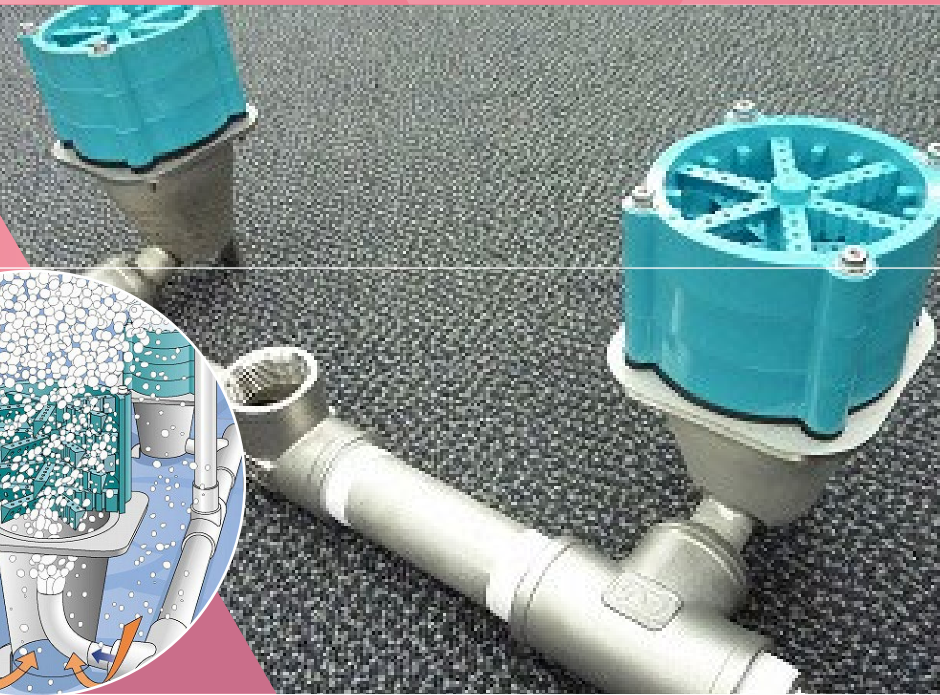


## 8 Grease trap problem solved!!

- A system for improvement considered in earnest by a wastewater treatment professional



# GREASTRATOR

# ■ Grease trap worries and problems

Greastrator diffusion pipe

**Awful smell!**

**Don' t want to  
open the lid!**

**Maintenance is  
a burden!**

**Insect pests attracted!**



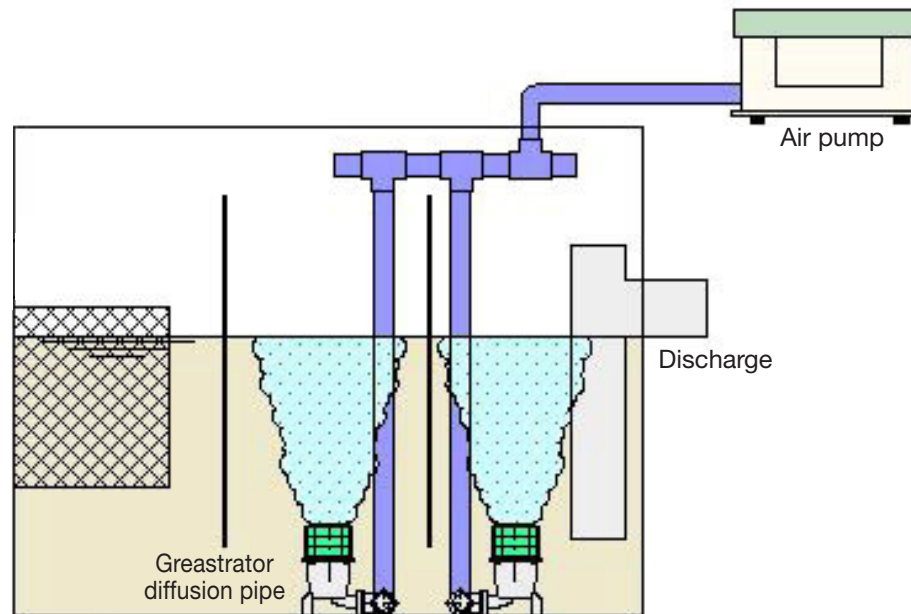
# Worries solved with a Greastrator diffusion pipe system!!

Greastrator diffusion pipe

When wastewater drainage stops, the problem can be solved running the air pump system.



Greastrator diffusion pipe

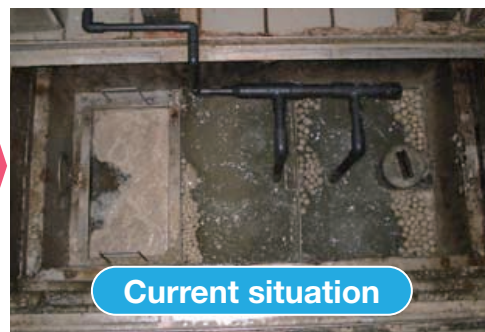


## Goals of the system

- 1 Preventing offensive odors**  
Do not make customers feel uncomfortable and increase the number of repeat customers.
- 2 Saving on cleaning work**  
Save the burden and work for your employees.
- 3 Preventing insect pest occurrences**  
Reduce pest-control costs and also respond to HCCAP.
- 4 Preventing pH from dropping**  
Prevent public sewer deterioration and offensive odor generation.

# Supply examples and customer opinions

Greastrator diffusion pipe



Aeration was introduced, but the problem of foul odors going into the dining area existed. After the introduction of a Greastrator diffusion pipe system, foul odors disappeared completely, and water became very clean. When the shop is open, the system is stopped to prevent oil content from flowing out. For that reason, oil balls somewhat occur, but they are easy to remove and do not smell bad. Now, students working part-time wash frying baskets without reluctance. [Manager of the shop]



Aeration and purification equipment with oil and fat decomposing bacteria developed by some National University were introduced, but filamentous fungi grew, and complaints were made by customers because of foul odors and sludge. After the introduction of the Greastrator diffusion pipe system, the problem was solved - its effect surprised me. After installation, in the middle of summer, a small number of filamentous fungi grew once. However, just by increasing the air volume a little, the problem was solved. [Sales representative in charge]

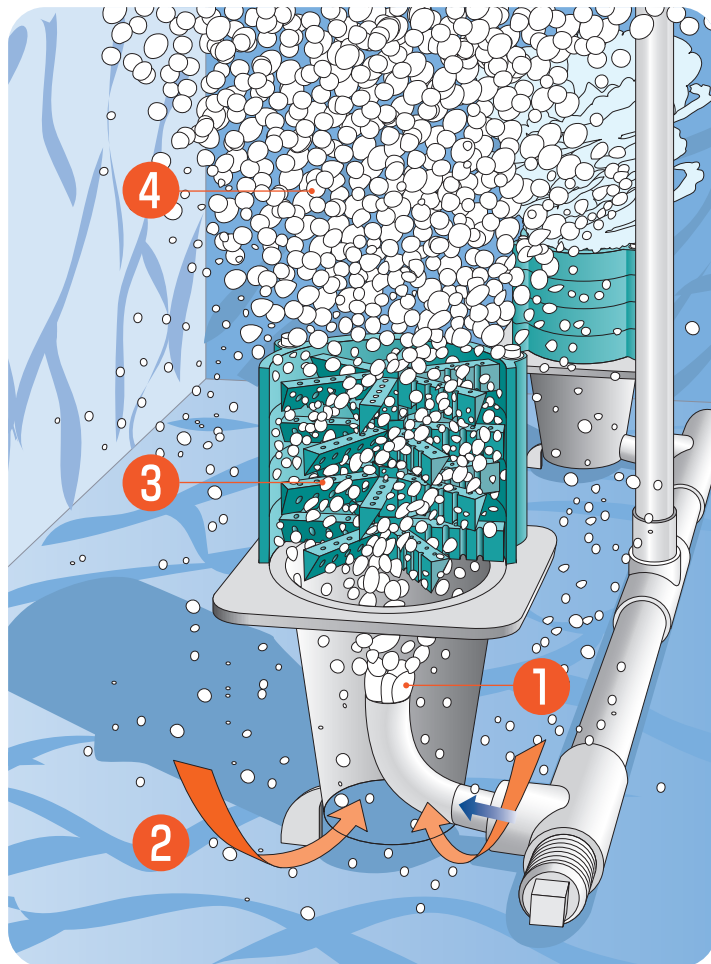


The school meal supply center in question was located next to the connecting corridor of the adjacent school. Before installation, students and other people suffered from awful smells, but after installation, such smells disappeared, and it became very easy to clean the grease trap. Thanks to this, the system was recommended and supplied to two more school meal supply centers in the same prefecture. In both centers, the system is being kept in good condition. [Sales representative in charge]



# ■ Greastrator diffusion pipe mechanism

Greastrator diffusion pipe



Offensive odors caused by putrefaction can be prevented by running the Greastrator diffusion pipe system during periods in which wastewater does not flow, so as to prevent oil content from being swept away.

## Greastrator diffusion pipe mechanism

- 1 Air from the air pump is emitted through the nozzle as a high speed air blast.
- 2 Water and sludge at the bottom are naturally swept up by an air lift effect.
- 3 With special shaped fins newly developed by using fluid dynamics, air and water are vigorously mixed together to generate nao air bubbles and circulating currents. (Patent pending)
- 4 When circulating currents are generated, microscopic air bubbles are also supplied to the bottom of the water tank to maximally activate purifying water.

# ■ Aquablaster makes a difference compared to ordinary diffusion pipes.

Greastrator diffusion pipe

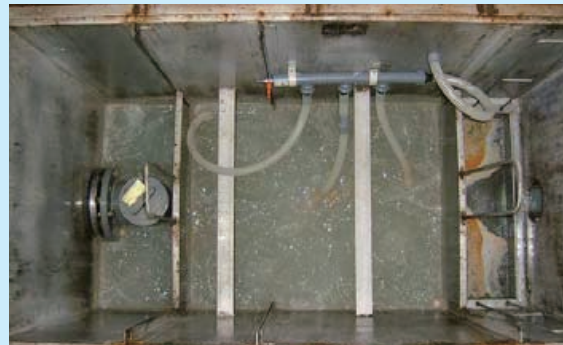
Ordinary diffusion pipes are used.



Diffusion irregularities occurred, and oil content accumulated in the corner, where maggots grew.



Greastrator diffusion pipes are used.



Water is stirred neatly, maintaining its aerobic state.



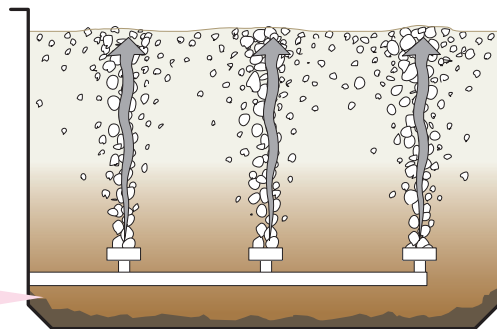
**Q. Why is it that ordinary diffusion pipes don't work effectively?**

It seems that ordinary diffusion pipes do not work effectively, often for the above reasons.

- ① microscopic bubbles cannot be generated,
- ② water cannot be stirred,
- ③ diffusion pipes are clogged,
- ④ sludge settles at the bottom.

It seems that ordinary diffusion pipes do not work effectively, often for the above reasons.

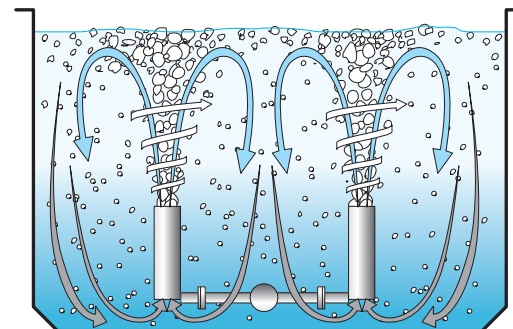
Conventional aeration system



Sludge accumulates at the bottom and becomes anaerobic.



Circulating aeration system



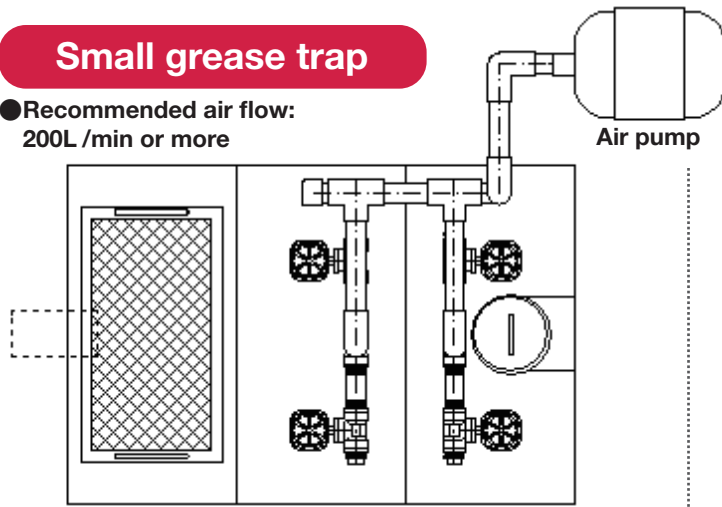
Oxygen spreads over the entire tank and sludge does not settle at the bottom.

# Greastrator diffusion pipe system installation example

Greastrator diffusion pipe

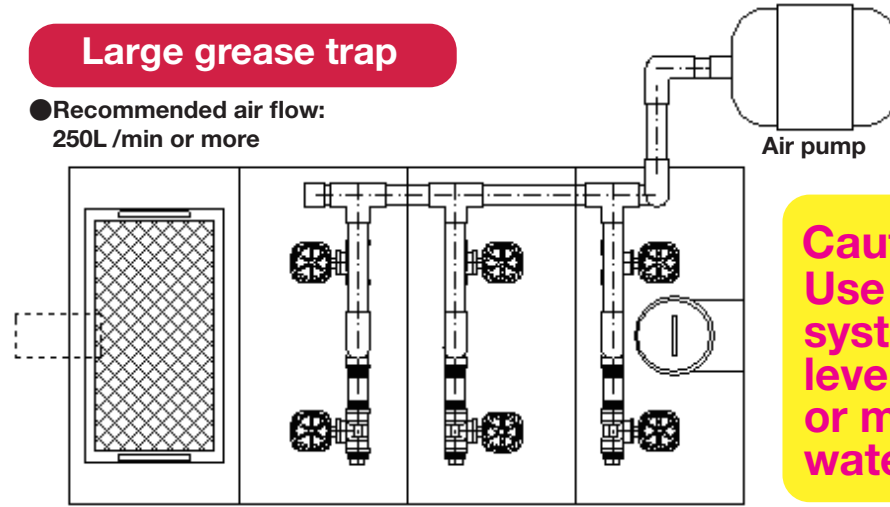
## Small grease trap

● Recommended air flow:  
200L /min or more



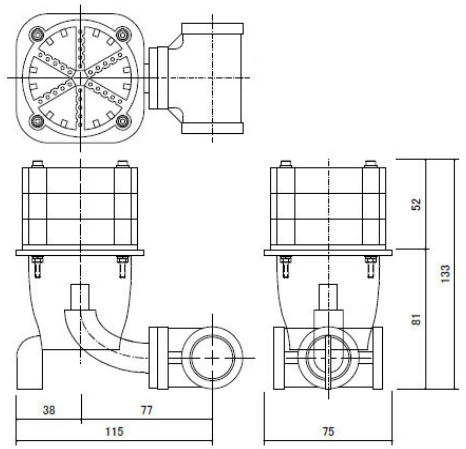
## Large grease trap

● Recommended air flow:  
250L /min or more



**Caution!!**  
Use both systems at a level of 300mm or more for the water depth.

## Greastrator diffusion pipe dimensional drawing



Greastrator diffusion pipe standards		
	GR-	GR-
Greastrator	4 units	6 units
Bottom section piping specifications	Made from	Made from
Air pump	120L /	200L /
Connecting piping	Made from polyvinyl chloride	Made from polyvinyl chloride
Installation interval	Any dimension	Any dimension

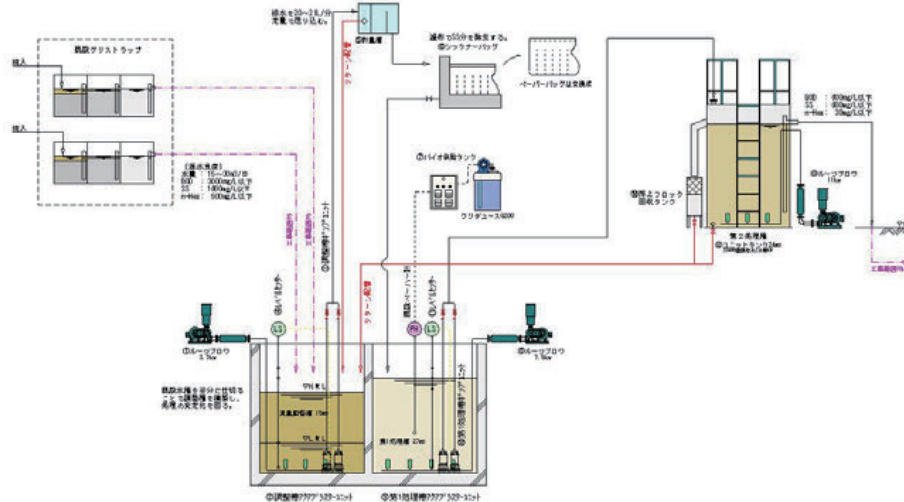
# Wastewater treatment with lower costs proposed

Greastrator diffusion pipe

To say nothing of grease traps, Aience established wastewater treatment technology that can achieve levels lower than sewage discharge standards just by using the Aquablaster diffusion pipe and degrading bacteria injections.



Supplied: February 2009. Food factory wastewater treatment device flow chart



In the above treatment system, wastewater is treated up to levels below sewage discharge standards as follows: raw water BOD: 2000 to 3000mg/L reduced to 300mg/L or less, and normal-hexane extracts: 300 to 500mg/L reduced to 30mg/L or less. In general, the volumetric loading rate is 0.5 to 1.5kg/m<sup>3</sup>. For a grease trap when the capacity of a water tank is small, the loading rate becomes several tens of times as large as that.

## There are many wastewater treatment device supply examples



Supplied / December 2003...

Waste plastic recycling plant (12 sets OEMed to Nikko)			
Unit mg/L	Raw water	Treated water	River discharge
BOD	2000	80	100 or less
COD	1600	70	100 or less
SS	2000	40	30 or less
N-Hex	200	1	5 or less



Supplied / October 2001

Food processing factory wastewater treatment			
Unit mg/L	Raw water	Treated water	Value in the contract
BOD	2100	350	400 or less
SS	1500	200	300 or less
N-Hex	350	35	40 or less



Supplied / November 2002

SHIMADZU CORPORATION Seta factory Kitchen & industrial wastewater treatment			
Unit mg/L	Raw water	Treated water	Sewage discharge
BOD	1200	85	300 or less
SS	800	80	300 or less
N-Hex	120	12	30 or less



Supplied / September 2007

Food processing factory wastewater treatment			
Unit mg/L	Raw water	Treated water	Sewage discharge
BOD	2000	100	200 or less
SS	2500	120	200 or less
N-Hex	250	15	30 or less



# ■ The product can be returned if it does not work effectively in any of the following conditions.

Greastrator diffusion pipe

## Greastrator diffusion pipe definition

The Greastrator diffusion pipe is a device to prevent unpleasant odors generated from grease traps, prevent insect pests from being attracted by putrid odors and causing infestations, and reduce cleaning frequency. In addition, when using this product, water viscosity becomes lower, and that will help prevent clogs in main pipes. (\* In principle, use the product during periods in which wastewater is not flowing in.)

The product also has purifying capabilities such as the capability to decompose oil and fat. However, it does not guarantee specific values for oil content, BOD, and SS, considering the relationship between the grease trap capacity and the wastewater load (volumetric load).

## Usage conditions for achieving normal performance

- ① The product must be used for a grease trap for a water depth of 300mm or more.
- ② The product must be used for a grease trap with a width (short side) of 450mm or more.
- ③ Basically, the product must be used for a grease trap with the following feature: For the wastewater flow, the flow rate does not exceed the oil-water separation speed (0.9m/minute).
- ④ Only OEC Alpha K.K. purifying water must be used as a bio- or washing liquid.

## Expected effect and other conditions

- |                     |  |
|---------------------|--|
| ① Odors             | ① -1 / For foul odors from the grease trap, maintain it at a level that does not make workers and customers feel uncomfortable.  |
|                     | ① -2 / The aim is to prevent the generation of putrid odors such as hydrogen sulfide, propionic acid, butyric acid, and acetic acid.   |
| ② Cleaning          | ② -1 / Clean the residue basket as needed so that it does not become full.   |
|                     | ② -2 / In a kitchen where a lot of oil content flows in, oil balls may be formed on the water surface. Remove them with a tool such as a net.  |
| ③ Clogging of pipes | ③ -1 / When the pipe diameter of the effluent pipe is not appropriate, or when the inflow exceeds the oil-water separation speed of the grease trap (0.9m/minute) even temporarily, whether there is a Greastrator diffusion pipe or not, clogs in the piping may occur. |
|                     | ③ -2 / Non-heat-treated starchy powder (flour, starch, powder for deep-fried food) is called $\beta$ -starch. It is refractory and settles at the bottom. Make   |
|                     |  |



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<https://www.aience.co.jp/en/>

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