



# *DISSOLVED AIR FLOTATION*



DAF-SP-16.8M.

Create, Service, Quality, Win-Win

# DISSOLVED AIR FLOTATION

## Equipment Instruction

When the sludge is light, the Dissolved Air Flotation will be an efficient solid-liquid-separator equipment. The machine is designed as an equipment of shallow-trough, handy operating  $650\text{KG}/\text{CM}^2$ , processing efficiency  $6\sim 9\text{M}^3/\text{M}^2/\text{HR}$ . and height is 1M. This equipment is small, light and high processing efficiency. And it can be loaded on the poor for saving space.



## Benefit and Installment

Under the same volume of water, this equipment is higher benefit than solid-liquid separator. So its original cost is low, and no extra land to install it. People just need to load it on the poor to cut down the land cost. And this equipment is easy to install for 3~5 days to save labor and time cost.

## Operating principles and Functions

Dissolved Air Flotation is an advanced flotation system. It is successful by principles of shallow-trough and zero speed. It's a multi-function equipment of condensing, flotation, scraping dregs, settling and scooping out dirt of bottom.

The principle of this equipment is : First, pump high pressure air and water into dissolving pipe to mix them. Then outlet water to no pressure pipe. The melting water produces tiny bubbles which can combine tiny colloid solidify object. Then the tiny bubbles will float up to top of water. That causes the result of solid-liquid-separating.

The floating dirt will cause the dirt compressed by each other on top level of water. Meanwhile we can adjust the height of water and the dirt concentration. When the dirt concentration reaches to 10000~30000ppm, then we can use the scoop the clean them. Therefore, when the the dirt concentration is high, it just needs a dirt collecting poor. It doesn't additionally need dirt concentration pool. It saves lots of space and money.





Air Dissolving Unit



Water level adjustment

### Operation and Maintenance

**Operation:** This machine is stable and easy to operate. In America and Europe, most people choose this machine. When in trial run, people just need to make sure the air-liquid-proportion and the proportion of gyration water. Then people can operate it easily. We just need to check the pressure of dissolving-air-tank and volume of air.

**Maintenance:** The soaking parts of the equipment are made by SUS-304 and rot-proof processing. People just need routinely to put grease on rolling parts of machine

It is easier than other solid-liquid-separator for annual maintenance. It can discharge water in short time and no trouble in dirt

But other solid-liquid separator need to spend many days to discharge water and no way to deal with the dirt. So our Dissolved Air Flotation system can solve these problems and save lots of labors, time and money





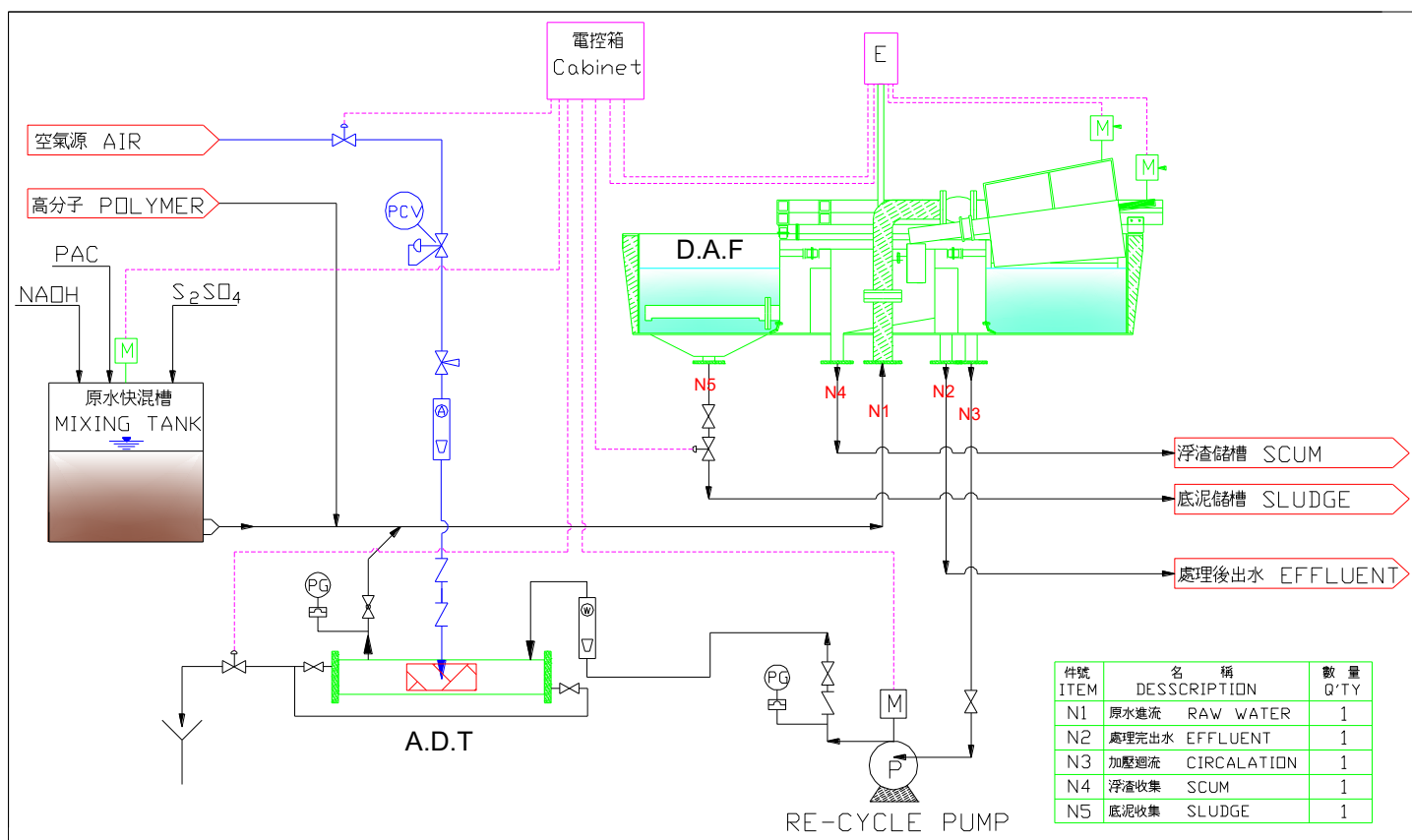
# DISSOLVE AIR FLOTATION

## Characteristic

- High remove efficiency. It can reach 85%~95%. After processing, it will be 30~50 PPM.
- The short time is about 3~5MIN.
- Easy to maintain, save time, save labors, and save money.
- It can process the high concentration to 3000PPM.
- Easy to operate, save space, and lower manufacturing cost.
- High sludge concentration, it can be 10000~20000PPM



## The Flowchart

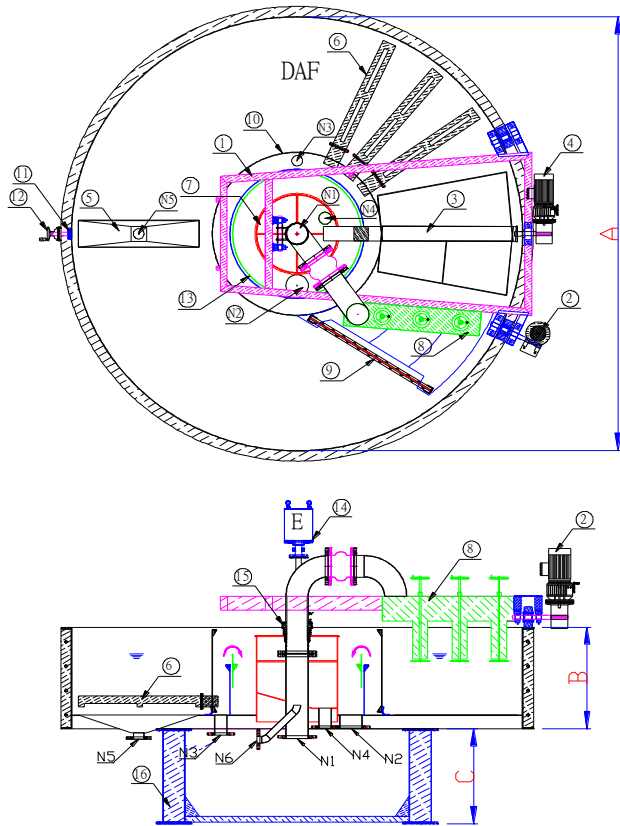


## Application

- 1 At waterworks, after melting the original water with air, this machine can remove algae to clean water.
- 2 To process the gray-water before its recycle.
- 3 For laundries, food processors, petroleum plant, refinery, dyeing, plastics industry, and rubber industry, this machine can help before discharge oily-waste water and the sludge.
- 4 At sewage works, this machine can process biological or chemical sludge before discharge waste water.
- 5 For paper-making industry, this machine is used the recycling of fiber and clean water.



# DISSOLVE AIR FLOTATION



NO.	結構	Construction
1.	行走台車	Carriage
2.	台車驅動機	Carriage drive
3.	刮渣斗	Scoop
4.	刮渣斗驅動機	Scoop drive
5.	底泥儲槽	Sludge holding tank
6.	清水收集管	Effluent collecting Pipe
7.	浮渣收集槽	Scum holding tank
8.	進水分配箱	Into the water tank
9.	擾流柵欄	Burble stockade
10.	擋渣桶	Buffle plate
11.	視窗	Windows
12.	水位調整	Water level adjustment
13.	水位控制堰	Level control weir
14.	旋轉電驛	Revolving electricity post
15.	中心旋轉頭	Radial bearing
16.	腳架	Trestlework
N1.	原水進流管	Raw water pipe
N2.	處理水出流管	Effluent pipe
N3.	迴流水出流管	Circulation pine
N4.	浮渣出流管	Scum pine
N5.	底泥排出口	Sludge pine
N6.	溶解空氣管	Dissolved air tube

TYPE	Dimensions(mm)			Capacity (m <sup>3</sup> /h)	Carriage (kw)	Scoop (kw)	Sirculation (60M-m <sup>3</sup> /h)	Acreage (M <sup>2</sup> )
	A(Φ)	B	C					
DAF-SP-015	1500	762	700	9	0.37	NONE	4	1.7
DAF-SP-018	1800	762	700	12	0.75	NONE	5	2.5
DAF-SP-024	2400	800	700	21	0.37	0.37	7	3.5
DAF-SP-028	2800	800	800	31	0.37	0.37	10	5.1
DAF-SP-032	3200	850	800	41	0.75	0.37	14	6.9
DAF-SP-039	3900	850	900	65	0.75	0.37	21	10.5
DAF-SP-045	4500	850	900	85	0.75	0.37	28	13.9
DAF-SP-055	5500	850	1000	125	1.1	0.55	42	21
DAF-SP-061	6100	900	Steel/RC	155	1.1	1.1	51	25.7
DAF-SP-067	6700	950	Steel/RC	185	1.5	1.1	62	31
DAF-SP-072	7200	1000	Steel/RC	215	1.5	1.1	71	35.4
DAF-SP-081	8100	1000	Steel/RC	270	1.5	1.5	90	45
DAF-SP-090	9000	1050	Steel/RC	330	1.84	1.5	110	55
DAF-SP-100	10000	1050	RC	410	1.84	1.5	136	67.8
DAF-SP-110	11000	1000	RC	500	2.2	1.84	164	81.8
DAF-SP-122	12200	1000	RC	610	2.2	2.2	202	100.9
DAF-SP-134	13400	1100	RC	740	3.0	2.2	244	122.1
DAF-SP-148	14800	1100	RC	900	4.0	3.0	300	149.9
DAF-SP-168	16800	1200	RC	1200	4.0	4.0	400	196.1

**Remark:** The receiving liquid parts and the car are SUS304. The track for car, sidebar, and reinforcing bottom border, are SS400.

The processing concentration is about 1500PPM.  
(It will be different for its sludge concentration.)



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