

SOLAR WATER

Drinking water
Approximately 5 liters/day

Hot water
Approximately 127 liters/day

Drinking water
Approximately 10 liters/day

Hot water
Approximately 208 liters/day



DSW-I

Base price **¥340,000**
(Installation costs and consumption tax not included)
Effective heat collection area:
1.91 square meter
Hot water tank capacity: 95 liters
Evaporation tank capacity: 32 liters
Distilled water capacity: 20 liters



DSW-II

Base price **¥528,000**
(Installation costs and consumption tax not included)
Effective heat collection area:
3.82 square meter
Hot water tank capacity: 142 liters
Evaporation tank capacity: 66 liters
Distilled water capacity: 42 liters

A system that generates pure water (distilled water) from rainwater (from roof)

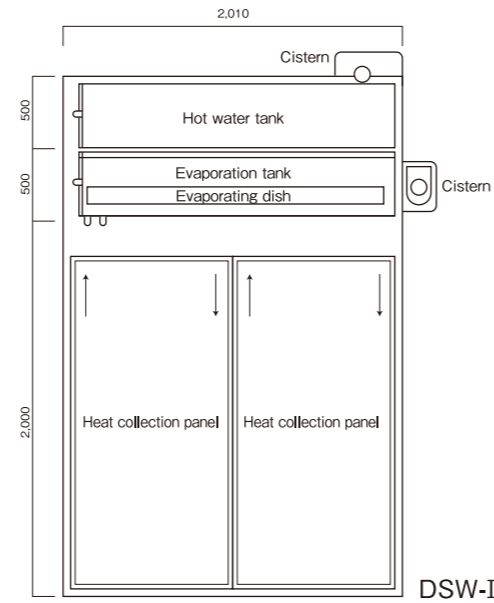
Drinking water
Approximately 10 liters/day

Hot water
Approximately 208 liters/day



RDSW-II

Base price **¥645,000**
(Installation costs and consumption tax not included)
Effective heat collection area:
3.82 square meter
Hot water tank capacity: 142 liters
Evaporation tank capacity: 66 liters
Distilled water capacity: 42 liters
Rainwater tank capacity: 208 liters



<Specification sheets>

Model	DSW-I				DSW-II				Material Quality	Insulating material
	Dimensions	Water volume (ℓ)	Weight (kg)	Weight when full of water (kg)	Dimensions	Water volume (ℓ)	Weight (kg)	Weight when full of water (kg)		
Hot water tank	φ377×850	95.0	19.0	114.0	φ377×1,860	142.0	32.0	174.0	Special stainless steel	Styrofoam
Evaporation tank	(φ400×870) (φ336×870)	32.0	37.0	69.0	(φ400×1,776) (φ336×1,776)	66.0	60.0	126.0	Special stainless steel	Styrofoam
Heat collector	1,000×2,000×70	9.0	36.0	44.0	2,000×2,000×70	18.0	72.0	88.0	Special stainless steel	Fiberglass
Evaporating dish	φ220/2×672×H60	6.2		6.2	φ220/2×1,576×H60	13.3		13.3	Special stainless steel	
Distilled water capacity		20.0				42.0				
	Total	161.2	92.0	265.2	Total	279.3	164.0	467.3		

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Azuma SOLAR.Co., Ltd

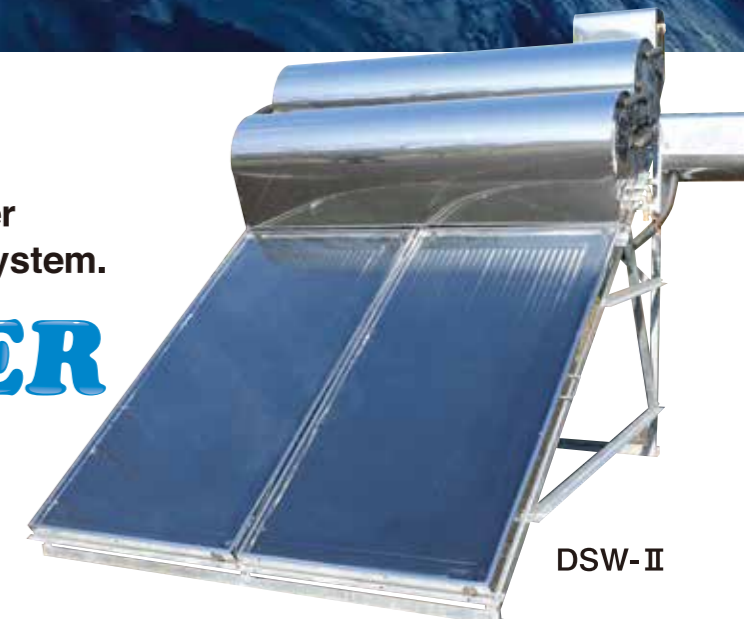
Although the earth is known as the water planet, the water that we have available for use is a mere 0.01%.

With the help of the sun, we have made it possible to turn this limited water into safe and delicious pure water.

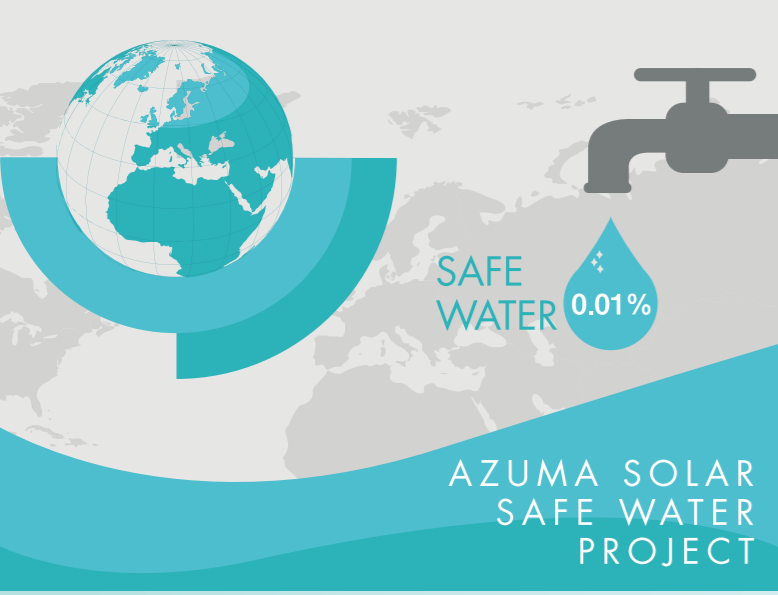
AZUMA SOLAR
SAFE WATER
PROJECT

Simultaneous Drinking Water/Hot Water
Collection-Type Solar Water Heating System.

SOLAR WATER



DSW-II



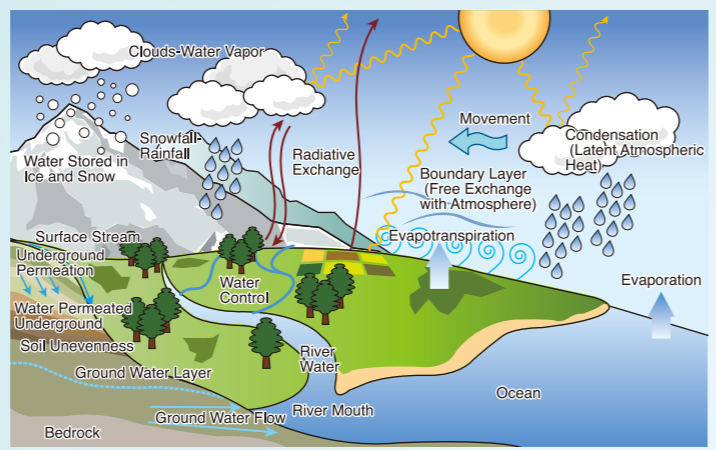
Making pure (drinking) water with the sun's heat

With rapid population growth in the last 100 years, conflicts over water resources have led to frequent and acute quantitative water shortages throughout the world. Additionally, there is also the qualitative problem of roughly 500 million people not having access to safe drinking water. These factors lead many to believe that "the 21st Century is the century of water."

In both Japan and the rest of the world, the market for mineral water has expanded significantly, indicating the demand for delicious and safe water. At Azuma Solar, we have developed the world's first "simultaneous drinking water/hot water collection-type solar water heating system" (patented domestically and internationally), an innovative system that uses almost limitless solar thermal energy to supply hot water and safe drinking water simultaneously.

Reproducing the Earth's Natural Processes Using Solar Energy

Just as solar heat turns seawater into water vapor, which then turns into clouds and rain, so too does our solar water heater generate pure water through evaporation, cooling, and condensation. Although the earth is known as the water planet, approximately 97% of the earth's water is seawater and roughly 2% is in the form of ice in Antarctica, the Arctic, and glaciers. Of the remaining 1%, most of it is underground, leaving only about 0.01% for drinking water in lakes and rivers.



PATENTS

- Japanese patent No.4687928
- PTC international patent PCT-JP2011/05 No.1976
- German patent No.11 2011 100 000
- Korean patent No.10-1222451
- Chinese patent No.201180001027.7
- Australian patent No.2011211830
- Hong Kong patent HK1166364
- India, Indonesia, Thailand, and Malaysia patents pending

A patent application for our "simultaneous drinking water/hot water collection-type solar water heating system" was filed on December 11, 2009 and was approved in roughly one year on February 25, 2011 to give us a Japanese patent for our technology. We currently also hold international patents, as well as patents for Germany, Korea, China, Australia, and Hong Kong. Patents for India, Indonesia, Thailand, and Malaysia are pending. With the patent acquisition process from application to approval taking a relatively fast 15 months, our technology's novelty, marketability, and inventiveness has received international recognition.



FEATURES

Capable of collecting 156 liters of pure water in one month.



Assuming that one liter of distilled water is purchased every day for ¥150, the device would save ¥23,400 per month and would offset the costs of the equipment in roughly 2 years.

Drinking water collection

Pure water savings
¥780 / day
¥28,400 / month
 (Corresponding value)

Please consume the collected distilled water early. We recommend you to boil it before drinking for your safety.

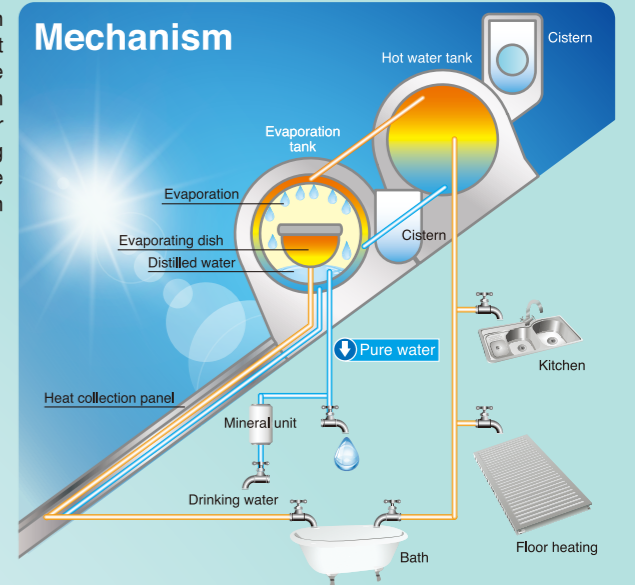


Hot water collection

	Hot water tank (52~60°C)	Evaporation tank (49~59°C)	Total
Capacity	142ℓ/day	66ℓ/day	208ℓ/day
Heat quantity (a sunny September day)	About 6,000kcal /day	About 2,000kcal /day	About 8,000kcal /day
Amount of savings (LPG conversion)	¥5,703 /day	¥1,901 /day	¥7,604 /day

MECHANISM

Water is passed through heat collection panels and an evaporating dish, where it absorbs heat from the heat collection panels and heats the evaporating dish. The evaporated water vapor (gas) is then cooled with water from the cooling tank, where it condenses to form distilled water (pure water). Additionally, the heat of evaporation in the cooling jacket is put through a heat exchanger, which raises the temperature in both the and hot water tank. The hot water can then be used as a hot water supply simultaneously.



DSW-II



Water vapor → Condensation → Pure water Evaporation tank

APPLICATIONS

In addition to the features of solar water heaters that have been available until now, our device is also capable of generating pure water (distilled water) with solar thermal energy. Being capable of providing both drinking water and hot water simultaneously, it is an innovative product that has a wide variety of applications. As it is possible to generate pure water from rain water or even river water, our device can be put to good use securing safe drinking water during disasters and in less developed countries that lack infrastructure.

Although it is possible to mineralized pure water (distilled water) using fossilized seashells, maifan stone, deep ocean water, etc., the efficacy of pure water (distilled water) is also widely acknowledged.

- As drinking water**
Refreshing drinking water that removed harmful substances to the body
- For cooking**
As there are no added components, it helps to draw out the inherent tastes of ingredients.
- In green tea, coffee, and tea**
Deep smells and delicate flavors are extracted and taste enhanced.
- In caring for newborns and infants**
It can be used in milk and baby food and it is gentle on babies' sensitive skin.
- As ice**
It makes a very transparent ice, which makes that whiskey and water taste even better
- In humidifiers and steam irons**
More efficient and longer-lasting with less water scale



AZUMA SOLAR SAFE WATER PROJECT

