

New Life to Water



# "Water"

determines the quality of a product

"Water" is not only a daily necessity but a fundamental indispensable part of making various products.

It is no exaggeration to say that the quality of a product is determined by how this water is used.

After asking about the environment and applications used by Mtech, we respond to various requests from a selection of water treatment methods and membranes to development, manufacturing, and maintenance of operating systems.

## Company Profile

Company name : Mtech co.ltd.

Established : March 23, 2000

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Website & Mail : <https://mtech-web.co.jp/en> & [info@mtech-web.co.jp](mailto:info@mtech-web.co.jp)

History

Established in 2000 as a company specializing in water treatment equipment and sold the first LW series of our products. In 2004, the factory moved to the current address for business expansion. The company name changed to Mtech Co. Ltd.

# Introduction of Case Studies

**RO pure water system**  
**Medical and Laboratory**



**Membrane filtration device**  
**Industrial water**



**UF·RO Membrane device**  
**Food production**



**UF·RO Membrane device**  
**Seawater desalination**



## Mtech Original Product

**The movable**  
**Fresh Water generator**  
**LW Series**



**Adsorption Oil Separator**  
**OSU Series**

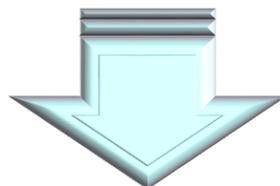
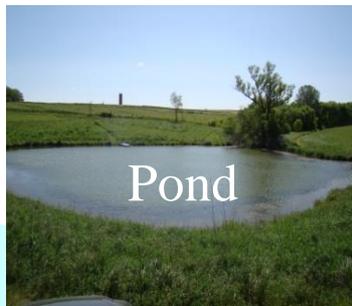


- \* Industry first! Cartridge method adopted
- Easy replacement of filling material
- Compact and space-saving design
- \* Equipped with high-efficiency surface water inlet as standard equipment
- Collection of floating oil
- Collection of flotsam

# Live Water LW Series

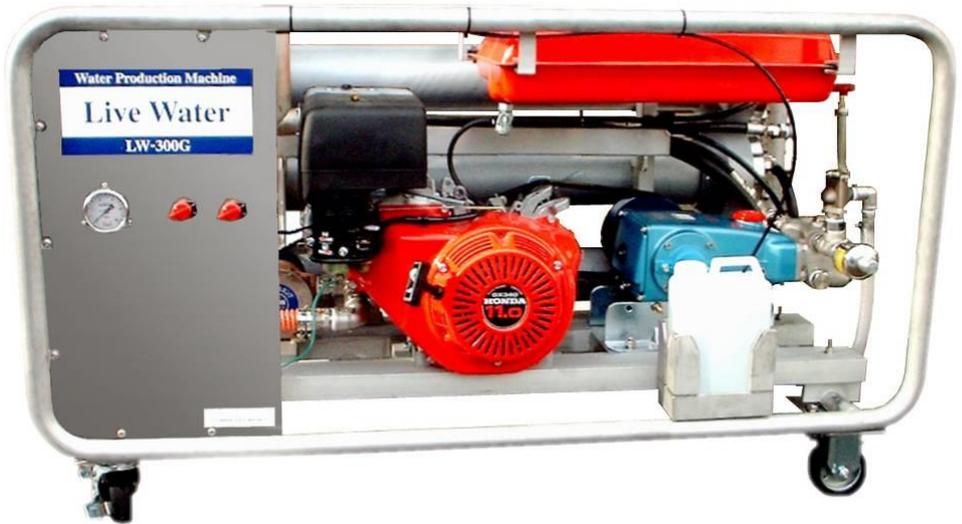
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"Live Water" uses reverse osmosis to separate components. Using a reverse osmosis membrane (RO membrane), seawater is pressurized and sent by a pump to efficiently create fresh water. Reverse osmosis can remove bacteria, viruses, fine particles, salt, heavy metals, and organic matter in water. Therefore, it is possible to produce safe drinking water.



# Live Water LW-TypeG

The "LW-TypeG" is a desalinator driven **by a Gasoline Engine** that produces fresh drinking water from **Sea/Ocean, River, Lake, Pond, well, or Swimming pool** by using Reverse Osmosis (RO) technology.

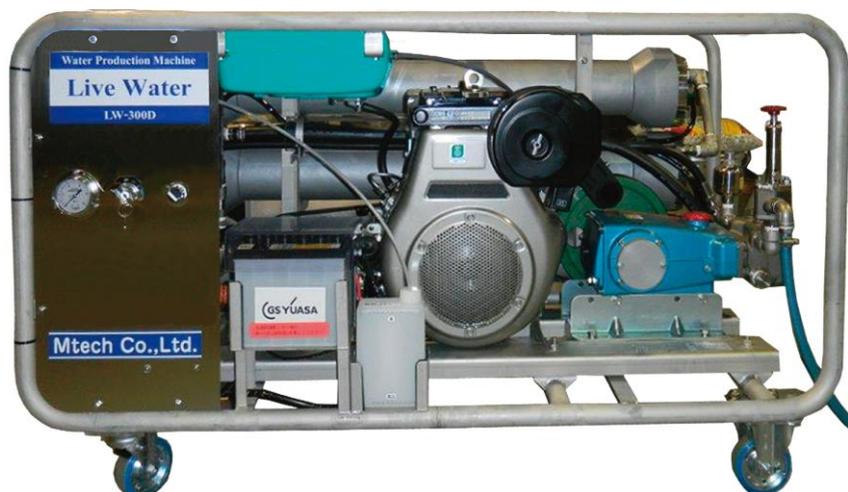


It can pump source water from any source by the Suction Pump and feeds to the Primary and Secondary Prefilters (microfilters). The Pressure Pump puts high pressure on the fed water to the RO modules.

The RO membrane in it works to **exclude Bacterium, Viruses, and Corpuscles as well as Salinity, Heavy Metals, and Organic Matters**. As the result, the "LW-TypeG" is capable of offering Highly Safe Water.

	LW-200G	LW-300G	LW-400G
Production capability of Fresh water (at 25°C) Max./day	5,640 liters (Seawater)	8,460 liters (Seawater)	11,280 liters (Seawater)
	8,000 liters (Others)	12,000 liters (Others)	16,000 liters (Others)
Prefiler	Primary Prefilter: 10μ, Secondary Prefilter: 3μ		
Filtration	Reverse Osmosis (RO) Membrane		
Size of RO membrane	18 square meters/ 2 elements	24 square meters/ 3 elements	32 square meters/ 4 elements
Source water lift	5 m max/25A		
Pump	Source Water Pump (Suction) X1, RO Pump (Pressure) X1		
Fuel tank capacity/Consumption	16.0 liters / max1.5 liter/hour		
Power source / Fuel	Gasoline Engine 340cc, 11.0 hp / Gasoline only		
Dimensions (Approximately).	1380(W) x 680(D) x 770(H) mm		1380(W) x 680(D) x 1000(H) mm
Weight (dry condition)	170Kg	198Kg	260Kg
Accessories	• Raw water hose (with water intake strainer)		7m
	• Treated water hose		5m
	• Concentrated water hose		7m
	• Safety filter cartridge (10μ and 3μ)		1 unit
	• Residual chlorine concentration/PH measuring device		1 unit
	• Equipment cover		1 unit
	• Equipment storage box		1 unit

# LW - TypeD



The "LW-TypeD" is a desalinator driven by a Diesel Engine that produces fresh drinking water from Sea/Ocean, River, Lake, Pond, well, or Swimming pool by using Reverse Osmosis (RO) technology.

It can pump source water from any source by the Suction Pump and feeds to the Primary and Secondary Prefilters (microfilters). The Pressure Pump puts high pressure on the fed water to the RO modules.

The RO membrane in it works to exclude Bacterium, Viruses, and Corpuscles as well as Salinity, Heavy Metals, and Organic Matters. As the result, the "LW-TypeD" is capable of offering Highly Safe Water.

	LW-200D	LW-300D	LW-400D
Production capability of Fresh water (at 25°C) Max./day	5,640 liters (Seawater)	8,460 liters (Seawater)	11,280 liters (Seawater)
	8,000 liters (Others)	12,000 liters (Others)	16,000 liters (Others)
Prefiler	Primary Prefilter: 10μ、Secondary Prefilter: 3μ		
Filtration	Reverse Osmosis (RO) Membrane		
Size of RO membrane	2 elements	3 elements	4 elements
Source water lift	7 m max/25A		
Pump	Source Water Pump (Suction) X1, RO Pump (Pressure) X1		
Fuel tank capacity/Consumption	12 liters		
Power source / Fuel	Diesel Engine 9.5 PS / Diesel fuel only		
Dimensions (Approximately).	1,400(W) x 700(D) x 830(H) mm		1,400(W) x 700(D) x 1000(H) mm
Weight (dry condition)	250Kg	300Kg	342Kg
Accessories	• Raw water hose (with water intake strainer)	7m	
	• Treated water hose	5m	
	• Concentrated water hose	7m	
	• Safety filter cartridge (10μ and 3μ)	1 unit	
	• Residual chlorine concentration/PH measuring device	1 unit	
	• Equipment cover	1 unit	
	• Equipment storage box	1 unit	

# LW - TypeM

The "LW-TypeM" is a desalinator driven by an Electric motor that produces fresh drinking water from Sea/Ocean, River, Lake, Pond, well, or Swimming pool by using Reverse Osmosis (RO) technology.



It can pump source water from any source by the Suction Pump and feeds to the Primary and Secondary Prefilters (microfilters). The Pressure Pump puts high pressure on the fed water to the RO modules.

The RO membrane in it works to exclude Bacterium, Viruses, and Corpuscles as well as Salinity, Heavy Metals, and Organic Matters. As the result, the "LW-TypeM" is capable of offering Highly Safe Water.

	LW-200M	LW-300M	LW-400M
Production capability of Fresh water (at 25°C) Max./day	5,640 liters (Seawater)	8,460 liters (Seawater)	11,280 liters (Seawater)
	8,000 liters (Others)	12,000 liters (Others)	16,000 liters (Others)
Prefiler	Primary Prefilter: 10μ, Secondary Prefilter: 3μ		
Filtration	Reverse Osmosis (RO) Membrane		
Size of RO membrane	2 elements	3 elements	4 elements
Source water lift	5 m max/25A		
Pump	Source Water Pump (Suction) X1, RO Pump (Pressure) X1		
Power Device / Power source (OP: Any other voltage is available)	Electric Motor 3φ 200VAC, 50 / 60 Hz / 3.7KW		Electric Motor 3φ 200VAC, 50 / 60 Hz / 5.5KW
Power source / Fuel	Diesel Engine 9.5 PS / Diesel fuel only		
Dimensions (Approximately).	1,400(W) x 700(D) x 830(H) mm		1,400(W) x 700(D) x 1000(H) mm
Weight (dry condition)	Approx 255Kg	Approx 297Kg	Approx 339Kg
Accessories	• Raw water hose (with water intake strainer)	7m	
	• Treated water hose	5m	
	• Concentrated water hose	7m	
	• Safety filter cartridge (10μ and 3μ)	1 unit	
	• Residual chlorine concentration/PH measuring device	1 unit	
	• Equipment cover	1 unit	
	• Equipment storage box	1 unit	

# LW - L - TypeG



The "LW- L series- TypeG" is a desalinator driven by a Gasoline Engine that produces fresh drinking water from River, Lake, Pond, well, or Swimming pool by using Reverse Osmosis (RO) technology. It can pump source water from any source

by the Suction Pump and feeds to the Primary and Secondary Prefilters (microfilters). The Pressure Pump puts high pressure on the fed water to the RO modules. The RO membrane in it works to exclude Bacterium, Viruses, and Corpuscles as well as Salinity, Heavy Metals, and Organic Matters. As the result, the " LW- L series- TypeG " is capable of offering Highly Safe Water.

It differs from other LW series in that it utilizes RO membranes for low-pressure applications and uses a low-pressure pump to **increase the volume of produced water**, making it **Weight reduction and miniaturize**.

Therefore, it is not suitable for treating highly concentrated seawater.

\*Highly concentrated seawater can be separated, but the membrane will fail prematurely.

\*Low concentration seawater may be treated. Please contact our Technical Department.

	LW-L350	LW-L-500G
Production capability of Fresh water (at 25°C) Max./day	8,800 liters	13,200 liters
Prefiler	Primary Prefilter: 10μ, Secondary Prefilter: 3μ	
Filtration	Reverse Osmosis (RO) Membrane	
RO membrane	2 unit	3 unit
Pump	Source Water Pump (Suction) X1, RO Pump (Pressure) X1	
Fuel tank capacity/Consumption	16.0 liters / max 1.5 liter/hour	
Power source / Fuel	Gasoline Engine 170cc, 6.0 hp / Gasoline only	
Dimensions (Approximately).	1280(W) x 640(D) x 730(H) mm	1280(W) x 640(D) x 730(H) mm
Weight (dry condition)	100Kg	110Kg
Accessories	<ul style="list-style-type: none"> <li>• Raw water hose (with water intake strainer)</li> <li>• Treated water hose</li> <li>• Concentrated water hose</li> <li>• Safety filter cartridge (10μ and 3μ)</li> <li>• Residual chlorine concentration/PH measuring device</li> <li>• Equipment cover</li> <li>• Equipment storage box</li> </ul>	<ul style="list-style-type: none"> <li>7m</li> <li>5m</li> <li>7m</li> <li>1 unit</li> <li>1 unit</li> <li>1 unit</li> <li>1 unit</li> </ul>

# LW - RD

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**Self-propelled** seawater desalination equipment "LW-RD". It is available in Three power specifications: Diesel engine, Gasoline engine, and Motor engine.

This product is capable of self-propulsion on rough terrain and is expected to be useful in times of disaster and mountainous areas.

It can also generate electricity, so it can be used as a power source.

This product can be used to respond to the needs of the people in the disaster-stricken areas. Since it is also equipped with an outlet port, it can supply , particulates, salt, heavy metals, a power for lighting, various recharging, etc.

As with the other LW series models, the RO membrane can remove bacteria, viruses organic matter. Therefore, it is possible to produce clean drinking water from oceans, rivers, lakes, ponds, wells, and swimming pools.

## LW-Vehicle

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**In-vehicle fresh water generator**

A combination of desalination devices such as "filtration device", "UF membrane" and "RO membrane" are installed on the bed of a 4t truck, and it is possible to move to the place where water is needed and generate desalination.

possible product. In addition, the power to operate the fresh water generator is equipped with a generator, so it can be operated completely independently.

This product is a product that can be used by customizing the device according to the area of use. The product is designed so that it can be easily rearranged and repaired even after installation, and can be used for a long time. Since the Vehicle type can be moved by car even in remote villages, it can be handled with a single unit, so it does not require a large amount of capital investment.

\* UF membrane: A membrane that allows larger particles to be removed than RO membranes

\* Filtration device: A device that removes large particles by using sand or charcoal with different



# Live Water -Oil Water Separator-



Device overview	OSU-10	OSU-20	OSU-30
Oil Recovery amount	10 L/min	20 L/min	30 L/min
Target oil	Mineral oil & animal and vegetable oil		
Collection Method	Float type recommended		
Form	500*500*1920		500*730*1920
Filling Material	Filtor FT 12kg	Filtor FT 24kg	Filtor FT 36kg
Weight (water Full)	142Kg (192Kg)	170Kg (250Kg)	240Kg (290Kg)
Raw water entrance		20A	
Raw water return port caliber			
Treated water outlet caliber		40A	
Drain diameter		40A	

\* It may differ from the specified value depending on the condition of raw water.

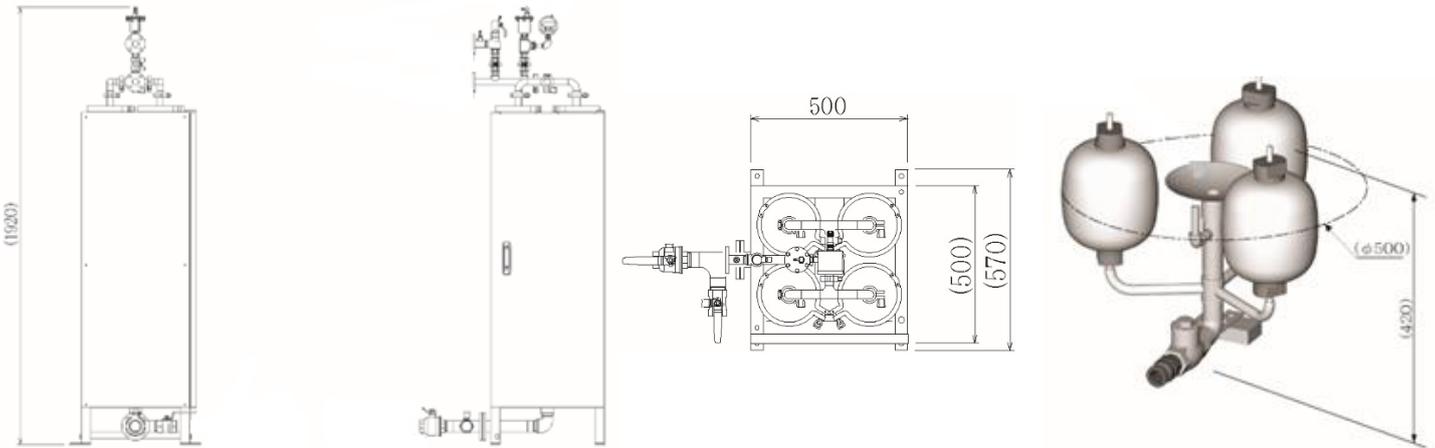
\* This product requires a separate float system and pump.

\* Specifications are subject to change without notice.

## Outline Drawing

LW-MTS-OSU has a strong oil adsorbent in small dimensions.

We also have items for highly efficient oil and water recovery (Model: IH-20).

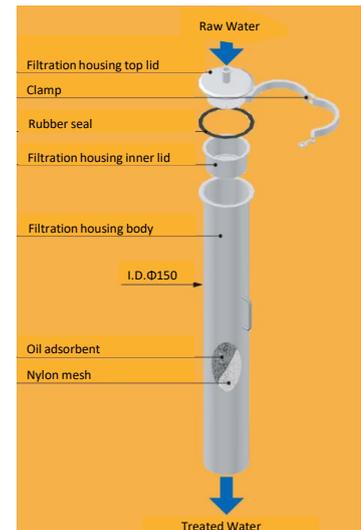


## Product application

LW-MTS-OSU collects oil slicks and surface oil floating in the oil-water separation tank with an oil recovery device floating on the liquid surface and separates the oil and water.

## Characteristics

- ① Uses a cartridge method for the filling material
  - Easy replacement of filler (filler is packed in a mesh bag)
  - Compact design enables effective use of space
  - The number of cartridges used can be set according to the assumed oil processing amount.
- ② Filled with high-performance oil-impregnated wastewater treatment material that can also treat emulsified oil!  
The treated water will be less than 5ppm of n-hexane extract.
- ③ Consumables are only oil adsorbents!



## Test Data

Analysis Item	Analysis Result		Analysis Method
	Raw water	Treated water	
Biochemical oxygen requirement (BOD)	98.0 mg/L	5.8 mg/L or less	JIS K 0102 21
Chemical oxygen requirement (COD)	65.0 mg/L	4.1 mg/L or less	JIS K 0102 17
Normal hexane extract (animal and vegetable oil)	95.0 mg/L	3.0 mg/L or less	JIS K 0102 Reference I .2
Normal hexane extract (mineral oil)	230.0 mg/L	5.0 mg/L or less	JIS K 0102 Reference I .1
C Heavy oil (MFO, HFO, RFO)	Measured value over	5.0 mg/L or less	Gas chromatograph method



## Contact

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