

# DISSOLVED AIR FLOTATION

## Circular



### CIRCULAR DAF

Kusters Water offers a complete line of dissolved air flotation (DAF) systems ideally suited for liquid-solid separation in many industries, including separation of free oils and grease. The Kusters Water DAF units are designed for effective removal of total suspended solids (TSS), biochemical oxygen demand (BOD) and fats, oils and grease (FOG).

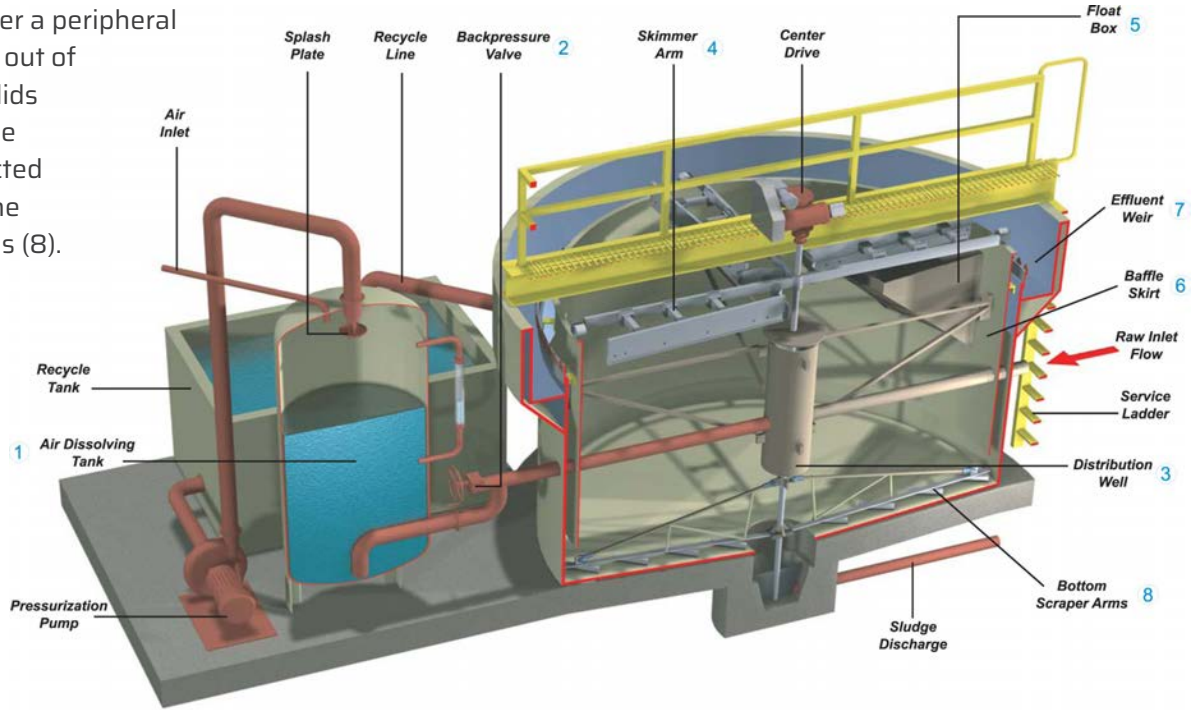
DAF units are custom designed based on flow rates and solids loading. Materials of construction available include:  
Epoxy coated steel, 304 SS and 316 SS.

### Highly Efficient

- 80 to 90% Capture of Suspended Solids Without Chemical Addition
- 90 to 98% Capture of Solids With Chemical Addition (Typically a Polymer)
- 3.5 to 5.5% Float Thickness (WAS - Solids Concentration)
- 85 to 90% Air Dissolution Capability
- 80 to 90% Oil and Grease Removal
- 50 to 80% B.O.D. Reductions

**HOW IT WORKS**

Air dissolution occurs within the air dissolving tank (1) that is receiving either pumped raw flow or pumped recycle flow that will be mixed with compressed air or gas. The air/water mixture is then held under pressure in the air dissolving tank by a backpressure valve assembly (2). The backpressure valve injector releases the pressurized flow near the center of the flotation unit into a distribution well (3) which allows the dissolved air to come out of solution in the form of microscopic bubbles. These small bubbles attach themselves to suspended solid particles contained in the waste stream and float them to the surface of the cell. The accumulated float is collected on the surface by multiple skimmer arms (4) which move the solids into the float box (5). The clarified water exits the tank by passing down under a full diameter baffle skirt (6), then rises up and over a peripheral effluent weir (7) and out of the tank. Heavier solids that may settle to the basin floor are collected and removed with the rotating scraper arms (8).



**PROVEN APPLICATIONS**

- |                         |                       |                    |                       |
|-------------------------|-----------------------|--------------------|-----------------------|
| Aircraft Maintenance    | Clarifier Replacement | Poultry Processing | Seafood Processing    |
| Algae Removal           | Durable Goods         | Power Plants       | Snack Foods           |
| Automotive              | Food Processing       | Prepared Foods     | Sludge Thickening     |
| Ballast Water Treatment | Heavy Metals Removal  | Pulp And Paper     | Stockyard And Feedlot |
| Canning                 | Meat Packing          | Railroads          | Tanning               |
| Chemical Processing     | Mining                | Refinery           | Textile               |
| Cheese Processing       | Pet Foods             | Rendering          | Trucking Industry     |

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