

# EfloDAF

# Dissolved Air Floatation

## Advantages

### Typical Removal Rates

TSS : 85 - 90 %  
BOD : 65 %  
FOG : 98 %

High pressure, multi stage recirculation pump

Air injection pump for delivery of micro air bubbles (< 100 micron) avoiding the requirement of a dissolved air system with associated pressure vessels, flow monitoring and air compressor.

Fine, easy clean filter to protect high pressure pump.

Separate skid mounted chemical dosing unit for the injection of flocculant & polymers. Complete with flow mixing and retention necessary for building the floc. Fitted with inlet PN10 flange for customer's inlet pumps.

Chemical dosing available for flocculant, polymer and pH adjustment.

Efficient, variable speed surface scraper mechanism complete with low power motor/gearbox unit and corrosion resistant chain drive.

Choice of material for process vessel including protected mild steel or stainless steel.

Fully automatic operation.

Skid mounted, fully piped and wired to a single control panel controlling the chemical dosing, process pump, air injection pump and scraper mechanism.

All electro-mechanical components are from major European companies including Grundfoss, Danfoss, Nord, Wilo & Siemens for an exceptional long and reliable operating life.

## General Description



EfloDAF uses the principle of air floatation to separate contaminants from waste water streams.

Contaminants such as emulsified oils and greases are first broken from suspension using chemical coagulants such as Ferric or PAC depending on jar tests. These small contaminating particles are united using flocculant dosing to create larger particles.

These particles are not dense enough to settle by gravitational methods but are instead persuaded to float to the surface of the tank by the introduction of minute air bubbles. The bubbles emerge at the base of the tank and attach themselves to the flocculated particles and float to the surface as a thick scum.

This surface scum is scraped to a collection chamber, leaving a clean water discharge.

Typical applications would include : Food Manufacturing, Oil Field Produced Water, Metal Finishing, Cargo & Car Wash, Dairy, Mining, Brewery, Vegetable oil and Salad Oil Production.

Eflo DAF is a key process component in industrial water re-use systems achieving significant oil and solids removal as well as reductions in COD / BOD.



Surface scum scrapers working on dairy waste

## Eflo - About Us

**Eflo International Ltd**, UK is an OEM company offering proven and robust technologies for advanced wastewater treatment systems for both domestic and industrial waste water.

Eflo also designs and manufactures reverse osmosis plants for sea water and brackish water desalination delivering these as ready to run packaged plants in either skid for or containerised.

**Eflo** has designed & installed treatment plants in Europe, the Middle East, Africa, Caribbean the Indian Ocean islands over a period of more than 40 years and can delivery globally through local agents who provide product support.

**Eflo** offers a range of other innovative water treatment products including oily water separation and DAF processes as well as water treatment chemicals

Please contact us so we can help you with your water treatment requirements

### EFLO Water Treatment Products :

- EfloSAF** Submerged Aerated Filter
- EfloMBR** Membrane Bio-Reactor
- EfloDAF** Dissolved Air Floatation
- EfloGREY** Grey Water Re-Cycling
- EfloRO** Sea Water & Brackish Water Reverse Osmosis
- EfloSBR** Sequential Batch Reactor
- EfloCT** Extended Aeration
- EfloSEP** Oily Water Separator
- EfloCHEM** Water Treatment Chemicals
- EfloSLUDGE-DRY** Sludge Dewatering

# EfloDAF Dissolved Air Floatation



Typical EfloDAF including dissolved air vessel and polymer and flocculant reaction system



EfloDAF in operation as pre-treatment to an EfloSAF. Typical industrial waste water application for a textiles factory producing a mixed waste water including dyes and organic matter.

## Technical Data and Model Sizes

Parameter	Unit	FT-5	FT-10	FT-20	FT-25	FT-50	FT-75	FT-100
Capacity	m <sup>3</sup> /hr	5.00	10.00	20.00	25.00	50.00	75.00	100.00
Dimensions	m	2.1 x 1.7 x 2.1	2.8 x 2.1 x 2.4	3.3 x 2.4 x 3.1	3.3 x 2.4 x 3.6	5.9 x 3.0 x 4.1	7.6 x 3.0 x 4.1	9.3 x 3.0 x 4.1
Weight (Max)	Kg	2,000	3,000	4,000	5,000	8,000	9,000	11,000
Working Volume	m <sup>3</sup>	2.50	5.00	10.00	12.50	25.00	37.50	50.00
<b>Re-Circulating Pump - Grundfoss</b>								
Capacity	m <sup>3</sup> /hr	2.00	4.00	8.00	10.00	20.00	30.00	40.00
Pressure (Min)	m	80.00	80.00	80.00	80.00	80.00	80.00	80.00
Power (Max)	Kw	1.5	2.0	4.5	5.5	8.0	11.5	15.5
<b>Scraper Motor/Gearbox - Nord</b>								
Power (Max)	Kw	0.5	0.5	0.5	0.5	0.5	0.5	0.75
<b>Treatment</b>	<b>Treatment Without Chemical Dosing %</b>				<b>Treatment With Chemical Dosing %</b>			
Suspended Solids	80				85 - 95			
Fats	70				98			
Oil & Grease	70				98			
BOD	50				65			

DESIGNED & ENGINEERED BY:

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