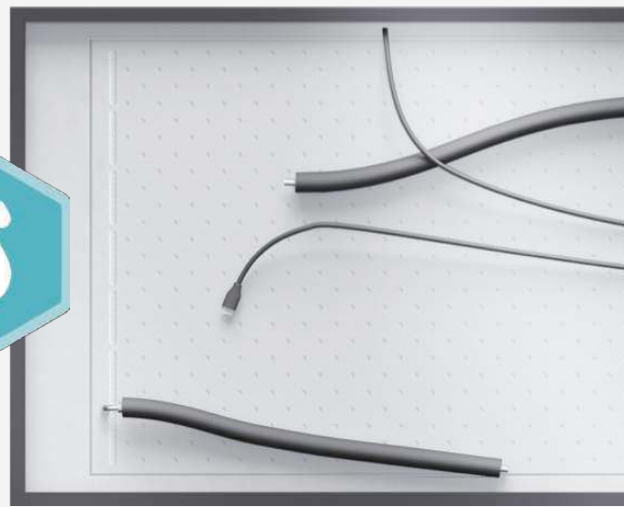
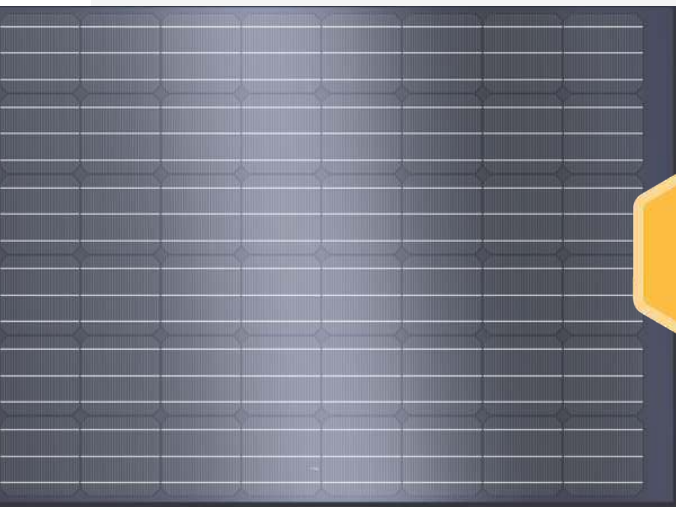


DUALSUN Wave

A revolutionary hybrid solar technology

that produces simultaneously electricity and hot water.



Electricity

Dimensions of a standard photovoltaic panel (60 6-inch cells)

High-efficiency monocrystalline cells, cooled by water circulation on backside of panel

Thin frame width: 45 mm

Nominal PV power : 280 Wp

Hot water

Rigid and ultra-thin heat exchanger, completely integrated into panel (patented design)

Excellent heat transfer between photovoltaic frontside and water circulation on backside

Maximum temperature : 74.7°C

Thermal power output : 580 W/m² *

* Performances measured during EN 12975 certification testing at the TÜV Rheinland laboratory



Product warranty 10 years, PV power warranty 25 years

Certified IEC 61215 & 61730 and
Solar Keymark n°011-7S2285 P

Adapted for all types of mounting systems



The most competitive solar technology for the energy independence of our buildings.

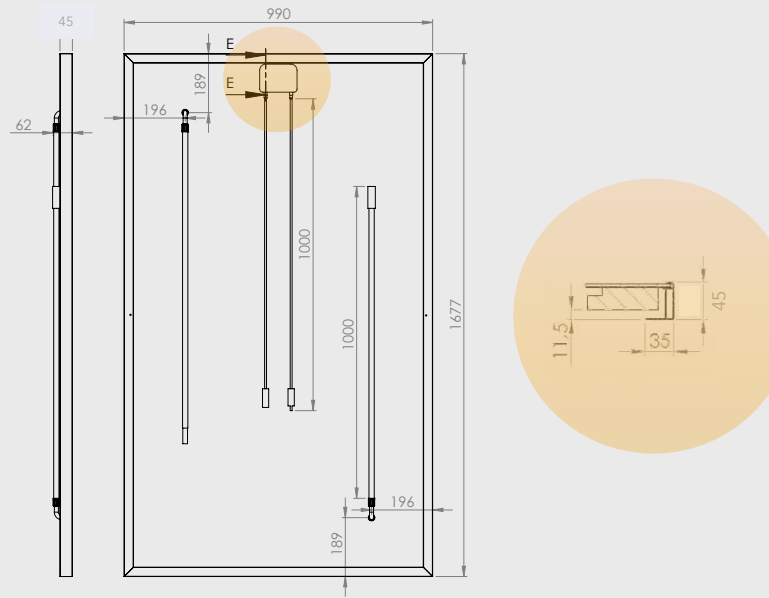
TECHNICAL DATA

GENERAL DATA

Length	1677 mm
Width	990 mm
Frame thickness	45 mm
Weight empty / filled	30 kg / 31.7 kg
Frame color / backsheet	Black / Black

ELECTRICAL DATA

Number of cells per module	60
Cell type (dimensions)	Monocrystalline (156 mm * 156 mm, 6 inches)
Nominal power (P_{mpp})	280 Wp
Module efficiency	17.20 %
Power tolerance	0/+3 %
Rated voltage (V_{mpp})	31.95 V
Rated current (I_{mpp})	8.77 A
Open circuit voltage (V_{oc})	38.88 V
Short circuit current (I_{sc})	9.30 A
Maximum system voltage	1000 V DC
Reverse current load	15 A
NOCT	50.7 °C
Connectors	MC4
Application class	Class A
Voltage (μVoc)	-0.32 %/°C
Current (μIsc)	0.048 %/°C
Efficiency loss	0.44 %/°C



THERMAL DATA

Gross area	1.66 m ²
Volume of heat transfer liquid	1.70 L
Heat transfer liquid	Glycol water
Maximum temperature	74.7 °C
Maximum operating pressure	2.0 bar
Pressure loss per panel	6000 Pa at 200 liters/hour
Hydraulic input/output*	½ inch (15/21 mm)
Optical efficiency a_0	51 %
Heat loss coefficient a_1	11.4 W/K/m ²
Heat loss coefficient a_2	0 W/(m ² .K ²)

** The a_0 , a_1 et a_2 coefficients are the measured values from testing during EN 12975 certification at the TÜV Rheinland for unglazed collectors : $n_0 = 0.578$; $b_0 = 0.028$; $b_1 = 12.078$; $b_2 = 1.842$.

Power output as a function of the temperature of the water in the panel (by application)

Power values are calculated using the a_0 , a_1 coefficients and the panel surface (1.654m²) in STC conditions (Text = 25°C, G = 1000 W/m²).

