

Greatly reduced wastewater treatment costs

Standard diffusion pipe in the future

AQUABLASTER

アキュアブラスター

Patent obtained / Patent no.4749961

- Reduced power consumption
- Reduced sludge output
- Zero odor generation
- Adjustment tank as a pre-processing tank
- Powerful stirring inside a tank
- Pressurized flotation unit elimination Sewage discharge without activated sludge

Adopted as an ODA diffusion demonstration project for Viet Nam in 2016

**FY2005
NBK Grand**

Prize in the
Environment and
Amenities
category

Special features of the "Aquablaster"

Nano airbubbles generated

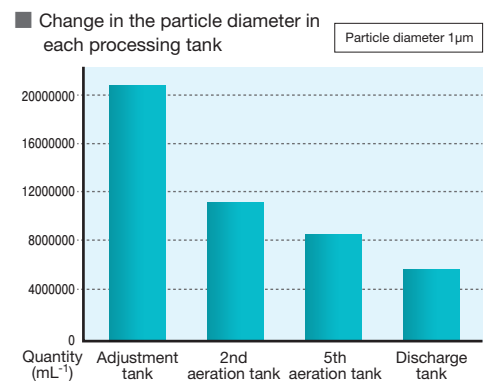
Swirling flows and microscopic air bubbles are generated by making the gas and the liquid collide with the hard blades.

Sludge on the bottom swept up

An airlift effect sweeps up water and sludge from the bottom for homogenization inside the tank.

Oil content and SS pulverized inside

Swept-up oil content and SS are pulverized by special fins.



Zero internal pressure loss

Load on the blower becomes smaller, making it possible to greatly reduce power consumption.



Please see the video on the website.

Aquablaster makes a difference compared to other diffusion pipes! Six features of Aquablaster

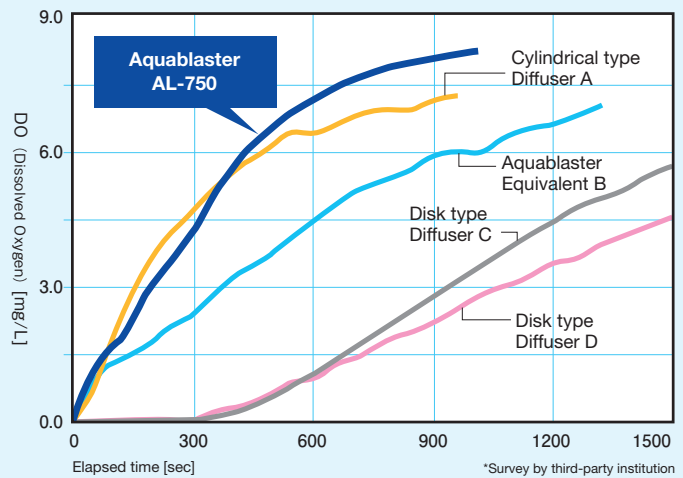
1

Outstanding oxygen dissolution power

Even compared to products of other manufacturers in this category, the top level of oxygen dissolution power is promised.

*Levels of oxygen dissolution efficiency that have been open to the public cannot be used as indicators in comparison because of the lack of definite measurement criteria.

Comparison of dissolved oxygen concentration trends



2

Reduced cost of electricity by Pressure Loss

Aquablaster with zero pressure loss has an energy-saving effect which consumes less electrical power than other diffusers.



When Pressure Loss of Aquablaster is 0.00 mmAq

Disk type Diffuser

Pressure Loss : 200 mmAq

Cylindrical Diffuser

Pressure Loss : 700 mmAq

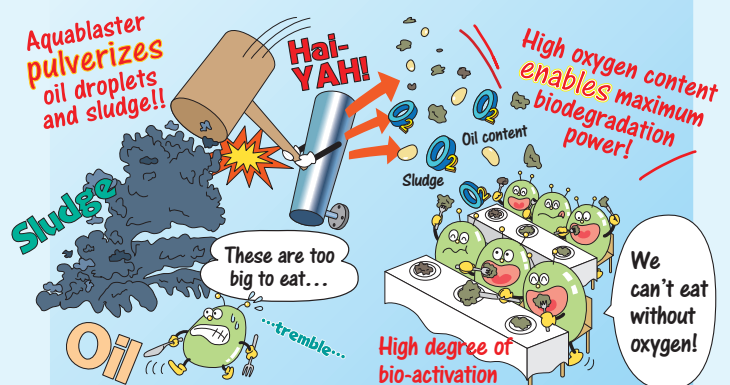
*The Aq in mmAq is water. 700mmAq means extra power requires to reach + 70 cm water depth.

3

Reduced sludge output

Sludge output is reduced because SS and oil content are pulverized into particles small enough for microorganisms to eat easily.

*Pulverization of sludge is prevented by adjusting the air volume.



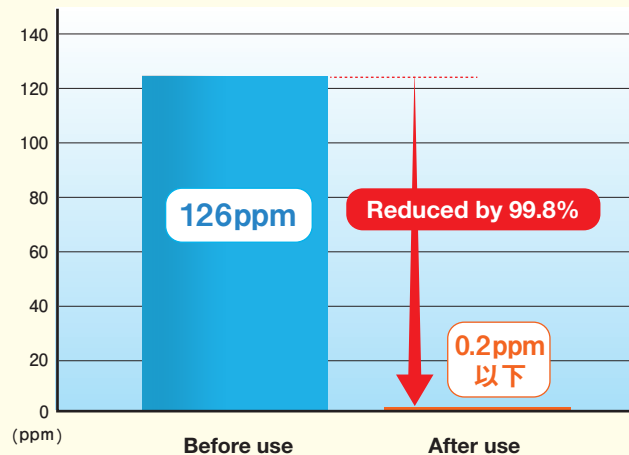
4

Guarantee of zero odor generation

Microorganisms are made to perform full aerobic respiration metabolism so that no odor such as hydrogen sulfide is generated.

*Limited to the installations designed by Aience.

Hydrogen sulfide concentration



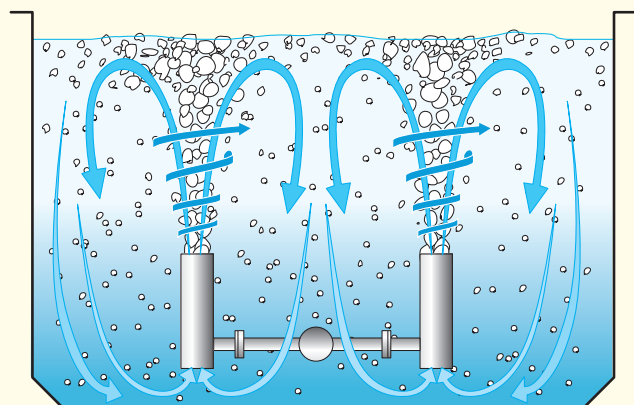
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Powerful stirring inside a tank

Sludge on the bottom is swept up and its accumulation is prevented to eliminate anaerobic areas.

(Such a substance as silica and calcium is also prevented from settling.)

Microscopic bubbles spread throughout the water tank

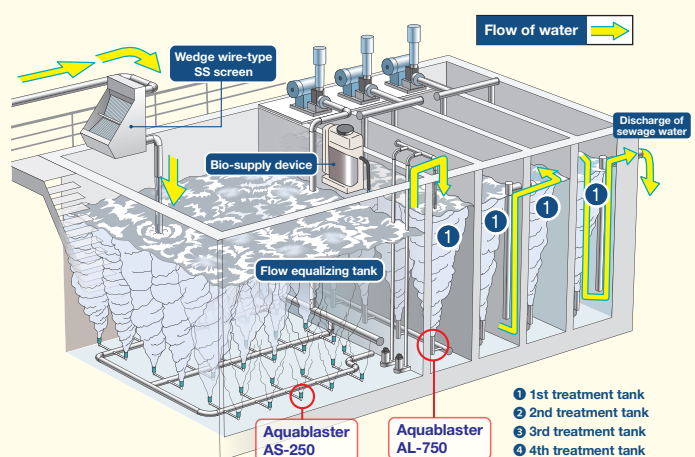


6

AIS, which realizes pressurized flotation unit elimination and sewage discharge without activated sludge

If a tank in which pre-processing can be performed by Aquablaster is available, it is also possible to eliminate pressurized flotation.

Basic flow diagram / Sewage water discharge



Mechanism of Treatment

A special aeration Aquablaster crushes the organic substances and **activates perfect aerobic respiration metabolism.**

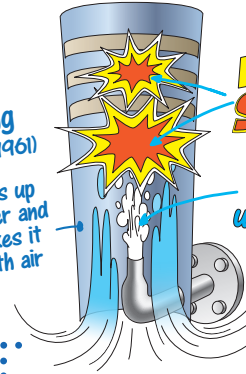
1

Patented special wing
(Patent no.4749961)

Lifts up water and mixes it with air

KER-SMASH!!!

At speeds of up to 100km/h



2

Aquablaster pulverizes oil droplets and sludge!!

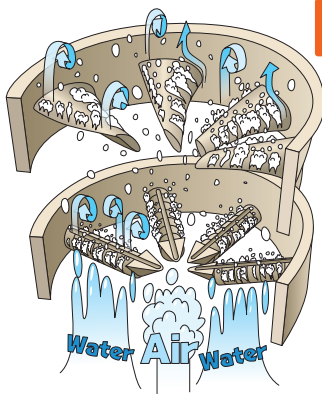
Hal-YAH!

Sludge

Oil

These are too big to eat...

...tremble...



3

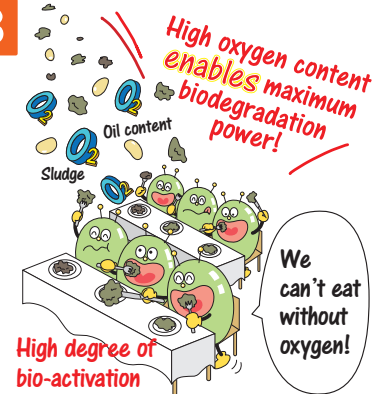
High oxygen content enables maximum biodegradation power!

Oil content

Sludge

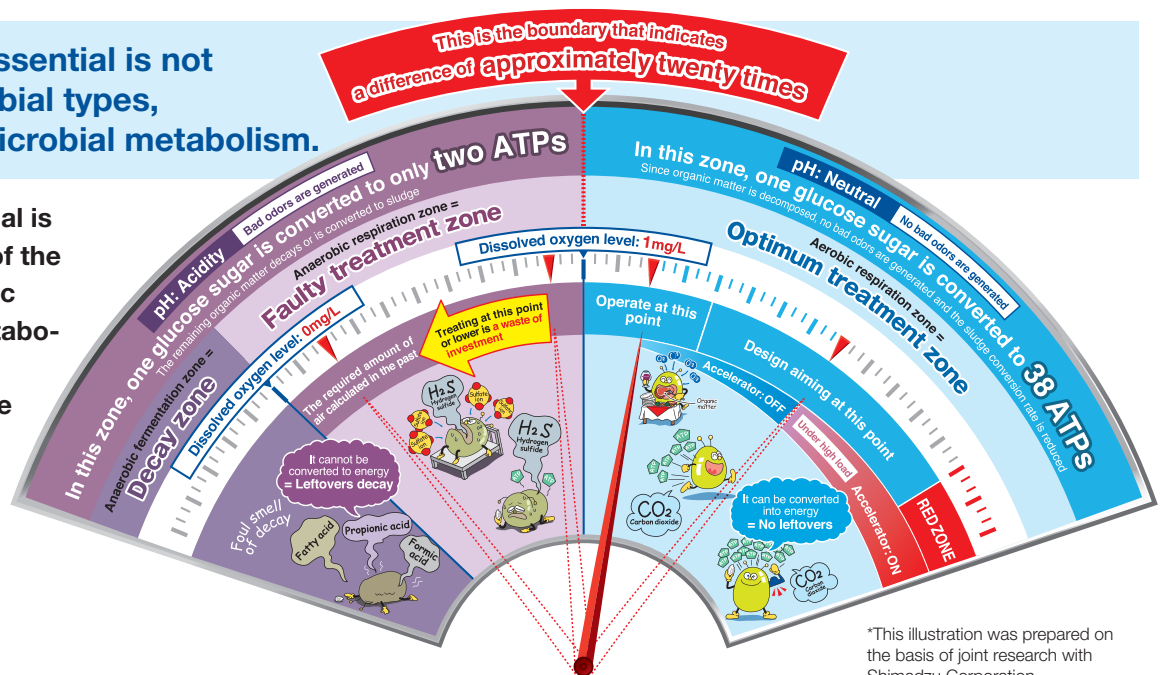
High degree of bio-activation

We can't eat without oxygen!

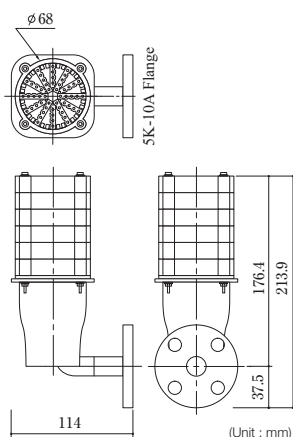


What is essential is not the microbial types, but the microbial metabolism.

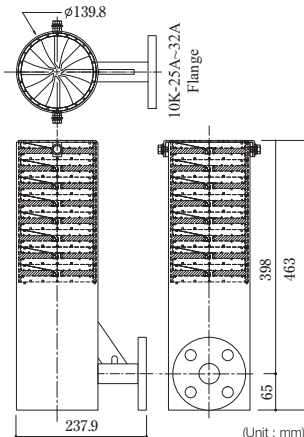
What is essential is the activation of the "Perfect aerobic respiration metabolism" that can convert glucose into 38 ATPs.



AS Series diagram



AL Series diagram

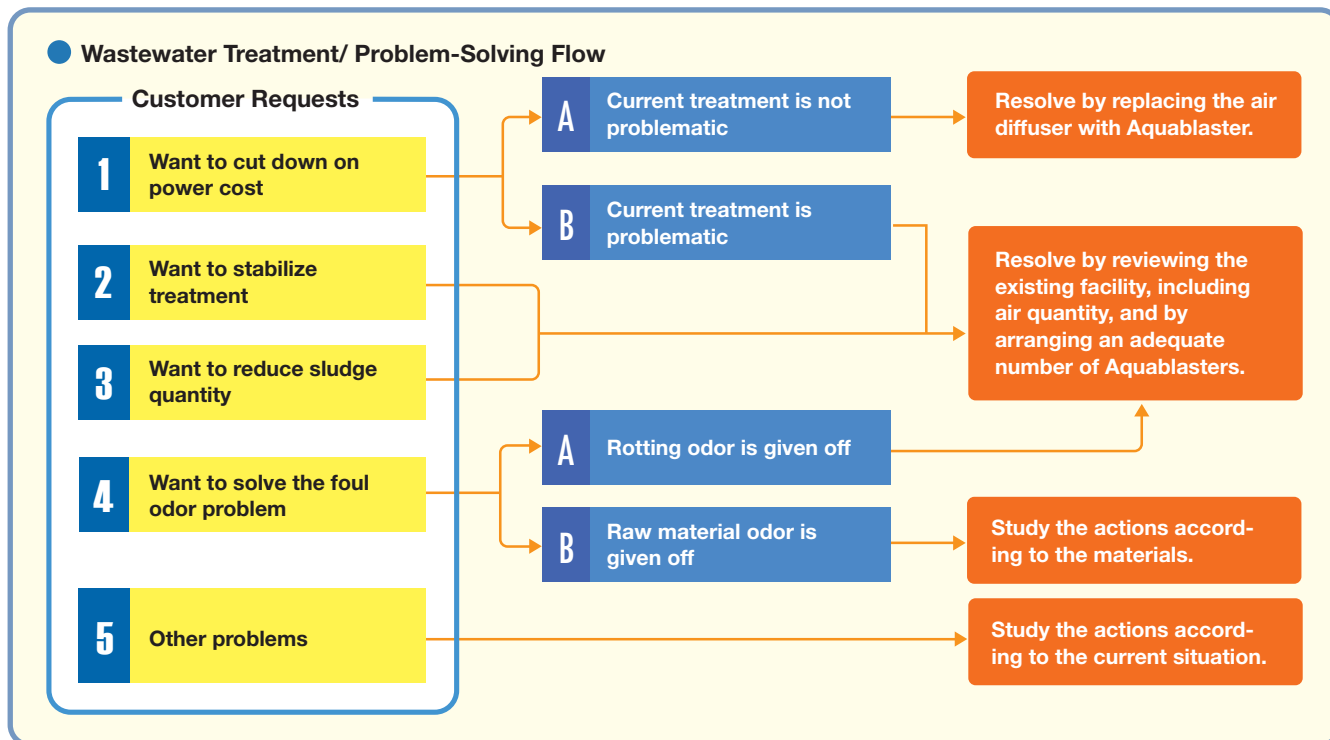


Specification table

Product name	Part number	Applied air volume	Size	Connecting part
Aqua blaster	AS-250	175~275L/min	W114xH213.9	5K-10AFlange
	AL-750	600~900L/min	W237.9x463	10K-25AFlange
	AL-1100	900~1300L/min	W237.9x463	10K-25AFlange
	AL-1500	1300~1700L/min	W237.9x463	10K-32AFlange

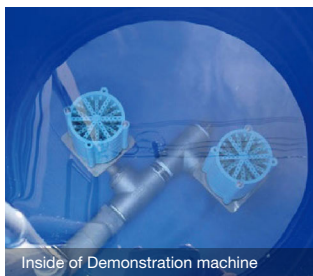
*Air volume can be adjusted or unit produced to custom specifications.
Do not hesitate to consult Aience!

Aquablaster will solve the various problems of wastewater treatment!



We will offer further detailed suggestions if we receive your information on current situations.

Validation items		
Degree of necessity	Information to be prepared	Suggestion details
YES	Tank Size (L x W x Water Level)	Submission of a preliminary layout plan and an approximate estimation.
MAYBE	Current treated water quantity	Review of the current treatment airflow
MAYBE	Drawings of tanks	Preparation of a precise layout plan drawing
MAYBE	Current water quality	Reference case examples of layout plan
MAYBE	Treatment flow diagram	Suggestions on sludge/chemicals reduction, etc.
MAYBE	Other specification documents, etc.	Validation of details
MAYBE	Current treatment cost	Estimation of cost-benefit performance



Lend a demonstration machine.

Only to prepare 90L of wastewater and a 100V power source.

Validation items	Raw water	12 hr. treatment	24 hr. treatment	36 hr. treatment	48 hr. treatment
Degree of necessity	YES	MAYBE	YES	MAYBE	YES

*Five fundamental measuring items: BOD, COD, SS, n-hex and PH

■ Manufacturer



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