludge dewatering, electrical control systems, instrumentation and secondary treatment methods. Ovivo are specialists in the design and construction of complete treatment plants, incorporating DAF and a wide range of other proprietary products.

Our extensive knowledge and understanding of the industrial processes that generate wastewater is critical to the successful implementation of DAF systems as a primary treatment stage.





## Features and Benefits

### Integrated Chemical Reaction-Tanks

The EnviroDAF system can be manufactured with any number of chemical reaction tanks for upstream pH control or coagulation. The reaction tank is constructed in stainless steel, with a retention time to suit each application. High quality mixers, pH controllers and dosing line connectors are all fitted as standard.

### Unique Counter-Current Scraping

The EnviroDAF system features a unique counter-current sludge removal system. Unlike co-current or circular systems, the reversed profile of the counter-current system allows a constant lift of air bubbles under the sludge blanket in the removal zone, resulting in vastly improved performance.

### Heavy-Duty Scrapers

The surface scraper is based on a six-sprocket guide system, ensuring accurate tracking of the scraper blades over the beach. Extra heavy-duty roller chains, sprockets and drive motor/gearbox are designed for continuous duty.

### Skid-Mounted and Pre-Tested

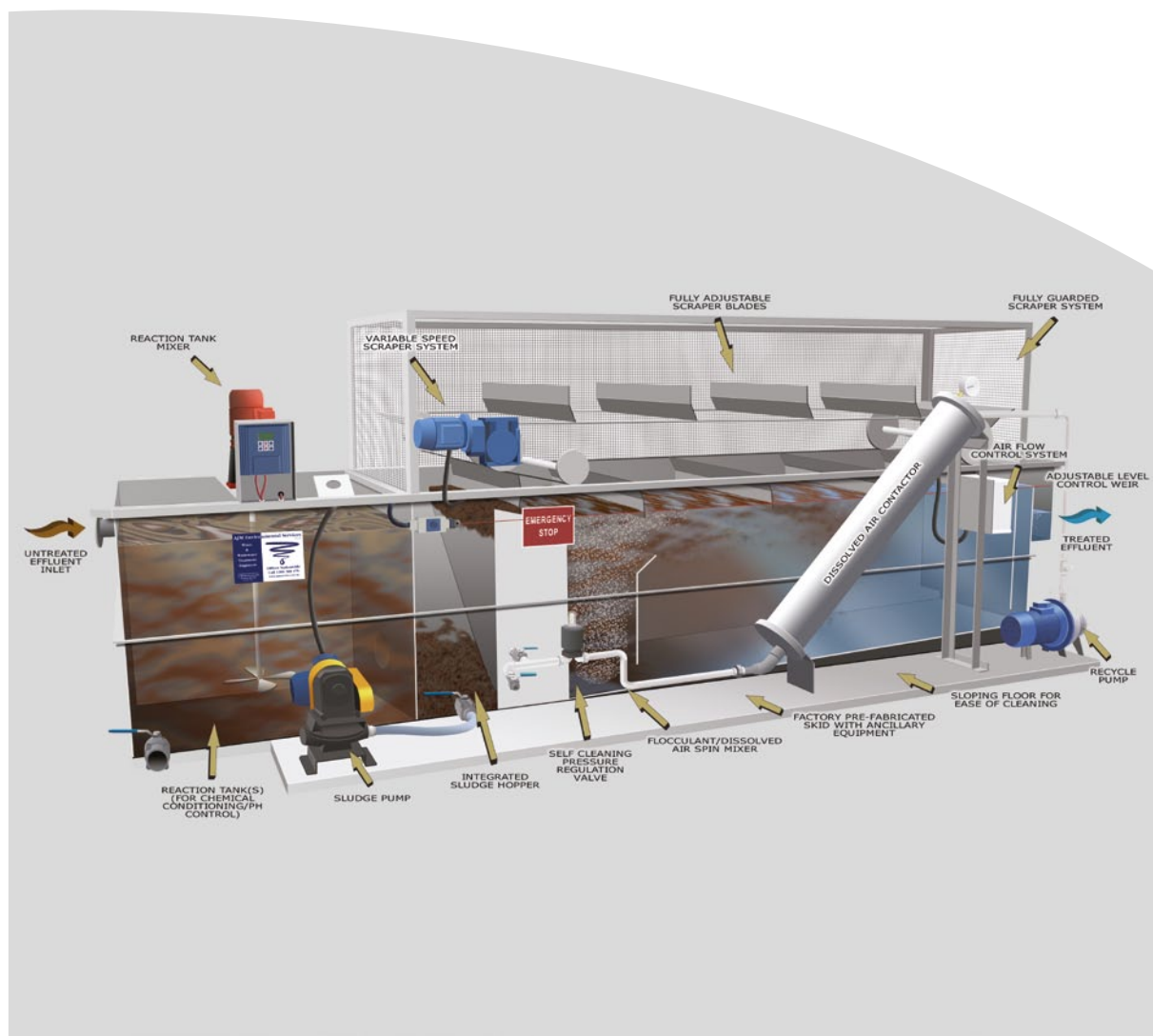
The EnviroDAF system is usually supplied as skid-mounted, pre-tested units to simplify installation. A comprehensive range of accessories (such as sludge pumps and air compressors) can also be integrated into the unit during assembly.

### True Dissolved Air Process

Treated water from the base of the DAF is mixed with compressed air in a Dissolved Air Contactor (DAC). At the entry to the DAF, the pressure is released to ensure production of uniformly sized micro-bubbles that are key to optimizing bubble attachment.

### Bottom Sludge Removal

For ease of cleaning, the DAF systems are designed with a sloping base to allow any settled solids to be drained. On larger DAF systems our unique hopper bottom is a cost-effective, proven method of automatically removing solids.



## The EnviroDAF™ Range of Capabilities

### Applications

For the following industries and applications, an EnviroDAF™ system is usually the most appropriate separation device for wastewater treatment:

Abattoirs  
 Cheese processing  
 Container washing  
 Dairies  
 Food processing (general)  
 Fish processing  
 Metal removal  
 Meat industry  
 Poultry processing  
 Pulp & paper  
 Small goods  
 Tanneries  
 Vegetable industries



### Advantages of the EnviroDAF™ System

- Unmatched for quality and performance
- Hundreds of installations worldwide
- Capacities ranging from 1KL / hr to 400KL / hr
- Available as pre-assembled, pre-tested units
- Ovivo experience in all industrial sectors, covering food, metals, paper and petrochemicals

### Capacities and Sizes\*

Model	m <sup>3</sup> /hr	L	B	H
1200	4	2750	980	1050
2600	10	3300	1350	1050
3800	15	3650	1680	1050
4800	20	4350	1680	1050
7100LD	25	4900	2180	1050
7100HD	35	4900	2180	1350
11000	50	6750	2750	1350
15000	70	7400	2750	1350
19000	100	9300	2750	1350
24000	150	10500	3600	1650
38000	200	10100	4000	1650
45000	250	12100	4000	1650
60000	300	14000	5000	1650

\*Dimensions and capacities are only a guide and are subject to change. Please confirm with your local Ovivo representative prior to using the above.

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