

# DISSOLVED AIR FLOTATION

Baldwin can provide  
either rectangular or  
circular DAF units



40,000L/Hr PLC Controlled Mine Site DAF

## Dissolved Air Flotation

Is a liquid/solid separation process in which microscopic air bubbles (10 - 100 $\mu$ ) become attached to solid particles suspended in liquid, causing the solid particles to float. In a DAF system air is dissolved into liquid under pressure. The dissolved air remains in solution in the form of microscopic air bubbles. The bubbles are mixed intimately with the wastewater and become attached to the solids in the waste stream causing the air solids agglomerate to float to the liquid surface where a solids (float) blanket is formed. Surface skimmers then remove the float blanket.

## Benefits of the Baldwin DAF

### Air Dissolving System

The Dissolving System provides an air dissolving efficiency of approximately 90%. The key to consistently high dissolving efficiency is the excellent air/liquid contact, thus a high mass transfer. The efficiency of the air dissolving system permits lower recycle rates and hence allows higher [wastewater](#) feed rates.

### Air Release System

The Air Release System is designed to maximize (greater than 90%) the conversion of air into bubbles appropriately sized for Flotation (10 - 100 $\mu$ ).

### Air/Solids/Polymer Mixing Chamber

The Swirl inducing mixing chamber provides intimate mixing for the air bubbles, solids and polymer. This allows for optimum air/solids bond formation.



## Quiescent Flotation Cell

In our Circular DAF the addition of vertical baffles, called Lamellas, allow laminar flow conditions to be maintained at unusually high hydraulic loading. To ensure the float blanket remains undisturbed, a free air venting system has also been included. Baldwin's standard range of DAF units are designed with capacities from 1m<sup>3</sup>/hr to 100m<sup>3</sup>/hr.

For larger applications custom designed are available to suit site conditions.



## Process Optimisation

Baldwin's service know-how and experience are unparalleled in the industry. A bench scale test unit allows troubleshooting or optimizing of existing units in a quick professional manner without interrupting the full-scale DAF process.

### Pilot Unit Available

Although the bench scale unit almost eliminates the need to conduct site trials, pilot scale units are available to prove performance and generate a float for dewatering trials.

## Performance Guarantee

Baldwin's commitment to solving your waste water problem starts with a thorough evaluation of your process, the components contributing to the generation of waste water, and continues through equipment selection and design to the final commissioning and operator training phases.

Selecting a Baldwin DAF unit is your way of ensuring your wastewater problems are solved.



## Contact Us

Give us a call for more information about our services and products

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We specialise in the design and manufacture of industrial wastewater treatment systems