

# ***Solar tree***

***NEW generation of solar energy***



# THE COMPANY

SOLVIS is one of the european market and technology leader in production of photovoltaic modules, with its own development, production and distribution network of photovoltaic modules and power plants.

As speciality, SOLVIS is one of only few companies in Europe manufacturing special and custom designed modules with different power, cell, backsheet or frame color.

## **The smart solar tree designed by Solvis -New generation of solar energy**

An innovative, ecological and design urban furniture, the Smart Solar Tree is simultaneously a public bench for 12 people, a built-in USB charging hub for 6 mobile devices (smartphones and tablets), a supply terminal block with 6 220V-power sockets for electric bicycles and laptops, as well as a stylish tree-shaped public lighting.

The Smart Solar Tree is fully powered by 18 solar photovoltaic panels which, at night, act as luminescent leaves of selectable color. Developed by the Croatian companies Solvis and Inoxmont, this original innovation which already equips public squares in several Croatian cities is now exported worldwide.



# TREE

Stands For:

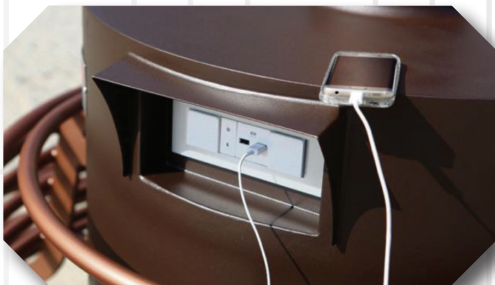
- T** -Tree generating
- R** -Renewable
- E** -Energy and
- E** -Electricity

Solar energy provides feasible design solutions for environment.

At locations where free wireless internet is available it enables the people for free access of energy for charging their mobile and portable lap top devices. Informations like important city locations, phone numbers, institutions and addresses which could be accessed by every one can be provided by several interactive info panels. Tree is capable of producing roughly 800 kilowatts of power per day, can provide electricity day and night.



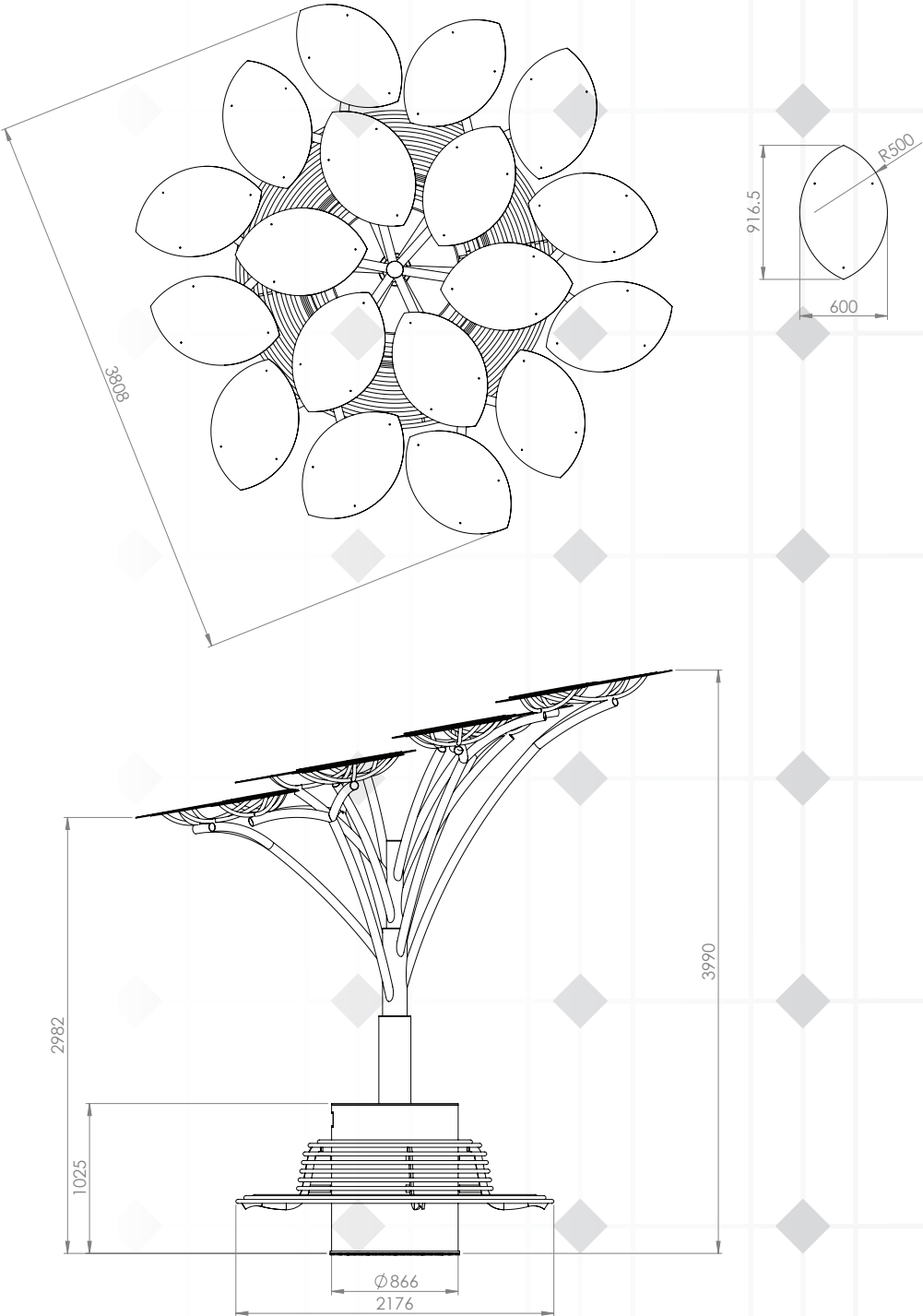
The Solar Tree can be used for uplifting the public opinion of citizens for renewable resources of energy.



Applicable in:

- urban and rural areas,
- parks, gardens,
- on airports, coastlines,
- on Highways,
- in Deserts,
- new housing estates,
- in De-forested areas,
- as shade and comfort along the bike path
- and more ...

SOLAR TREE - FLOOR PLAN AND SIDE DRAFT





# TECHNICAL SPECIFICATION - SV10 E LEAF

MODEL		SOLAR TREE OFF-GRID	SOLAR TREE ON-GRID
PV modules	[W]	18 x SV10-45 E Leaf	
Installed PV power	[W]	810 Wp	
Inverter	[A]	1 x Hybrid inverter 1,3 kW	3 x On-grid inverter* 260 W
Inverter warranty	[V]	2 years	25 years
Communication	[A]	Ethernet	Wi-fi/Ethernet
Batteries	[V]	2 x AGM, 12V - 145Ah (C20)	-
Battery warranty	[%]	2 years	-
Cell phone charging	[%]	6 x USB port	
Laptop or E-bike charging		6 x Schuko socket	
Wi-fi router		Optional**	
LED Lighting		18 LED lights, 1 W each, triggered by luxomat	
Bench		Round for 12 people, configurable by request	

\*Possible configuration for single and 3-phase installation

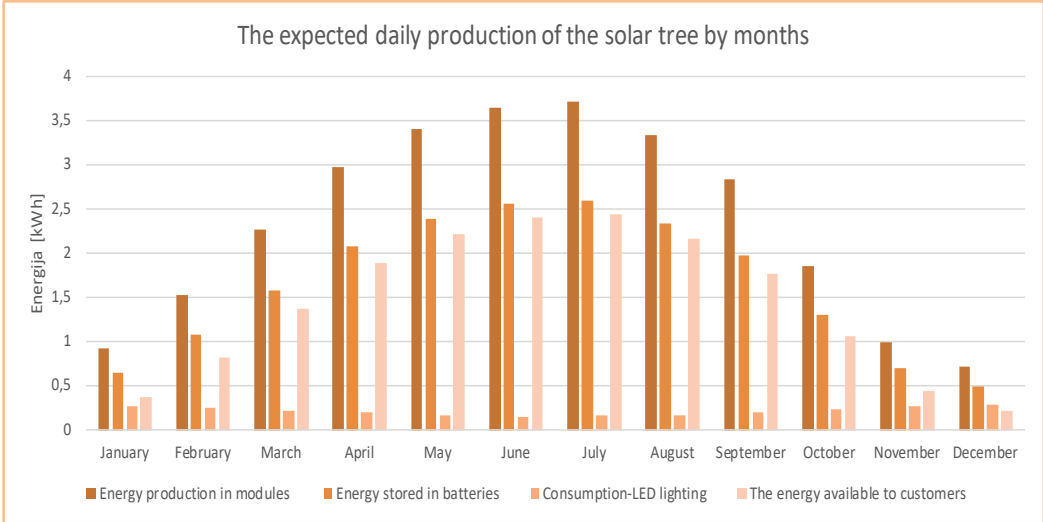
\*\*Contract with ISP needed



## Electrical parameters at Standard Test Conditions (STC)

MODEL		SV10-45 E
Peak power $P_{MPP}$	[W]	45
Peak power tolerance	[W]	-0/+5
Short circuit current $I_{SC}$	[A]	9,21
Open circuit voltage $V_{OC}$	[V]	6,4
Rated current $I_{MPP}$	[A]	8,48
Rated voltage $V_{MPP}$	[V]	5,3
Current and voltage tolerance	[%]	± 3

# ENERGY PRODUCTION AND ENVIRONMENTAL EFFECTS



REPORT	
Parameter	EU methodology
Annual reduction of CO <sub>2</sub>	761,07 kg
Annual reduction of NOx emissions	0,34 kg
Annual reduction SO <sub>2</sub>	0,37 kg
Annual reduction of particles	0,05 kg

Solar tree will in lifetime of 15 years save 11,42t of CO<sub>2</sub>

## Benefits:

- reduce carbon emissions
- save space going vertical
- successful technological achievements

Integrated lighting, seats, and places to plug in with photovoltaic leaves placed at different levels on branches made of steel, "solar trees" could dramatically reduce the amount of land needed to develop solar parks.

## Lead time for installation:

- six weeks from order to installation date of structures

Final installed pricing is up to the integrator and is based on product selected, site conditions, and other factors.



**MARRAKECH**  
**COP22|2016|CMP12**  
UN CLIMATE CHANGE CONFERENCE

2 Solvis solar tree has been chosen by the Comity of the twenty-second session of the Conference of the Parties (COP 22) in Marrakech.

2Solartree has been installed under sponsorship of UNIDO (United Nations Industrial Development Organisation) Solvis Solar tree was part of many Side-Events and the largest business-focused event taking place during the COP22.



## Partners:



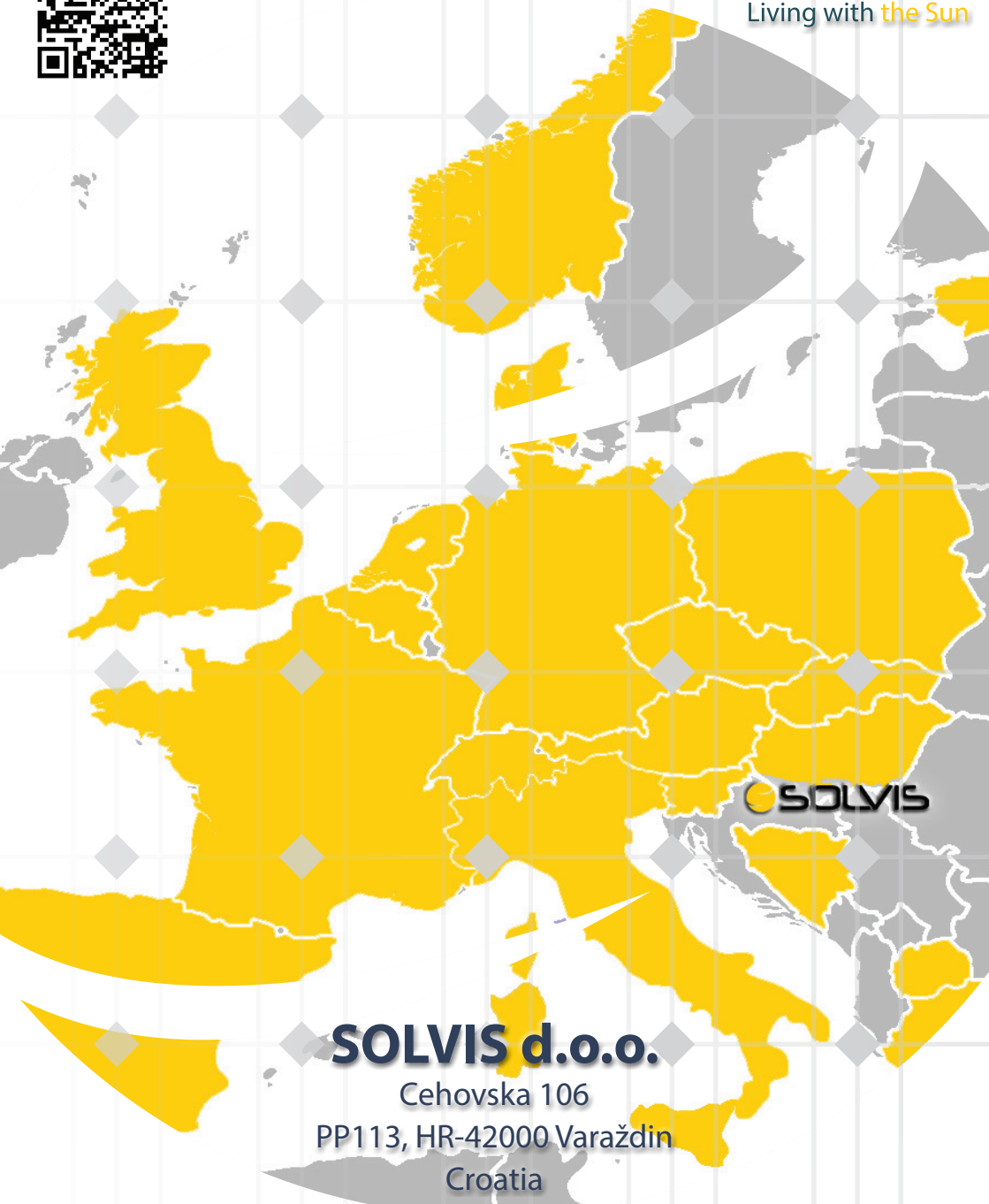
**ELEKTROSPEKTAR**

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# SOLVIS

Living with the Sun



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