

Application of AERATOR R-1

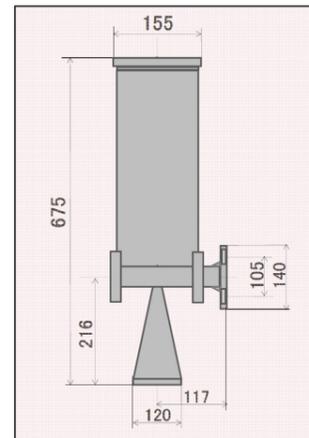
- ◆ Active sludge treatment of industrial wastewater.
- ◆ Deaeration of volatile gas in wastewater ,e.g., ammonia, hydrogen sulfide, trihalomethane ,etc.
- ◆ Installed in a reacting chamber for oxidization ,doxidization ,neutralization or reaction acceleration.
- ◆ Increase of efficiency in exiting electric facility.
- ◆ Purification of reservoir water.
- ◆ Stirring and mixing of upper and lower fluid materials of pond ,lake ,etc.
- ◆ Culture of microorganisms in water using aeration and mixing.
- ◆ Stirring and mixing of material in brewery.
- ◆ stirring and mixing of sediments in precipitator in human waste treatment plant.



AERATOR R-1



AERATOR R-2



POWERFUL
AERATION
SYSTEM

AERATOR R-1



Specifications

Model	Dia. mm	Length mm	Material			Weight kg	Air capacity per unit			Aeration area per unit m ²
							Stand- ard m ³ /min	Upper limit m ³ /min	Lower limit m ³ /min	
R-1	125	680	ABS	ABS	ABS Flange	2.7	1.0	1.4	0.7	Approx. 6.0

Improvement of Processing
performance of BOD.COD

Aqitation of for gas and liquid by
strong stirring

Improvement of liquid circulation
and oxygen dissolution efficiency

Extinction of stink due to
accumulated of waste sludge



AERATOR R-1



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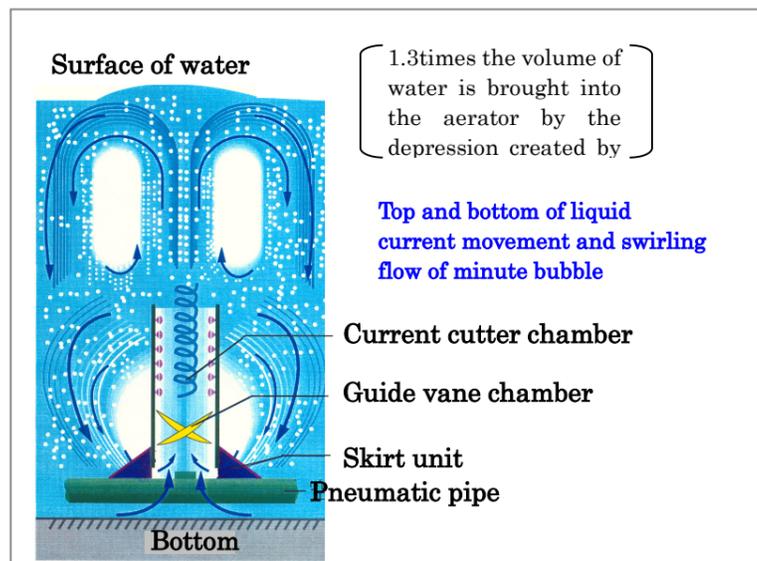
SUZUKI SANGYO CO., LTD.

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AERATOR R-1

The AERATOR R-1 is a stationary diffusing cylinder developed especially for aeration of active sludge tank and it has no movable parts. Air blown to bottom passes through the aerator together with water. Then, the air and water are mixed with each other by stirring and generate ultra fine bubbles. Simultaneous by the cylinder. Absorb and lift the lower fluid materials up. To circulate the whole fluid materials continuously the bubbles exchange, oxidize, deoxidize, absorb the upper and lower fluid materials continuously and efficiently.

Liquid current distribution in tank & Structure



1. SKIRT UNIT

The skirt unit is welded to pneumatic pipe and leads the water from the bottom to a main unit utilizing the Air Lift Effect.

2. GUIDE VANE CHAMBER

A mixture of water and air is controlled accurately and fed into a current cutter chamber as strong spiral fluid stream.

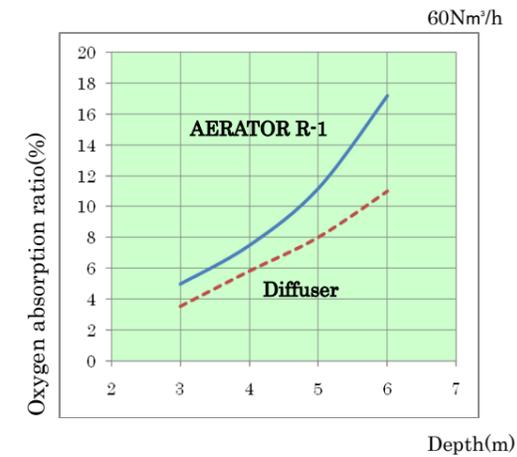
3. CURRENT CUTTER CHAMBER

The spiral fluid stream, i.e., mixture of water and air, is stirred by a current cutter of special shape and becomes into turbulent flow. It is further milted and is transformed into ultra fine bubble stream.

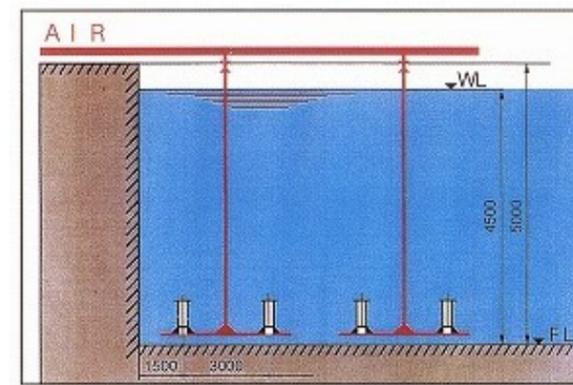
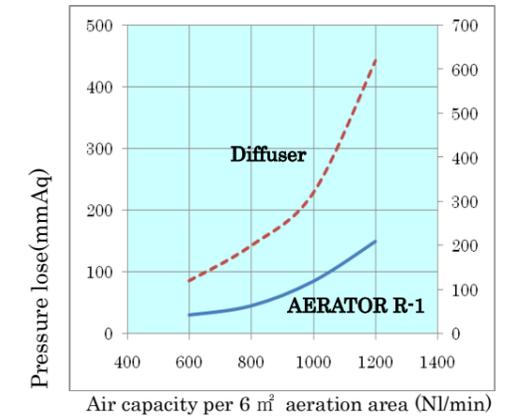
Feature of AERATOR R-1

1. Considerable reduction of electric expenses
2. High and stable oxygen absorption ratio
3. Maintenance free
The regular cleaning is unnecessary
4. No trouble
There is no clogging or choking
5. The sludge doesn't accumulate in the tank bottom
6. The installing construction is very easy

Oxygen absorption ratio



Pressure Lose (Depth 5m)



▲ Installation diagram of Aerator R-1



▲ Allows installation without draining wastewater

Effect of introduction

T Dying factory wastewater treatment (Japan)

System Continuous active sludge treatment	
Aeration time	8Hr
Untreated material fluid flow	1560 m³/日
Untreated raw material fluid BOD	1600ppm
Treated material fluid BOD	20ppm
Aeration tank floor area	280 m²
Depth of aeration tank	3.2m



	Before Modification	After Modification
Aeration system	190 units of diffuser	46 units of aerator R-1
Air suction capacity	45m³/min	Average 32m³/min
Number of blowers	59kw	37kw
Do in aeration tank	0.5~1.0ppm	3~4ppm
Excess sludge	70m³/month	50m³/month