

ELWA®

Photovoltaic Hot Water System



Hot water from
from
PV Panels!

- 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

How ELWA works

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

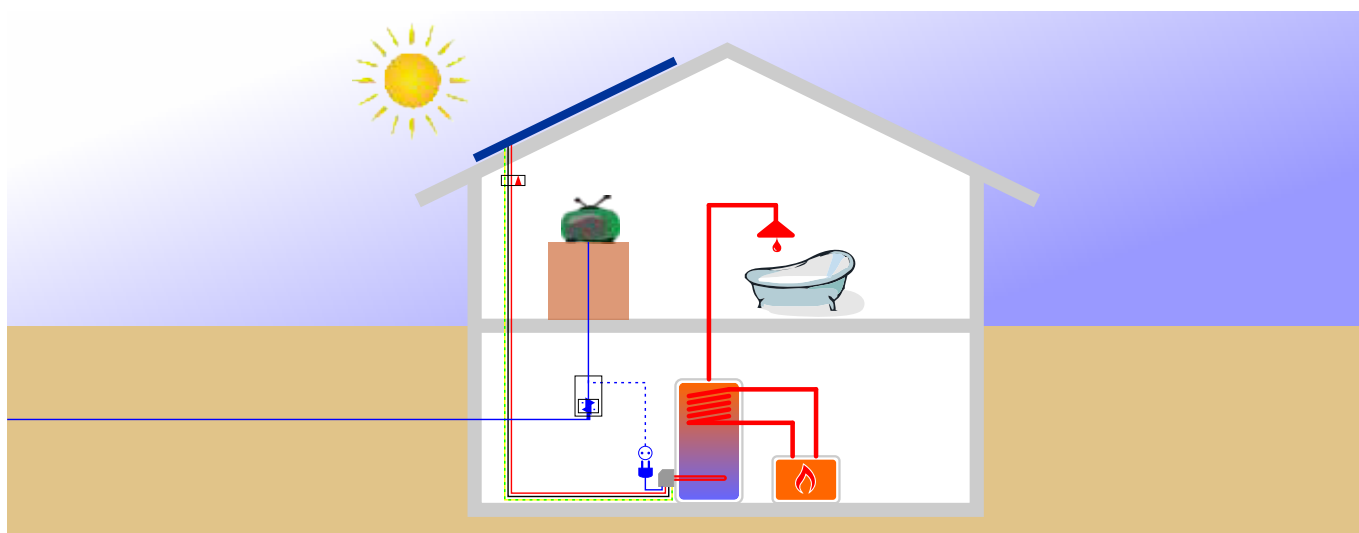
No grid connection, no inverter, and no need for grid connection permits.

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 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 tempature 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.

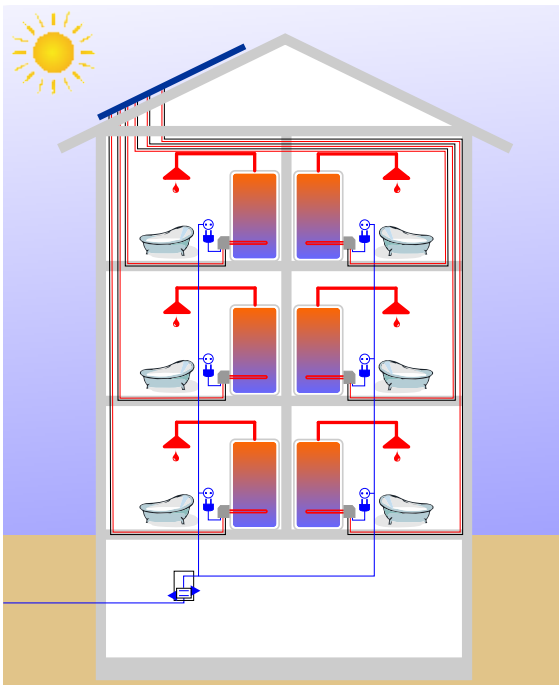
Advantage: hot water is provided much faster.

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.




Save money & CO2!

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

A screenshot of the MYPV website's savings calculator. The page title is "Save money and CO2 with ELWA". Below the title is a form for "Input Data" with fields for: Location (dropdown), Number of persons in household (input: 2), Hot water consumption (input: 10000), Hot water source (dropdown: Grid), Number of solar panels (input: 1), Electricity price (input: 0.25), Hot water temperature (input: 55), Hot water volume (input: 100), and Customer return period (input: 25). Below the form, the results are displayed: "Total savings in 25 years: 7,500 Euro" and "CO2 Savings in 25 years: 20,350 kg".

Category	Value
Total savings in 25 years	7,500 Euro
CO2 Savings in 25 years	20,350 kg

ELWA

DC	Technical data
■ DC voltage = MPP voltage range	100 - 360 V (max)
■ 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
■ Get design tool: ELWA PV-Dimensioning.xlsx	

AC	
■ Heating power	750 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

Interfaces

■ USB Interface	ELWA software available at www.my-pv.com
■ ELWA Modbus Interface	For real time system monitoring, further temperature sensor included.

Subject to change without notice.



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