# SUICUE SOLAR WATER HEATER

Save Money, Durable, Safe, Convenient and Eco-friendly.







Invention and Creation Awards of Taiwan-Contribution Award



TAIWAN EXCELLENCE 2013



Green Mark



The National Gold Award for Architecture

# Flexibility in capacity for various requirement.



TOP-384
Water tank:
128×3=384 liters
For 5-7 people



TOP-406
Water tank:
278+128=406 liters
For 6-8 people



TOP-504 Water tank: 168×3=504 liters For 8-10 people

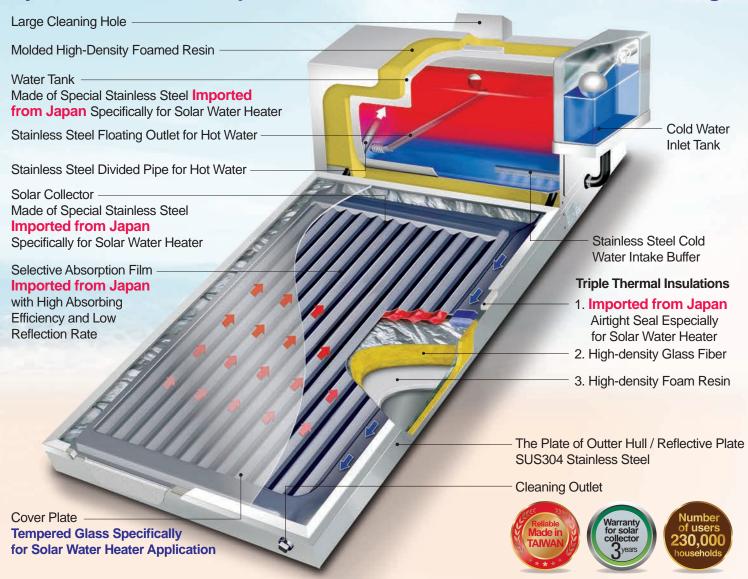


TOP-516
Water tank:
348+168=516 liters
For 8-10 people

# SUICUE Solar Water Heater

Using technology from Japan, SUNCUE launched solar water heaters in 1980. In 1993, SUNCUE exlusively developed stand-alone-tank design with great heat colleting performance, outstanding thermal insulation design and high hot water usage efficiency. It is now the leading brand made in Taiwan. Source: NCKU Research and Development Foundation

# Synchronized with Japan Manufacturer in Both Materials and Design



# Using SUNCUE Solar Water Heater Saves The Most Money. 85% of Energy Saving Annually.

Item	Electric Water Heater	Gas-fueled Water Heater	SUNCUE Solar Water Heater		
Installation Fee	USD\$ 587	USD\$ 340	USD\$ 1,853~2,470		
Actual Durability Approx.	7~10 years	5 years	More than 20 years		
Use of Fuel No. of Days	<b>365</b> days	365 days	55 days, average in Taiwan		
Fuel Usage Units/year	5,694 Kwh	613 Units	858 Kwh		
Fuel Cost USD\$/unit	0.1	0.36	0.1		
Annual Fuel Cost	USD\$ 533	USD\$ 221	USD\$ 80		
Total Fuel Cost Over Ten Years	Equals to the waste of three solar water heaters	Equals to the waste of one solar water heaters	Save money, Durable, Safe, Convenient and Eco-friendly.		

• The calculation is based on the electricity cost on April 1st, 2024, natural gas cost on June 1st, 2021, water use of 300 liters per household for

365 days per year in Taiwan. •The numbers are for reference only due to variables in usage, fuel cost and CPI.

• The UŚD value shown on the above chart is based on the exchange rate, TWD\$32.52 to USD\$1, at Bank of Taiwan as of October 24th, 2022.

# Comparison of Energy Cost Approx. USD\$ 533/year USD\$ 221/year USD\$ 80/year Saves 85%

Electric Gas-fueled Water Heater

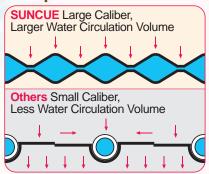
Gas-fueled SUNCUE Water Heater Solar Water Heater

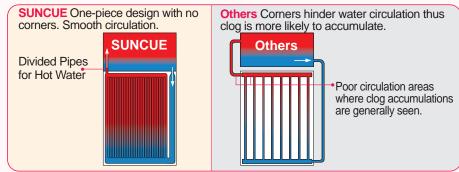
# **Great Heat Collecting Performance**

# **Exclusively Using "Stainless Steel Solar Collector" from Japan**

- · Corrosion-resistant, highly clog-resistant, good heat collecting performance.
- 26 diamond-shaped water collecting tunnels create a water volume 2.5 times more than regular-tube type, thus heat collection is faster and efficiency is higher.
- The only manufacturer in Taiwan that produces high-efficiency plate type solar collector. The solar collectors directly heat up cold water inside water collecting tunnels by absorbing solar heat and provide the shortest and fastest route for heat transmission with the best solar heat collecting performance.

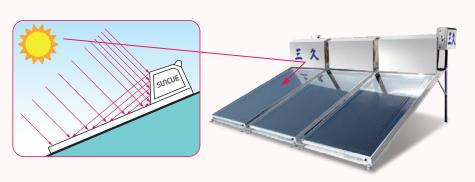
# **Comparison of Heat Transmission**





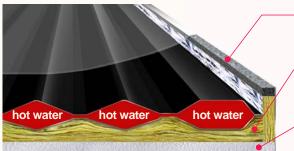
# Synchronized with Japanese brands, SUNCUE uses Large-area Reflective Plates

Collect more sunlight and enhance heat collecting efficiency by angled sunlight reflecting to the plates.



# **Outstanding Thermal Insulation Design**

**SUNCUE** Exclusively Uses Triple Thermal Insulation Design to Provide Good Airproof and Insulation Performance.



**1st Insulation Airtight Seal Especially for Solar Water Heater** Weather-resistance / water-proof / finely sealed. Prevents moisture from entering solar collectors and cause dew to form.

### **2nd Insulation** High-density Glass Fiber

Greatly minimizes heat loss with strong insulation and is non-flammable, corrosion-resistant, moisture-resistant, fungus-free and aging-free.

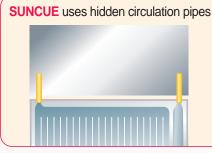
### **3rd Insulation High-density Foamed Resin**

Compact arrangement of molecules, good thermal insulation, even foam matrix, consistently good quality.

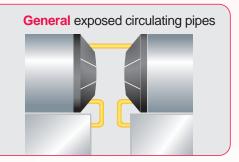
### **One-piece Design**

- Aesthetic appearance based on industrial design makes your living environment more stylish.
- Designed by structural engineers, SUNCUE solar water heater can endure typhoons and earthquakes.

# Vertical Design, Fast and Highly Efficient Circulation



Hidden circulation pipes reduce heat loss significantly.

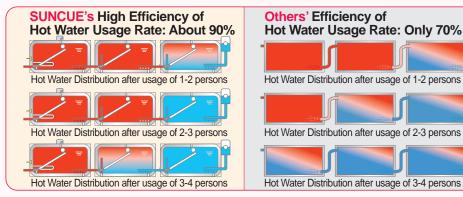


Exposed pipes allow more heat to escape. Structured with curved pipes causes poor circulation and clog.

# **High Hot Water Usage Efficiency**

# **Innovative Design of** Stand-alone Tank

- Independent usage of hot water: hot water and cold water are separated. Hot water usage rate is about 90%.
- One-plate-one-tank design makes expansion convenient and economic in the event of increased hot water requirement and number of users



# Patented Design for Cold Water In and Hot Water Out

Floating Outlet for Hot Water Patented floating device ensures the hottest water is always taken from the top of the water storage tank. Divided Pipe for Hot Water Speed up the flow of hot and cold water inside the collectors and improve the efficiency.

Cold Water Inlet Buffer Controlling cold water to flow gently to the bottom of water storage tank thus preventing cold water from mixing with hot water vigorously.

# **Exclusively using Open-air Design**

In open-air design, hot water in the water storage tank can still be fully used even during power failure or when water supply is cut off. However, in close-air type, hot water is pushed out by cold water intake.

# Save Money, Safe, and Convenient

# **Electrical Auto Auxiliary Heating Device**

The back-up heater only needs to heat up one water storage tank if water temperature is lower than set temp value. The heater monitors water temperature during set time slot and automatically heats up water till set temperature is reached. Save power, heat guickly and there is no need to wait for hot water.

# 8 Safety Devices

- Anti-explosion Water Storage Tank
- 2 Temperature Controller
- Breaker for Preventing Heating **Empty Water Storage Tank**
- 4 Breaker that prevents overheating
- **6** Breaker for Electricity Leakage
- 6 Time Controller
- No Fuse Breaker
- Paint-coated Stainless Steel Control Box Case

### Main Control Box of Electrical Auto Auxiliary Heating Device outdoors



### Micro-computerized Automatic Heating Control System

The main control box can be controlled by multiple operation boxes — suitable for operating on different floors.

- Micro-computer Controlled
- Time Set
- Forced Heating

• Hot Water Temperature Display Heat collection performance is immediately visible.

Built with touch panel, easy to use.

Activate back-up heater before shower time — convenient and cost-saving.

Heating can be activated anytime — no need to wait for taking a shower.

### Main Control Box of Micro-computerized Automatic Heating Control System outdoors



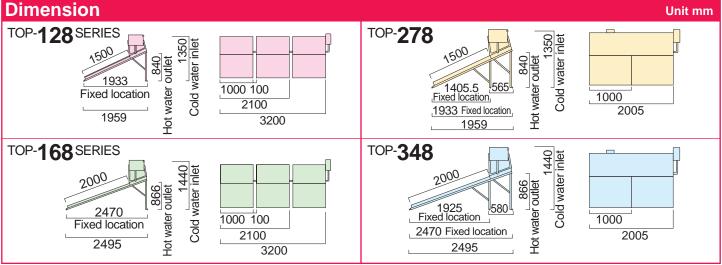
# Micro-computerized Deluxe Operation Box indoors





Specification								
Item	Model	TOP-128 <sup>SERIES</sup>	TOP- <b>278</b>	TOP-168 <sup>SERIES</sup>	TOP- <b>348</b>			
Solar Collector pcs		1	2	1	2			
Water Storage Tank liter		128	278	168	348			
Recommended Usage persons		1-2	3-5	1-3	5-7			
Collector Surface Area m²/pc		1.43		1.91				
Collector Size WxL mm		1,000×1,500 1,000×2,000		<2,000				
Materials & Unique Features	Collector Heat Retaining Tank	Special stainless steel imported from Japan						
	Solar Collector Absorption Film	Selective absorption film imported from Japan with high absorbing efficiency and low reflection rate						
	Insulation Material	Airtight seal specifically for solar water heater, molded high-density foamed resin and glass fiber; all imported from Japan						
	Cover Plate	Tempered glass specifically for solar water heater						
	The Plate of Outter Hull & Reflective Plate	Non-magnetic SUS304 stainless steel						
	Internal Circulation Pipes	Little heat loss, not exposed to sunlight, strong with long life span						
	Auxiliary Electric Heating	Electrical auto auxiliary heating device ensures hot water everyday						
	Stand	HDG angle steel structure						
Weight Approx. kg	Empty	76.7	150	91.7	173			
Including water storage tank, solar collector, water inlet tank and stand.	Full	205	428	260	521			
Circulation Method		Natural circulation (hot water ascends and cold water descends naturally)						

The electrical or micro-computer control box for electrical auto auxiliary heating device is optional. • For region with poor water quality, please consult with your local distributors or contact us. While ambient temperature down to zero or liquid water freeze, the pipes inside the Products will be exploded by thermal expansion and contraction of three-phase change of water. Customers must blow down all liquid water inside the pipes of the Products before ambient temperature change hugely.







# **TOP-256**

Water tank: vvater tank: 128×2=256 liters For 3-4 people



### **TOP-278**

Water tank: 278 liters For 3-5 people



### **TOP-336**

Water tank: 168×2=336 liters For 4-7 people



# **TOP-348**

Water tank: 348 liters For 5-7 people



### **SUNCUE's Quality Endures Typhoons and** Taiwan 921 Earthquake. Strong and Durable!



### Tempered Glass Specifically for Solar Water Heater Is Used, Making It Extremely Strong and There Is No Issue with Aging. The Glass Is So Strong That It Can Stand The Weight of Six Adult Men.



# Can Be Installed on Various Types of Roof









Standard

Tiling roof+construction rack

Terracotta

Parapet wall

# **Examples of More Than 30 Years of Usage**



Installed in 1981 Miss Lin in Kaohsiung



Installed in 1988 Mr. Chong in Taichung



Installed in 1988 Mr. Chang in Changhua



Installed in 1989 Mrs. Lai in Chiayi

# **Examples of Large-scale Installation**



200 units of NSK-45 installed in Taoyuan City in 2013



120 units of NSK-45 installed in Kaohsiung City in 2011



102 units of SP-125 installed in Yunlin City in 2004



98 units of NSK-45 installed in Kaohsiung City in 2013



72 units of NSK-45



96 units of NSK-45 installed in Kaohsiung City in 2014 installed in Kaohsiung City in 2010 installed in Changhua City in 2011



72 units of TOP-256



30 units of NSK-45 installed in Pingtung City in 2013



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