



SEDIMENTATION DISSOLVED AIR FLOTATION (SDAF)

Compact SDAF units combine flotation and sedimentation for efficient separation of oil and solids from water.

OVERVIEW

Enviro Concepts SDAF systems are designed to combine dissolved air flotation with high rate sedimentation to efficiently remove suspended solids, fats and oils, BOD, COD and heavy metals from a wide variety of water and wastewater sources.

These units are pre-engineered, pre-assembled and factory tested ensuring reliable operation and minimising site installation and start-up time. Dissolved air flotation effectively separates and removes the floating sludge layer, and the sedimentation plate packs remove the dense sludge settling at the bottom of the SDAF units. This results in high rate clarification capable of efficiently treating high suspended solids and high fats/oils wastewater. This amounts to 15-30% chemical dosage cost savings compared to the conventional DAF systems.

FEATURES

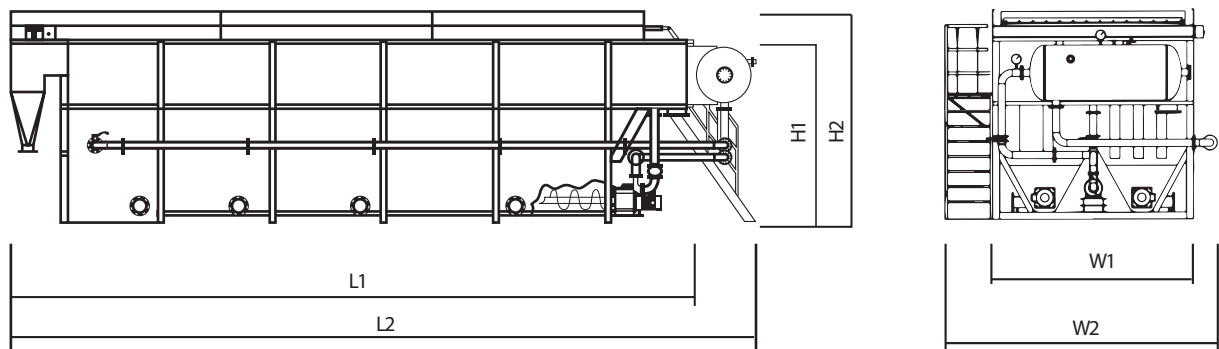
- Mild Steel or Stainless Construction
- Skid Mounted or Containerised
- Flocculation, Flotation and Sedimentation Zones
- Efficient Air Diffusion and Mixing Zone
- Sedimentation Plate Packs
- Mechanical Sludge Skimmer and Scraper
- Level Controlled, Non-clogging Sludge Weir
- Chemical Dosing System
- Feed and Discharge Pumps

APPLICATIONS

- Wash Bays for Cars and Trucks
- Mine Vehicles and Equipment Wash Downs
- Mechanical and Panel Beating Workshops
- Industrial Wash Processes
- Sea Water Desalination
- Storm and Ground Water Treatment
- Restaurants and Hotels
- Grease Trap Waste Treatment
- Food Industry Wastewater
- Activated Sludge Systems
- Sludge Thickening

SPECIFICATION

Feed Water Source	Industrial wastewater, wash bay effluent, meat processing effluent, etc.
Flow Capacity	6 to 200 m ³ /hr
Max. Suspended Solids	4,500 mg/L
Dimensions	3.7m x 2.2m to 10.8m x 6.7m x 3.3m
Dry Weight	Approx. 1.5 to 5.5 Tonne
Power Requirements	1.1 to 22.0 kW (for the pumps), 0.55 to 4.0 kW (for the air compressor)
Dosing Chemicals	EnviroCoag, EnviroFloc, EnviroBase, Enviro Acid
Operating pH	6 to 10 pH
Operating Temperature	Below 40 deg C
Particle Size	Maximum of 1.0mm
Suspended Solids reduction	Up to 95% (with Coagulation/Flocculation)
BOD & COD reduction	Up to 80% (with Coagulation/Flocculation)
Fats, Oils and Grease reduction	Up to 95% (with Coagulation/Flocculation)



MODEL RANGE & TECHNICAL DATA

Model	Capacity	Power (kw)				Dimensions (m)			Pipe Connections (DN)		
	(m ³ /h)	Pump	Air compressor	Skimming Motor	Scraper	L ₁ /L ₂	W ₁ /W ₂	H ₁ /H ₂	Inlet (a)	Outlet (b)	Sludge Out (c)
DAF006	~6	1.1	0.55	0.12		2.5/3.7	1.5/2.2	2.1/2.5	80	50	100
DAF010	~10	1.5	0.55	0.12		3.8/5.1	1.7/2.4	2.4/3.0	100	80	100
DAF020	~20	3	0.75	0.2		4.1/5.4	2.2/2.9	2.4/3.0	150	150	150
DAF050	~50	5.5	0.75	0.2		6.6/7.2	2.0/2.9	2.5/3.1	200	200	150
DAF100	~100	15	2.2	0.2	1.5x2	8.8/10.0	3.0/3.7	3.3	300	300	200
DAF150	~150	18.5	3	0.2x2	1.5x2	12.2/13.5	3.0/3.7	3.3	350	350	200
DAF200	~200	22	4	0.2x2	1.5x4	9.6/10.8	6.7	3.3	300x2	300x2	200x2