

DAF

Apex Dissolved Air Flotation Units



Dissolved Air Flotation (DAF) units are a key component for many wastewater treatment plants where separation of solids and oils is required. With extensive in-house process engineering knowledge Apex Environmental's DAF units can be supplied as:

- Standalone units supplied for replacement purposes or as part of a site upgrade; or
- Integrated units supplied as part of a new wastewater treatment plant including all automation, chemical dosing, site pipework and civil works.

APEX25 DAF Unit



APEX50 DAF Unit



APEX150 DAF Unit



Benefits

Apex DAF units incorporate a number of features that provide benefits to the user. Our robust white water (dissolved air solution) pump can handle solids and fibre that would block traditional pumps, allowing for full-flow or side stream pressurisation modes that increase unit throughput by up to 25%.

To reduce operator involvement Apex DAFs incorporate automatically retracting instruments that are cleaned in place rather than requiring manual removal and cleaning. Turbidity monitoring and control can also be incorporated to automatically optimise chemical dose rates and reprocess wastewater if standards are not met.

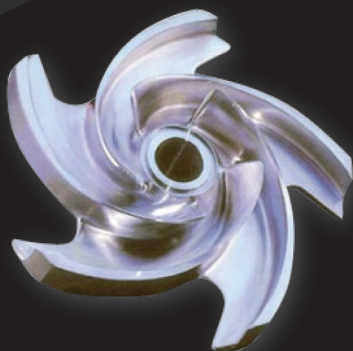
Units can also be supplied in either standard co-current configuration, or a counter-current configuration where wastewater is fed into the tank at the sludge removal end, ensuring that sludge is always being carried away from the clean end of the DAF.

Capacities and sizes

| MODEL | CAPACITY | TANK LENGTH | TANK WIDTH |
|---------|-----------------------|-------------|------------|
| APEX25 | 25m ³ /hr | 5m | 1,200mm |
| APEX50 | 50m ³ /hr | 10m | 1,200mm |
| APEX100 | 100m ³ /hr | 10m | 2,900mm |
| APEX150 | 150m ³ /hr | 15m | 3,000mm |

Options

Apex Environmental DAF units are fabricated in stainless steel and come with the following options:



- Bottom scrapers
- Chemical dosing systems including integrated or standalone tanks
- Tube flocculators with static mixers
- Online turbidity monitoring and control
- Stainless steel safety screens and access walkways/platforms
- Automated top scraper cleaning
- Counter-current configuration
- Bird proofing

Case study

Two Apex Environmental DAF units were installed as part of the wastewater treatment plant at large dairy factory. The DAF units can operate in parallel or separately depending on demand. The treated wastewater is applied to surrounding farmland through centre pivot irrigators.



| PARAMETER | INFLUENT | EFFLUENT |
|------------|----------|----------|
| COD(mg/L) | 5,700 | 2,000 |
| FOG (mg/L) | 900 | 50 |
| N (mg/L) | 140 | 45 |

Standard Performance for Whole Milk Powder Plant

The level of performance achieved depends on the source and quality of the wastewater. Apex Environmental recommends the use of bench top testing or site trials to de-risk projects and offer confidence in the technology working under specific onsite conditions.

In today's world we recognise the need to take responsibility for our environment seriously and water is high on the list of priorities. Apex Environmental is driven by a passion to help industry grow sustainably by providing the very best in wastewater treatment.

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