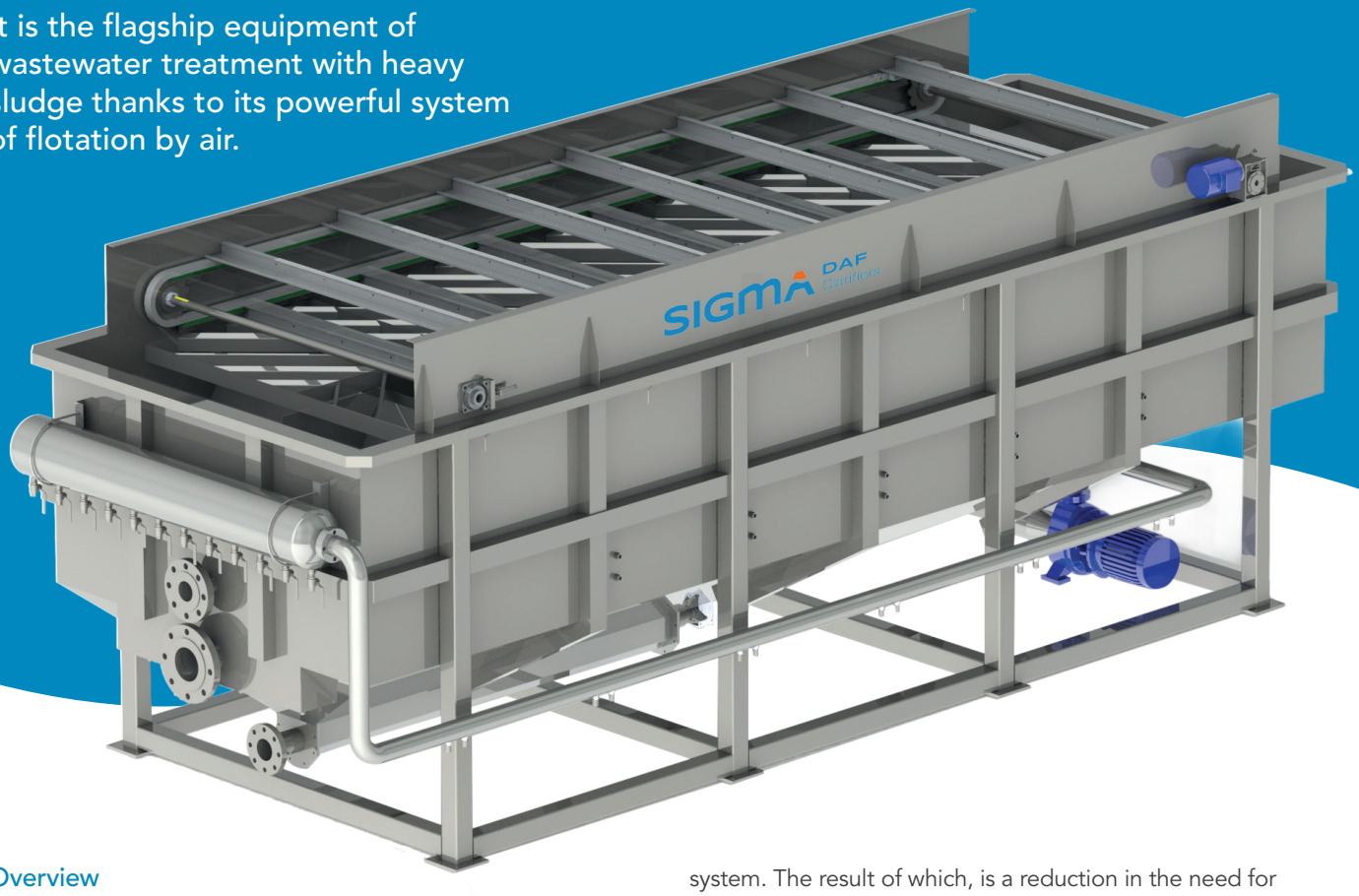
SIGMA DAF Clarifiers

DAFFPAC

It is the flagship equipment of wastewater treatment with heavy sludge thanks to its powerful system of flotation by air.



Overview

The FPAC flotation system is a large surface air flotation system with cross flow separation. The system has been designed to treat wastewater flows heavily loaded with solids that need significant amounts of free surface area for successful flotation and separation (up to 40kg of solids per m² of free surface area inside the system can be treated).

Dissolved Air Flotation (DAF) system processes wastewater that are introduced at one end of the apparatus and ejects the clean water at the other end.

DAF technology is utilised to remove oils, grease, solids and suspended flocculants that do not possess sufficient buoyancy to float; or where an emulsion of oils and solids (with increased density) require air flotation to enhance the separation process.

The use of micro-bubble flotation technology (30 to 50-micron range) increases efficiency, as smaller bubbles easily adhere to equal-sized or larger particles, boosting the overall effectiveness of the system.

Unique system characteristics

The FPAC is a high-performance system with a number of distinctive features. It includes a single movement separator, which rotates against the hydraulic flow of the water, helping to minimise the skimming distance of the floated sludge and eliminating solids carry-over. It creates a sludge with a dry solids content 3 to 4 times greater than a conventional system. The result of which, is a reduction in the need for and scale of any future treatment, such as de-watering or drying, consequently resulting in reduced follow-on costs.

The bottom sludge within the system is held in place as it thickens and partially de-watered by the shaftless auger system. This enables the operator to control the thickness of the sludge, eliminates the early-removal of solids and reduces the build-up of sludge. The residual sludge is then transported to a central discharge point and removed via an automatic pneumatic valve. This discharge cycle is self-cleaning, and any particles adhered to the walls or sides of the system will loosen and follow their initial flow path.

Key features

- Ability to process waste waters with high solid loading
- Compact system
- Unique sludge de-watering and removal system, producing a highly concentrated sludge
- Efficient laminar flow regime
- Low maintenance and easy to operate
- Custom built

Industrial applications

- Slaughterhouse and rendering plants
- Textile production
- Processing plants
- Pulp and paper industries
- Fish processing facilities

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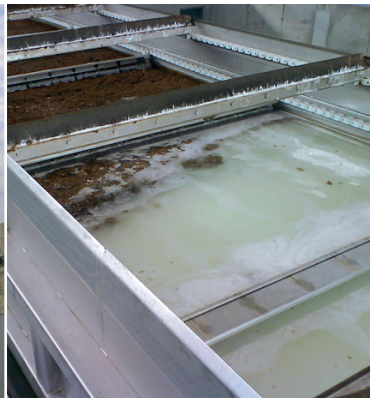
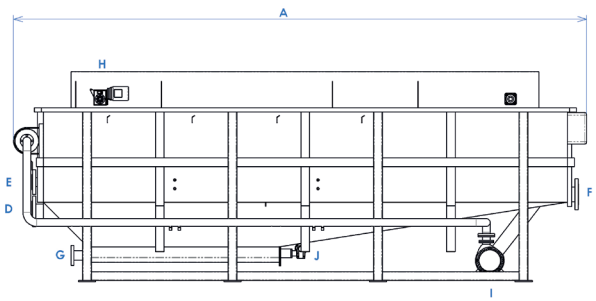
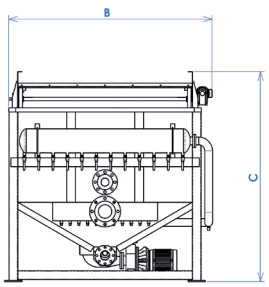


Type	Hydraulic capacity (m^3/hr)	Flotation area (m^2)	Lenght A (mm)	Width B (mm)	Height C (mm)	Power (Kw)	Weight Empty (Kg)	Weight Full (Kg)
FPAC 05 (*)	5	1.5	2250	1400	1400	3	800	3800
FPAC 10 (*)	10	3	3000	1650	1500	3	1200	7000
FPAC 15 (*)	15	5	4000	1900	2350	5.5	1500	10500
FPAC 20	20	6	4500	2400	2350	5.5	1700	12000
FPAC 25	25	7.5	5250	2400	2350	7.5	1800	13500
FPAC 30	30	9	6000	2400	2350	7.5	1900	14500
FPAC 40	40	10	6500	2400	2350	7.5	2000	15000
FPAC 50	50	12	7500	2400	2350	11	2100	16000
FPAC 60	60	14	8500	2400	2350	11	2200	18500
FPAC 70	70	16	9500	2400	2350	13	2300	20000
FPAC 80	80	18	10500	2400	2350	13	2400	22000
FPAC 90	90	20	11500	2400	2550	15	2600	23000
FPAC 100	100	23	9000	3400	2350	15	2800	25000
FPAC 120	120	27	10500	3400	2350	15	2900	30000
FPAC 140	140	32	12000	3400	2350	18	3000	34000
FPAC 160	160	36	13500	3400	2350	25	3400	38000

(*) without bottom screw





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ALLIANCE FOR WATER STEWARDSHIP

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