



CST Wastewater  
Solutions



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**CST WASTEWATER SOLUTIONS PTY LTD**

Postal: PO Box 82 Lane Cove NSW 1595 Australia

Office: 16/20 Barcoo St Roseville NSW 2069 Australia

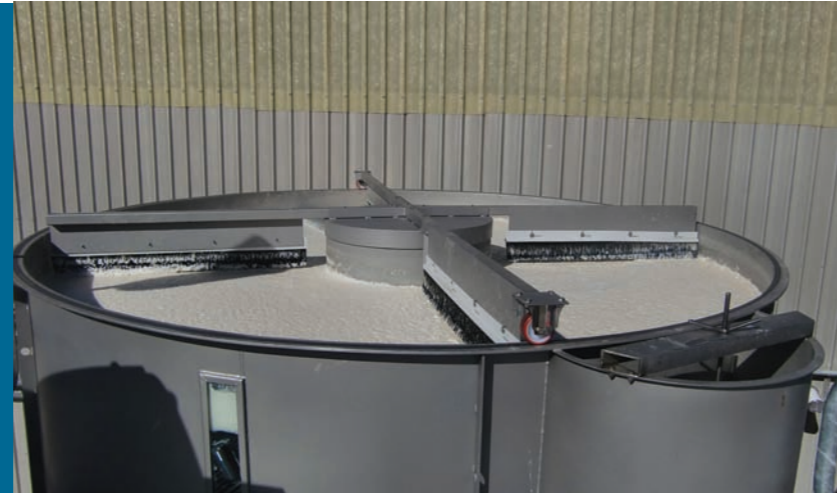
Telephone: 61 2 9417 3611

Facsimile: 61 2 9417 0097

Email: [info@cstechnology.com.au](mailto:info@cstechnology.com.au)

[www.cstwastewater.com](http://www.cstwastewater.com)

DAF  
Dissolved Air Flotation Units



## DAF – Daf Flotation Unit

### Operating principle

The CST DAF is an innovative dissolved air flotation system engineered in Europe to EEC standards. It's exceptionally high solid / liquids separation efficiencies and sludge thickening ability are the result of combining a system of hydraulic distribution and filtration through a bed of micro bubbles in a single system.

The unique part of the CST DAF system is its multifunctional central column. Through this central column the raw wastewater is fed. The raw wastewater and saturated recycle water pass through this central column. It also collects the clarified water and the thickened sludge.

The raw wastewater, saturated with air is introduced into the main body of the flotation tank via a series of openings located around the circumference of the lower part of the central column.

The solids are immediately carried to the surface by the micro bubbles and evenly distributed over the flotation area in a uniform hydrodynamic condition.

This rapid rise to the surface encourages sludge accumulation on the surface of the flotation tank. The sludge float is then removed by a rotating adjustable scroll scoop or by a surface skimmer (for specific applications) without sludge blanket disturbance.

### Key characteristics

- Low-head circular tank
- Bottom sediment removal system
- Continuous cleaning system for the inside wall

- Inspection window for visual control of the flotation process
- Automatic control of sludge blanket
- High saturation efficiency (>90%)
- Injected air is completely dissolved
- Automatic control of the injected air
- No requirement for purging of excess air (no purge valve)

### Construction materials

- Standard manufacture: AISI 304 (flotation tank) and AISI 316 (saturator)
- Possibility of construction entirely in AISI 316 or other types of steel
- Possibility of installation in existing or new circular tanks in reinforced concrete (by others) – model AD 10 upwards

### Sectors of Application

- Dairies - cheese factories
- Paper industry
- Food industry
- Oil industry
- Wineries
- Tanneries
- Primary and secondary clarification in municipal and industrial biological wastewater plants
- Sludge thickening
- Textile industry
- Large laundries
- Chemical industry
- Refineries

## DAF

Model	Inner tank diameter (mm)	Inner tank height (mm)	Total tank height (without legs) (mm)	Flotation area (m <sup>2</sup> )
A 1	1.200	950	1.000	1
A 2	1.700	950	1.000	2
A 3	2.200	950	1.000	3
A 6	2.900	950	1.000	6
A 10	3.700	880	1.000	10
A 20	5.100	880	1.000	20
A 30	6.400	880	1.000	30
A 50	8.200	880	1.000	50
A 90	10.900	1.050	1.250	90
A 160	14.500	1.050	1.250	160

## SAT – Air-Dissolving Reactor

### Air-dissolving Reactor

The CST SAT air-dissolving reactor is central and key to the dissolved air flotation process. It generates the micro bubbles that separate and thicken the suspended solids.

The CST SAT is a new concept that requires no maintenance.

- Internals of the reactor cannot break or clog
- The air dissolving efficiency is higher than any other on the market

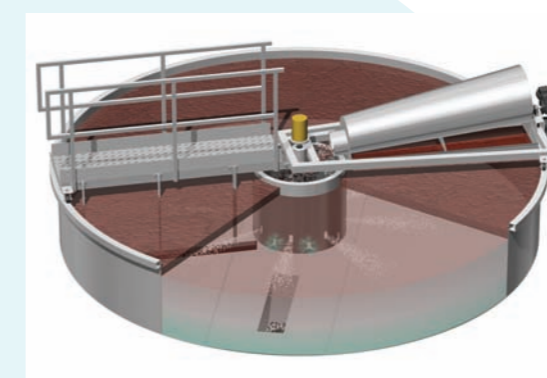
The CST SAT is also capable of improving the performance of existing flotation systems that employ low efficiency micro bubble generators.

It is manufactured entirely from AISI 316 stainless steel and is tested and certified to gas pressure vessel codes.

### Key characteristics

- Automatic operation
- Low Maintenance – Unique non clogging design
- Very high saturation efficiency – one of the highest on the market
- Manufactured in ANSI 316 in accordance with certified pressure vessel codes

*The CST SAT is also capable of improving the performance of existing flotation systems that employ low efficiency micro bubble generators.*



Model	Diameter (mm)	Volume (l)	Height (mm)
A 10	140	10	900
A 25	170	25	1.500
A 150	406	150	1.700
A 500	600	500	2.350
A 1000	900	1.000	2.400
A 2000	1.200	2.000	2.900
A 4000	1.600	4.000	3.800

## SAT