

# DISSOLVED AIR FLOTATION

## RECTANGULAR



### DISSOLVED AIR FLOTATION (DAF)

Kusters Water / Hi-Tech 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 Hi-Tech DAF units are designed for effective removal of total suspended solids (TSS), biochemical oxygen demand (BOD) and fats, oils and grease (FOG).

Tank designs are offered in standard sizes based on flow rates. Materials of construction available include: Epoxy coated steel, 304 SS and 316 SS. All chain and flight components are non-metallic, low maintenance.

### 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

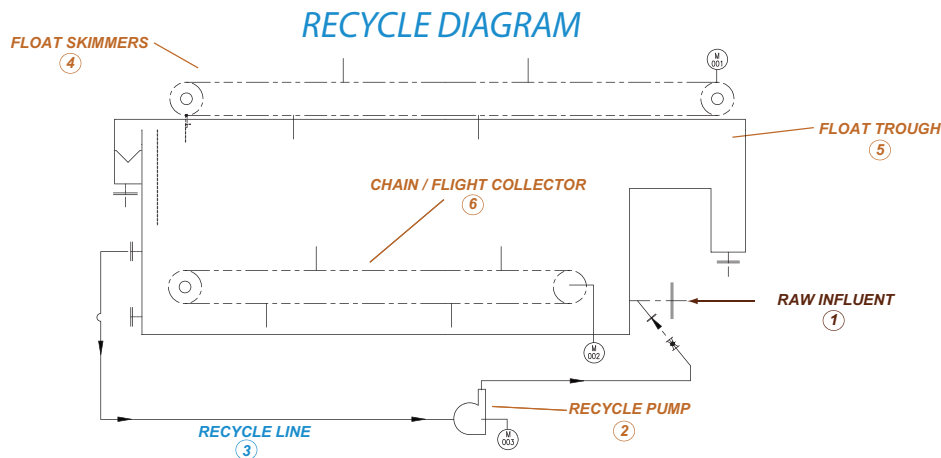


**KUSTERS-WATER**  
a division of KUSTERS ZIMA

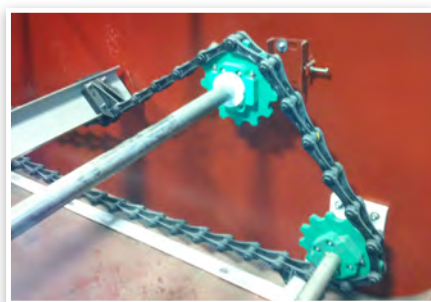
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## PRINCIPLE OF OPERATION

Raw influent (1) is introduced into the DAF cell, 20-100% of the clarified effluent is recycled (3) with the recycle pump(s). Air dissolution occurs within the specially designed multi-phase recycle pump (2) or using a conventional air dissolution system including an air compressor, recycle pump and air dissolution tank. The recycled air/water mixture is then injected at the point of raw influent and into the DAF cell, allowing the microscopic bubbles to attach to the suspended solids. The floated solids accumulate on the surface of the DAF. A non-metallic surface skimmer (4), with multiple collection flights, collects the floated solids and pushes them into the float collection trough (5) located at the adjacent end of the DAF cell. The clarified water exits the tank. Heavier solids that settle to the tank floor are collected and removed via a chain and flight system or auger (6).



Shop assembled and loaded for transit.



Lower Chain and Flight System.



DAF Unit Using Conventional Recycle System.

## PROVEN APPLICATIONS

Aircraft Maintenance  
Algae Removal  
Automotive  
Ballast Water Treatment  
Canning  
Chemical Processing  
Cheese Processing

Durable Goods  
Food Processing  
Heavy Metals Removal  
Landfills  
Meat Packing  
Mining  
Pet Foods

Poultry Processing  
Power Plants  
Prepared Foods  
Pulp And Paper  
Railroads  
Refinery  
Rendering

Seafood Processing  
Snack Foods  
Sludge Thickening  
Stockyard And Feedlot  
Tanning  
Textile  
Trucking Industry

For more information call **864.576.0660**  
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