

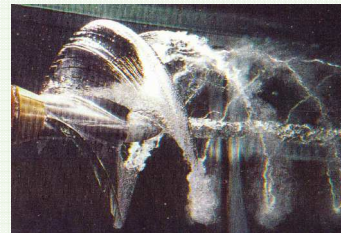
M. Takahashi have studied and engaged in R&D of 'Ultrasonic fish finder' in the ultrasound laboratory of Shibaura Institute of technology in the late 1950s. Tips is that he found the fine-bubbles generated from the fishing boat screw of old model in the process of development of fish finder. That was found because of cavitation phenomenon. It led to the development of fine-bubble generator. He decided to start development applications of fine-bubble.

We have been supported a number of the "encounters" for our history of research and development of 50 years. We have developed the "original products such as" unit filtration device", "Bubbling nozzle that can be broken down", "light catalyst filtration device" and others in addition to the "fine-bubble generation technology"

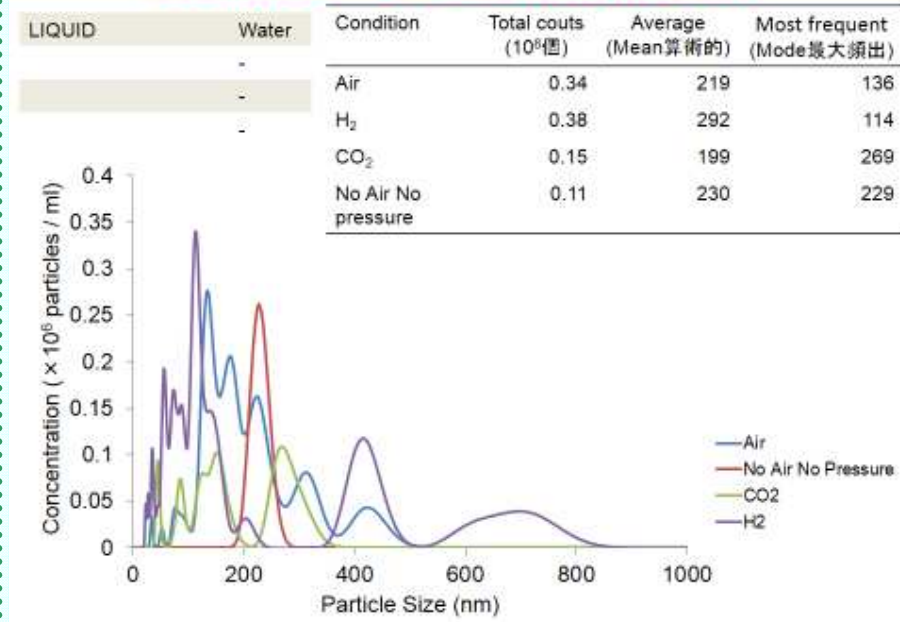


Ultrasound laboratory, Shibaura Institute of Technology (1964) M. Takahashi is sitting in the front row far left

Cavitation due to the screw of fishing boat (light picture)



**Model:ASK3 BY SHIZUOKA UNIVERSITY**



Nano-bubbles of several tens of million cells / ml has been confirmed by the measurement in Nanometer particle analyzer "Nano sight".

**LIVINGENERGIES & Co.**

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**LIVINGENERGIES & Co.**

# Micro-nano bubble/ (Ultra) Fine-Bubble Generator



~Tabletop~For labo use

It is recommended for labo test. Chemical-resistant.



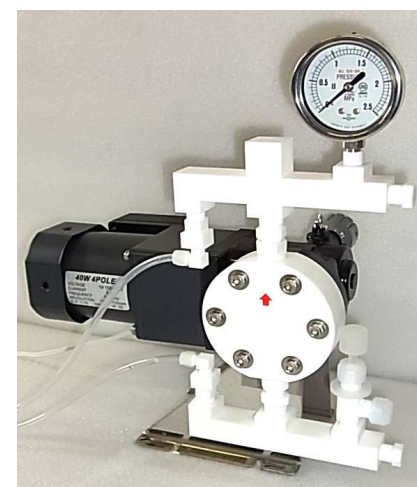
Model	LE5S
Flow capacity ml/min.	200-300
Weight kg	4.4
Power supply	AC100-110V
Frequency	50/60Hz
Size H×W×D mm	190×300×220
Main parts material	SUS/CERAMIC

●APPLICATIONS

Water purification, cleaning, culture, fermentation, sterilization, deodorant, aeration, degassing, nano-bubbles mist, chemical reaction synthesis, emulsion, liquid-liquid mixing, dispersion, dental mouthwash, atopic medical treatment and nursing care bathing, agricultural water, high concentration hydrogen water other

- Gas ... Ozone, oxygen, hydrogen, argon, nitrogen, carbon dioxide and other
- Liquid ... Water, an organic solvent, oil, even highly viscous liquid.

It is recommended for bubbling of organic solvents.



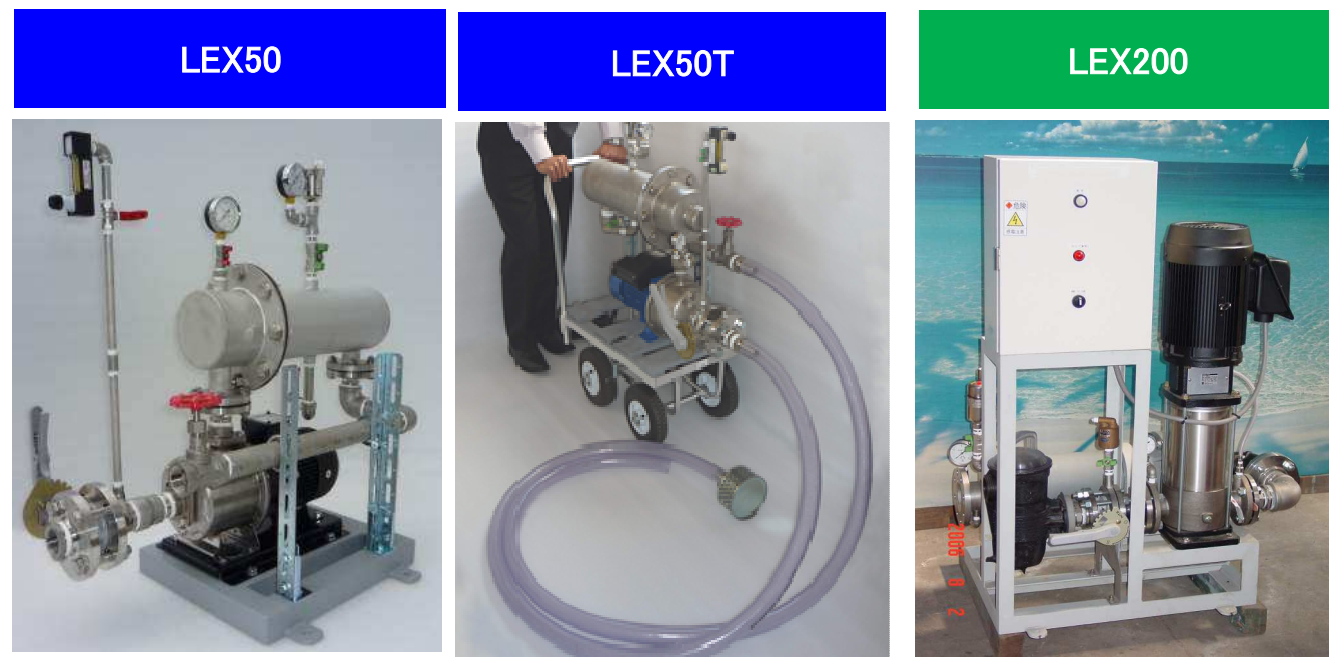
Model	LE3FS
Flow capacity ml/min.	120-150
Weight kg	7
Power supply	AC100V
Frequency	50/60Hz
Size H×W×D mm	380×360×210
Main parts material	PTFE/FKM

## 【Large capacity】

	Model	Flow capacity litters/min	Weight Kg	Power supply	Power consumption	Size H×W×D mm
1	LEX50	42~60	50	3 phase 200-220V	1.1 Kw	800×700×400
2	LEX50T			3 phase 200-220V		920×830×430
3	LEX200	160~200	200	3 phase 200-220V	5.5 Kw	1190×927×623

※Flow amount may vary depending on the installation conditions, etc.

※Specifications and appearances may be change without notice in advance.



Operation panel in the picture is an option.

## ~Portable~

### 【LEA10】

Compact and Silent model.

Easy operation, easy maintenance. It can be used for various purposes.



Capacity 6-10L/min.  
 Weight 14kg  
 Power supply AC100V  
 Frequency 50/60Hz  
 Electric Consumption 600/650W  
 Demention H640xW440xD280 mm  
 Included Parts such as Grounding, flow control valve, Air control valve, Hoses.

## ~Middle size~

### 【LEA15】

Vertical Stainless steel mixing header type, excellent durability.



Capacity 15L/min.  
 Weight 28.0kg  
 Power supply AC100V  
 Frequency 50/60Hz  
 Power consumption 600/650W  
 Size H640xW440xD280 mm  
 Included parts such as Grounding, flow control valve, air control valve

**We also welcome the order of special specification product such as heat-resisting, specializing for high viscosity liquid, made of fluorine, built-in unit and so on. OEM supply is also available.**