

ELWA®

Photovoltaic Hot Water System



- 100 % PV self-consumption
- Easy installation
- AC backup heating included
- No need for grid connection permits
- Lower cost compared to conventional hot water systems
- 2 ELWAs allow stratification-heating
- Low maintenance costs

Hot water from
from
PV Panels!

How ELWA works

ELWA uses DC power from PV panels directly for water heating.

No grid connection, no inverter, and no need for grid connection permits.

Very easy to install.

The patented ELWA system provides up to 50% of the annual hot water demand of a four persons household.

With a DC power of 2,1 kWp ELWA replaces a four to ten square meter solar thermal system.

ELWA can also be retrofitted to existing PV-systems to increase self consumption.

Automatic AC backup heating (1,7 kW) ensures hot water supply during rainy days.



Efficient and energy saving

ELWA perfectly fits to hot water tanks from 100 up to 500 liters.

And: it works without any mains power, even during blackouts. Only 2 watts solar power is required to run the system - it provides hot water even under low irradiation conditions.

Advantages compared to solar thermal systems

- Simple installation: only two DC cables are needed, no water pipes
- Almost no losses between PV-modules und hot water tank
- Low maintenance: no moving parts, no glycol
- PV modules offer more energy yield at low outside temperatures
- No stagnation problems, starts automatically if hot water temperature is below limit

Standard-installation

Place ELWA at the lower part of the hot water tank to use the maximum water volume as storage. The electrically isolated heating rod fits to most standard hot water tanks.

ELWA can be mounted to 6/4 inch fittings for immersion heaters or with an adapter plate to the inspection flange.



Stratification heating

ELWA can be used for stratification heating if a second unit is installed. One unit is mounted at the upper part of the hot water tank, the second at the bottom.

Advantage: hot water is provided much faster. Communication works via DC cables - no extra wiring!



Residential buildings

Grid connected system installation may be complicated in residential buildings. ELWA is the perfect solution to supply each apartment separately with solar energy. It works even during bad weather conditions.

No calorimeters are needed, no monthly billing.

Save money & CO2!

With some simple input data our ELWA savings calculator computes your money return and CO2 emission reduction compared to traditional heating systems.



Example for hot water wall-integrated storage, copyright: Pink GmbH



Save money and CO2 with ELWA

With some simple input data you will get a money and CO2 savings reduction calculated for your town. MAKE SURE THAT YOU ALWAYS USE BROADBAND SUPPORT INTERNET.

Input Data

Location	<input type="text" value="Hamburg"/>
Number of persons in household	<input type="text" value="2"/>
Household consumption	<input type="text" value="10000 kWh"/>
Wall-Solar	<input type="text" value="2.8 kWp"/>
Number of solar panels	<input type="text" value="10"/>
Location energy rate	<input type="text" value="0.18"/>
Electricity consumption	<input type="text" value="10"/>
Wall-solar	<input type="text" value="2.8 kWp"/>
Temperature correction	<input type="text" value="0"/>

Total savings in 25 years **7,500 Euro**

CO2 Savings in 25 years **20,350 kg**

■ ELWA

DC	Technical data
■ DC voltage	100 - 360 V (max)
■ MPP voltage range	150 - 300 V
■ Number of MPP trackers	1
■ Max. input current	10 A, limited
■ DC nominal power	2.000 W at 25° C ambient temperature, built-in derating
■ DC inputs	MC4, 1 string
■ Recommended module configurations	6 - 8 standard 60 cells modules, 10 - 15 TSMC CIGS 140 Wp

AC	
■ Heating power	1,675 W
■ Mains supply	single phase, 230 V, 50-60 Hz
■ Fuse	10 A min.
■ Power cord	3 m
■ Standby-consumption	0 W at DC operation, <2 W at AC operation

General data	
■ MPP-efficiency	99.9 %
■ Total efficiency	>99% at nominal power
■ Protection class	IP20
■ Operating temperature range	10 °C to 40 °C
■ Display	3 LED's
■ Interface	Serial IR Interface
■ Dimensions (lxhxd)	130 x 180 x 600 mm including heating rod
■ Weight	2 kg
■ Heating rod length	45 cm
■ Heating rod thread dimension	6/4 inch
■ Certification	CE
■ Warranty	2 years

■ ELWA USB Interface

■ Interface	USB, ELWA software available at www.my-pv.com
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Subject to change without notice.

