smartflower POP – the world’s first all-in-one solar system

SIMPLY SET-UP, CONNECT AND PRODUCE CLEAN ELECTRICITY

smartflower™
Even though I like size, sometimes something small is very effective. And when it comes to photovoltaic solar there is nothing better than, for instance, the smartflower. I mean what a brilliant idea, you put this in front of the house, you plug it in – no installation, nothing – just plug & play.

ARNOLD SCHWARZENEGGER
CHAIRMAN R20, FORMER GOVERNOR OF CALIFORNIA, ACTOR
Remarkable, powerful and efficient. Up to 40% more output, thanks to the innovative smart features.

MADE FOR THE FUTURE
Wouldn’t it be wonderful if each of us could produce all clean energy we need right in our backyards? And wouldn’t it be a cherry on the top if the same photovoltaic system could simply be plug-&-play like any other normal home appliance? At smartflower, we have stopped asking such questions. Instead, we have answered them – with smartflower POP, the world’s first all-in-one solar system. Thanks to its extraordinary construction and the perfectly synchronised components, the system delivers, on average, approx. 4,000 kWh per year, thus fulfilling the complete average electricity requirement of a household in the central European region.

smartflower POP represents changing times. The size of the system alone is no longer the measure of all things. What counts is a fairly constant production rate during the course of the day, in order to enable a more effective use of the produced energy. smartflower POP achieves a degree of self-utilisation of around 60% – a significant improvement over a comparable rooftop unit, which averages just around 30%. Now that is what we call smart!

Astronomically controlled and movable across two axes: the circular solar modular fan constantly tracks the sun and always sets itself at an exact 90-degree angle to it, even when the sun is hidden behind clouds. The astounding result: up to 40% more output as compared to a conventional rooftop system, which receives optimum sunlight only for a few hours during the year.
As the sun rises in the morning, smartflower POP unfolds itself completely automatically. It directs its solar modular fan (with a surface area of 18 m²) towards the sun and begins producing electricity for you – for your hot shower, your fresh coffee, the breakfast radio. Thanks to dual-axle sun tracking, the fan moves reliably along with the sun throughout the day.

The result: in comparison with the static rooftop system, the unit starts earlier in order to produce the exact amount of electricity you need. It consistently maintains the electricity supply and even uses the energy from the last sun rays efficiently enough to cover your early evening electricity requirements. Only then, does it close up to its secure position, which is also completely automatic.

Awake when you are. Energy from the first to the last rays of the sun

A SYSTEM THAT FITS YOUR NEEDS

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The image clearly demonstrates how smartflower POP functions more efficiently than conventional systems. It has a considerably longer peak phase and produces energy even in the fringe hours of the day, which a rooftop system cannot achieve because of its static alignment to the sun. These produce maximum electricity when you are not at home – valuable energy which is lost.

*Based on calculation a typical July day in Madrid
Plug & Play –
and that is a promise!
smartflower POP
functions autonomously
and automatically

SMART FEATURES

Plug & Play –
and that is a promise!
smartflower POP
functions autonomously
and automatically

SMART MOBILITY
A significant advantage over fixed rooftop sys-
tems: smartflower POP is mobile! When you
move out, simply take your private solar plant
with you. Disassembling smartflower POP is just
as simple as assembling it: just unscrew the
four anchoring bolts and cart it away. And natu-
rally the ground can be easily restored to its orig-
inal state.

SMART CLEANING
smartflower POP easily rids itself of dust deposits
or snow by folding and unfolding itself. Thus,
common losses in energy production (up to 5%)
are minimized.

SMART USE
smartflower POP is delivered as an all-in-one
complete system and is operational within an
hour. No complex assembly is required: the system
is firmly bolted to the ground (or concrete foun-
dation) at the location of your choice. It is designed
for maximum performance (see also smart
tracking, smart cleaning and smart cooling), and
it is easy to use and maintain. It reliably provides
electricity throughout the day.

SMART OPTIONS
When it comes to solar energy, smartflower POP
lets you show your colours! It is available in
eight colours – from the trendy Berry to the classic
Pearl. Either way, the glossy, finely-structured
surface gives the base an appealing, modern de-
sign.

SMART COOLING
Hot modules deliver less electricity than cool
modules. 10°C more means 5 % less output. The
modules of smartflower POP are always
rear-ventilated – hot air cannot accumulate due
to their construction. This means they are
10–20°C cooler and deliver 5–10 % more output as
compared to rooftop systems.

SMART TRACKING
Thanks to the astronomical control system, the
solar modular fan moves horizontally and verti-
cally along with the sun’s position, even when it’s
cloudy. This guarantees optimum alignment
with the sun – an exact 90° angle – during the
entire course of the day, even when the sun is
low on horizon in the winter. The result: despite
the lower space requirement, up to 40 % more
output as compared to that of a conventional
rooftop system, which is only ideally positioned
towards the sun for a few hours per year.

SMART SAFETY
In continuous operation, the sensors perma-
nently monitor the wind speed. In winds above
54 km/h, smartflower POP automatically folds
into its secure position in order to avoid damag-
es. If the wind increases further, 63 km/h or
more, it takes up the secondary security position
(same as night position). The sensors continue
to function and when the wind decreases, the
system folds out completely and returns to its
electricity-producing tracking position.
At a glance. The essential details about smartflower POP

DIMENSIONS

EFFICIENCY GAIN THROUGH SMART FEATURES

POWER OUTPUT AS PER PVGIS, LOCATION ROME

SMARTFLOWER POP 2.31 kWp | ROOFTOP SYSTEM 4 kWp

- Nominal output: 2.31 kWp
- Power output through bi-axial sun tracking: 3,400 – 6,200 kWh/a depending on the region

LOWER YIELDS

- Deviation from facing south and roof slope (possible up to 12 %): smart tracking -3 %
- Higher module temperature, low dissipation of heat, heat build-up: smart cooling -5 %
- Contamination (e.g. by sand, salt, dust, snow): smart cleaning -3 %

REVISED OUTPUT

- Nominal output: 5,100 kWh, 6,250 kWh

DEGREE OF SELF-UTILISATION

- 60 % for smartflower POP
- 30 % for rooftop systems (statistical empirical value)

Explanation: For rooftop systems, static alignment to the sun, heat build-up and decontamination lead to a lower output than the one stated as theoretically possible at the location. Furthermore, the system does not constantly produce electricity throughout the day, for example in the afternoon when it is not required. This leads to the distinctly lower degree of self-utilisation of a rooftop system and/or to the stated efficiency gain of smartflower POP.


1 Degree of self-utilisation: 60 % for smartflower POP; see page 12; 30 % for rooftop systems in a statistical empirical value

TECHNICAL DATA

POWER OUTPUT

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- Power output through bi-axial sun tracking: 3,400 – 6,200 kWh/a depending on the region

SYSTEM

- Module type: Glass/backsheet
- Module product warranty: 10 years
- Module power output warranty: 25 years on 80 %
- Cell type: Monocrystalline
- Inverter module: 1-phase, integrated
- Inverter module guarantee: 5 years
- System warranty: 24 months

AREA OF APPLICATION

- Temperature range: -20°C to +50°C
- From 30 m onwards, the local standards must be followed

ELECTRICAL CONNECTIONS

- up to 30 m: 3 x 2.5 mm² AWG 14
- From 30 m onwards: the local standards must be followed

INSTALLATION

- Assembly on earth studs or concrete foundation

SECURITY POSITIONS

- Security position 1: At a wind speed of 54 km/h
- Security position 2: At a wind speed of 63 km/h

COLORS

- BERRY
- OCEAN
- AMBER
- MERMAID
- PEARL
- LAVENDER
- JUNGLE
- PORCELAIN

FLOOR AREA

- All data in mm

GROUND STUDS

- All data in mm

FROST BOX

- All data in mm

CONCRETE FOUNDATION

- All data in mm

GROUND BOLTS

- All data in mm
Independence today and for the future. And it pays off!
Clean energy for your everyday life

1 HOUR of smartflower POP
- 1x make the tastiest lasagne in the world
- 15 hours of your favourite movies, TV series or news
- 101 complete smartphone charges
- 182 hours of relaxing and reading in LED lighting

1 DAY of smartflower POP
- 3 air conditioning units – for 1 sunny day and pleasant temperatures in the entire house
- 6x drying laundry – if the clothes line is already completely full
- 6x bake the crispiest bread
- 7x hot showers – with continuous flow water heater
- 17 wash loads of laundry
- 50 cups of tea – for waking up or relaxing
- 100 kilometres of clean driving enjoyment in your electric car

1 YEAR of smartflower POP
- ca. 4,000 kWh – and thus the average complete annual consumption of a central European household.

smartflower POP produces – depending on the region – between 3,400 and 6,200 kWh. Numerical examples are based on approximate consumption values of the listed electrical appliances. Computational basis: in the middle of the year, twelve hours between sunrise and sunset/day.

Unlimited independence thanks to high-end-technology

FUNCTIONS RELIABLY EVEN DURING LESS SUNNY HOURS

The innovative bi-axial sun tracking of the solar fan enables increased output by up to 40% and thus a sufficient amount of energy to maintain independence from electricity providers, even where it is less sunny.
Made in Austria – an all-in-one solar system completely from one source
Management with a powerful vision (from left to right): Gernot Friedhuber (CMO & Partner), Thomas Daubek (CEO & Partner), Alexander Swatek (Founder & Managing Partner)

GUIDING PRINCIPLES & STRATEGIC VISION OF SMARTFLOWER

Clean energy for all. Our vision for the future

SMARTFLOWER STANDS FOR THE FOLLOWING

Sustainable ways of thinking and being proactive are the elementary supporting pillars of our company’s philosophy. Manufacturing takes place in Austria using high quality materials so that our products produce electricity as long as possible. 25 years – we guarantee this is with our module performance guarantee. We also create jobs in an emerging, future-oriented branch of industry.

With smartflower POP, we want to tell the world that photovoltaic systems can be completely simple, efficient and above all designed to perfection. We want to enable more people than ever to produce their own clean electricity for their households. We want to make cities, communities and companies independent; to free them from the load of increasing energy costs to the greatest extent possible. The fact that our systems are used successfully even in humanitarian crisis areas fills us with great pride.

We work very closely with local certified dealers, which paves the way for efficient regional support. For you this means: everything from one source, short distances and fast reaction times. In fact, that’s our vision of a consistent and sustainable business.

Let our vision inspire you!
5 reasons why you should buy smartflower POP

✔ All-in-One solar solution without extensive installation (Plug & Play)
✔ Efficient energy production: up to 40% more output due to innovative smart tracking, on demand exactly when you need it
✔ Thanks to smart cooling and smart cleaning, common losses in output due to heat and contamination are prevented by up to 15%
✔ Ideal if your roof is not an option (installation, aesthetics, rental property): smartflower POP can be set up in the garden and can be taken along when you move
✔ Highest quality made in Austria and best support from local dealers

And it’s that easy

✔ Use our dealer location search on www.smartflower.com
✔ Arrange an appointment by phone
✔ Let a dealer help you find the perfect installation site
✔ Wait in eager anticipation for the delivery
✔ Then simply setup, connect and use

► Now you can produce your very own clean electricity!

We look forward to receiving your call!

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