

In developing Mu-aerator

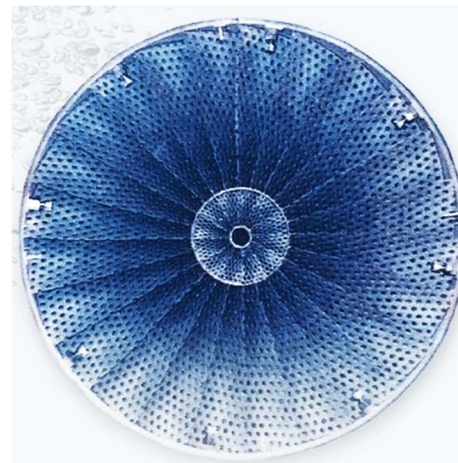


Mixing of μ [mu] and nothing [Mu]

In the Japanese infinity and space symbolized by the dry landscape garden, a famous Western time without cloudiness symbolized by the Leaning Tower of Pisa By piercing the space, a completely new technology and idea that mixes them inside is born. It is a kind of technology with a multi-layered idea similar to nested structure Note: 1. Technology with supple and multidimensional energy like a spiral is. Our name "Mu" © is derived from both the 12th ancient Greek letter " μ " and the Buddhist view of the universe "nothing". The sentence of the Heart Sutra, "non-raw immortal, not dirt unclean, not increase not decrease", there is a word. In the field of chemistry, The law of conservation of mass, which states that "the total mass of matter does not change before and after a chemical reaction," and in physics, "energy of isolated systems." We are discovering from the universe the law of conservation of energy that "the total amount of energy does not change."


In this way, there are various laws that generate phenomena (colors) in the universe. These two laws are the laws of matter and energy seen from the sky. From the point of view of color, we are from the standpoint of human beings, and there are life and death of bacterial and microbial cells (color) in wastewater treatment, but it is life and death in both human and activated sludge SRT. Does not mean Yes (ie, empty). That is, there is a chemical reaction as a part, and although there is an improvement in the BOD removal rate and a decrease in the sludge conversion rate, there is no change in the total mass of the substance as a whole. And even if the use of electricity is changed to the work (heat) of pumps and blowers as part of the process, the total amount of energy does not change as a whole.

There are also the terms partial optimization and total optimization. Partially optimal to see from the color. If you compare this to an air diffuser, the ideal image would be a device with high oxygen dissolution efficiency, no clogging, and good agitation. But, of course, high ideals also have a negative side. On the other hand, the overall optimum (universe) is viewed from the sky. This is exactly the characteristic of the mu aerator. Reasonable oxygen dissolution efficiency using the laws of nature, simple without driving parts and sliding parts, low pressure loss, maintenance-free, easy operation, and dispersal considering the position of bacteria, microorganisms, and reactions in the water tank As an air device, it is a device that has been well-received in the comprehensive evaluation from construction costs and maintenance costs. As an example of the introduction of this aerator, when operating in wastewater treatment with a high BOD volume load, microorganisms efficiently decomposed organic matter and obtained better treated water quality than before the repair. At the same time, the long-term water quality is proved by the measurement certificate.



DNA abstraction
The new generation mu mixing element

Note: 1 Nesting is a nesting in which containers with the same shape and different sizes are placed in order. Nested crafted of such insignificant detail or goblet. Well-known are the Hakone-crafted nested dolls (Kokeshi dolls, Daruma dolls, and Seven Lucky Gods) in Hakone Town, Kanagawa Prefecture, and the Russian matryoshka dolls. Nesting in programming.

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Technical cooperation: MU USA CORPORATION

(Patent) Japan / US / EU / China / India

• Specifications are subject to change without notice.

Wastewater / exhaust gas treatment technology using natural energy



Mu - aerator®

MA-125, MA-25, MAH-25, MA-10 Aerator

Power consumption reduced by 20% or more, low pressure loss and no clogging!



Utilizing natural energy to contribute to advanced water purification

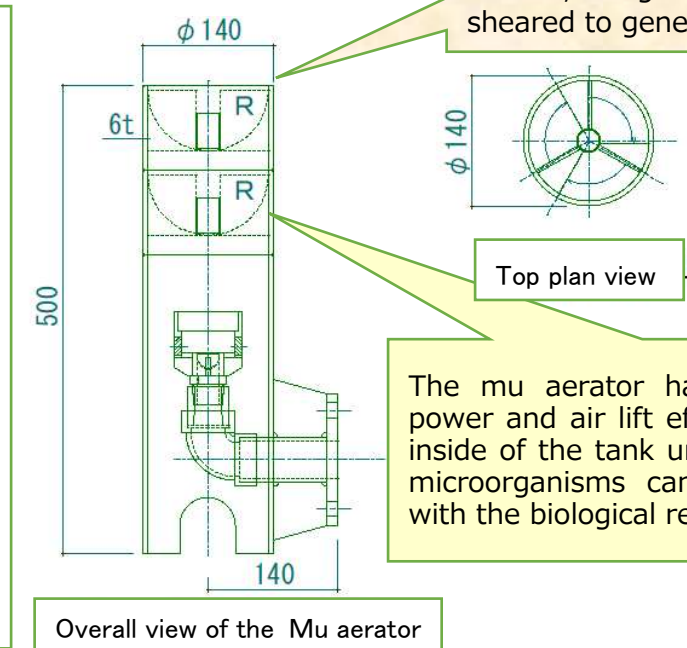
An epoch-making "Mu aerator" that surpasses the conventional static mixer type

Features of Mu aerator

- Highly efficient oxygen dissolution by mixing air and water with a mu-mixing element in which multiple mixing blades for stirring and **MU-SSPW (MU Static Spiral Perforated Wings)®** are arranged.
- Significant reduction in power consumption obtained with high oxygen dissolution efficiency and low pressure loss.
- Maintenance-free because there are no moving parts or sliding parts and the structure does not clog.
- High air lift effect reduces sludge accumulation at the bottom of the tank.



How the Mu aerator works



Water and air are repeatedly divided, swirled, merged, inverted and sheared to generate fine bubbles.

The mu aerator has a large agitation power and air lift effect, can agitate the inside of the tank uniformly, and aerobic microorganisms can efficiently proceed with the biological reaction.

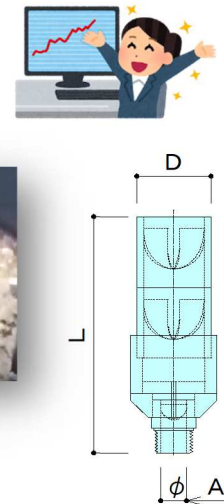
Mu aerator suitable for various applications



- ① MA-15-PP
- ② MA-25-PP
- ③ MA-125-AL
- ④ MAH-25-PVC



[Agitation status]



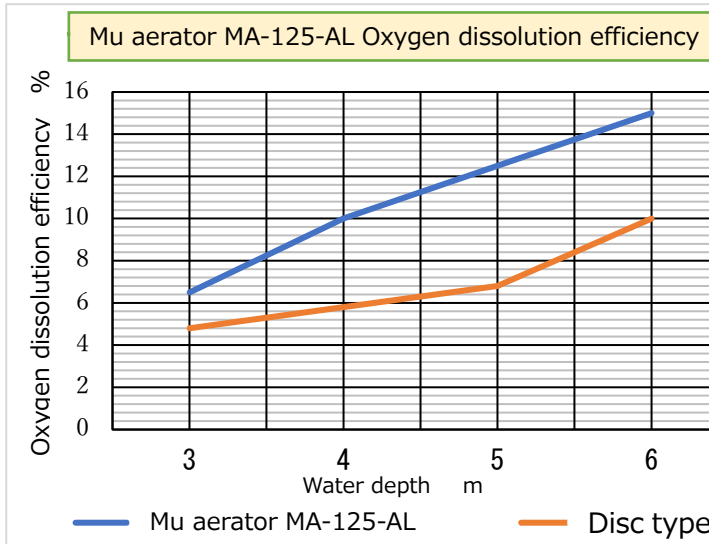
[Major Mu aerator lineup]

Model	Essentials	diameter (mm)	length (mm)	Connection diameter (A) (mm)	Air volume range (m ³ /min)	Stirring area (m ²)	Water depth (m)	weight (g)
MA-15-PP		40	120	10A(3/8B)	0.2~0.5	3~4	1.0<	42
MA-25-PP		60	200	25A(1B)	0.33~2.0	5~7	1.5<	195
MA-125-PP		140	500	40A(1·1/2B)	0.7~2.2	5~10	1.5<	1,700
MA-15-PVC		40	120	10A(3/8B)	0.2~0.5	3~4	1.0<	70
MA-25-PVC		60	200	25A(1B)	0.33~2.0	5~7	1.5<	112
MA-25-SUS		60	200	25A(1B)	0.33~2.0	5~7	1.5<	620
MAH-25-PP		70	100	25A(1B)	0.33~1.6	5~7	1.0<	72
MAH-25-PVC		70	100	25A(1B)	0.33~1.6	5~7	1.0<	120
MAH-25-SUS		70	100	25A(1B)	0.33~1.6	5~7	1.0<	660
MAH-25-AL		70	100	25A(1B)	0.33~1.6	5~7	1.0<	230
MA-125-40-PP		140	500	40A(1·1/2B)	0.7~2.2	5~10	1.5<	3,000
MA-125-40-PVC		140	500	40A(1·1/2B)	0.7~2.2	5~10	1.5<	3,000
MA-125-40-SUS		140	430	40A(1·1/2B)	0.33~3.5	5~12	1.5<	7,500

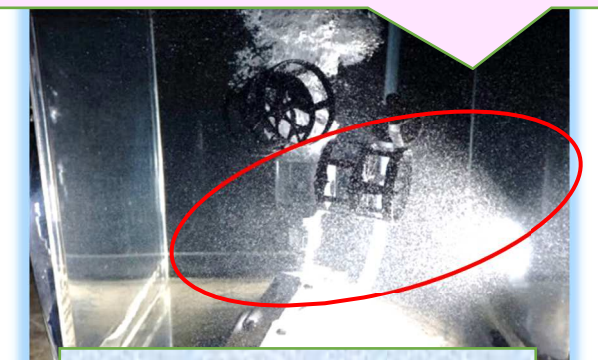
※The air volume range and stirring area may vary depending on the water depth.

Aeration equipment comparison [Reference]

Item	Types of air diffusers	Mu aerator	Mechanical aeration stirrer	Disc type
1. Oxygen dissolution efficiency		Big	Big	little
2. Stirring power		Big	middle	middle
3. Pressure loss		little	Big	Big
4. Clogged, functional deterioration		None	Yes	Yes
5. Inverter, intermittent operation		Yes	Yes	None
6. Dead water area (dead space)		None	Yes	Yes
7. Construction cost		Cheap	Expensive	Cheap
8. Maintenance and inspection		None	Yes	Yes
9. Operating cost		Cheap	Expensive	Cheap



A large amount of "microbubbles" can be generated from the mu aerator without giving mechanical or electrical operation. This promotes oxygen enrichment in wastewater treatment by the activated sludge method.



Occurrence of "micro bubbles"