

**SunBrush** *mobil*  
**Cleaning Systems**





# SunBrush *mobil*

**Versatile Solar Cleaning Solution**



[www.sunbrushmobil.com](http://www.sunbrushmobil.com)



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## Features & Technical Specifications



## SUNBRUSH MOBIL ABOUT US

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The best technologies arise from practice, for practice. When specific problems need to be solved. And when creative minds, technology enthusiasts and competent users are just no longer satisfied with the status quo. Even the invention of the SunBrush® mobil solar cleaning system goes back to such a problem situation. It was here, of all places, in the sun-drenched mountainous Allgäu region, where the first SunBrush® mobil was built; the heavy snowfall in 2008 prevented Franz Ehleuter's photovoltaic system from producing any significant yield in winter.

Not a long-term option, thought Ehleuter, who then developed the SunBrush® mobil, a solar cleaning system suitable for removing dirt, bird droppings and dust from the modules. What was first carefully conceived and tested on the home barn as a cleaning device for smooth surfaces, quickly won over an entire industry. The products were patented, while renowned manufacturers of solar modules became enthusiastic about their quality and went on to recommend them for use on their modules.

# TrackFlex Features



## 1 TrackFlex Effect

The TrackFlex Ram enables boom angle adjustment, which offers effective cleaning of tracking systems all day long. It also caters for narrow row width as the carrier vehicle is brought closer to the panels. Operates in narrow rows as well.

## 3 Transport Position

Hydraulic ram allows for the folding of the SunBrush on the right hand side of the carrier vehicle for safe transport. Controlled from the SunBrush Joystick.

## 5 Freely Pivoting

The brush system is suspended via a freely pivoting hanging point. This enables the brush to self regulate its angle as the panels track throughout the day and/or ground contours change.

## 7 Joystick Control

Intuitive can-bus joystick control offers safe and easy operation from the vehicle cab. Various control and monitoring functions are integrated.

## 2 WashTronic System

Our patented WashTronic levelling system offers an automatically regulating, constant and controlled pressure between the brush and panels, regardless of ground contours. Built as standard in every SunBrush, we can guarantee a consistent and even cleaning with no damage.

## 4 180° Cleaning

Hydraulic swivel motor design allows for cleaning on the right and left of the carrier vehicle.

## 6 Integrated Wet & Dry Cleaning

Water lines are built in as standard throughout the machine. Pre-soak and rinse are controlled by through the SunBrush joystick, providing a thorough clean.

# TrackFlex Specification



## Cleaning Wet Output Data\*

Brush Size	3m	5m	7m
Panel Arrangement	1 Portrait	2 Portrait	3 Portrait
Driving Speed	1,5 km/h – 2,5 km/h	1,5 km/h – 2,5 km/h	1,5 km/h – 2,5 km/h
Panel / hour	1.500 - 2.500 pcs	3.000 - 5.000 pcs	4.500 - 7.500 pcs
Area output / hour	3.000 - 5.000 m <sup>2</sup>	6.000 - 10.000 m <sup>2</sup>	9.000 - 15.000 m <sup>2</sup>
Water Usage	0,25 Liter per m <sup>2</sup> / 0,5 Liter per module	0,25 Liter per m <sup>2</sup> / 0,5 Liter per module	0,25 Liter per m <sup>2</sup> / 0,5 Liter per module

\*Data depends on local conditions and level of soiling (approx. values)

## Cleaning Dry Output Data\*

Brush Size	3m	5m	7m
Panel Arrangement	1 Portrait	2 Portrait	3 Portrait
Driving Speed	2 km/h– 6 km/h	2 km/h – 6 km/h	2 km/h – 6 km/h
Panel / hour	2.000 - 6.000 pcs	4.000 - 12.000 pcs	6.000 - 18.000 pcs
Area output / hour	4.000 - 12.000 m <sup>2</sup>	8.000 - 24.000 m <sup>2</sup>	12.000 - 36.000 m <sup>2</sup>

\*Data depends on local conditions and level of soiling (approx. values)



# TrackFlex Accessories

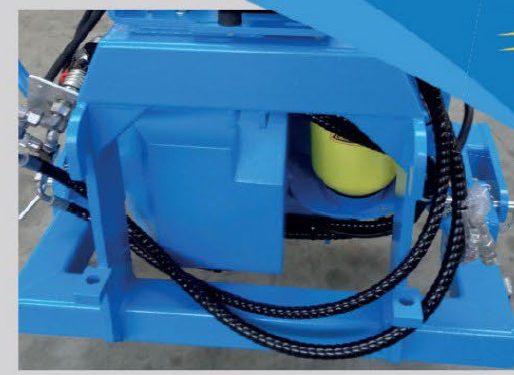
## HotWater 200

Water preheating unit. More effective removal of dirt, dust and grime. Enables reduction of water usage, for superior cleaning effect. Reduces temperature differential between water and panels - less risk of thermal shock. Heater is powered by built in diesel tank. Mounted on IBC Carrier Console.



## Flexible Adapter

Multi-purpose adapter specially designed for mounting to Avant vehicles.



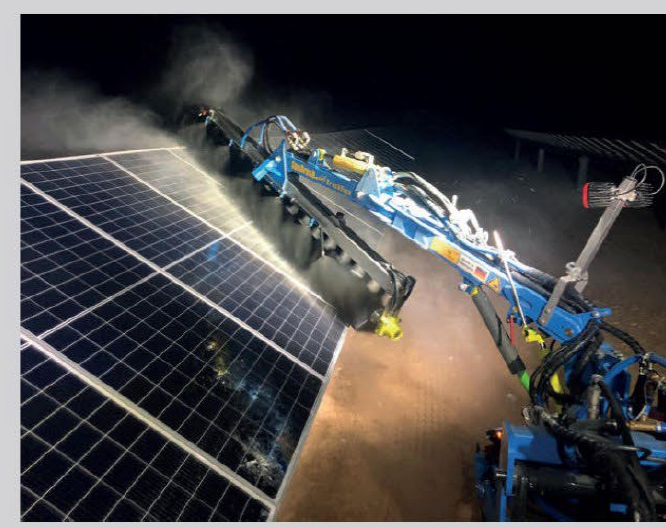
## Water Tank

1500 l, 2 axles



## LED Lights

Working effectively at night  
IP 66/68  
7170 Lumen / 60 W / 12- 24 V



## SunBrush Mobil Twin

Quick change of cleaning brush boom

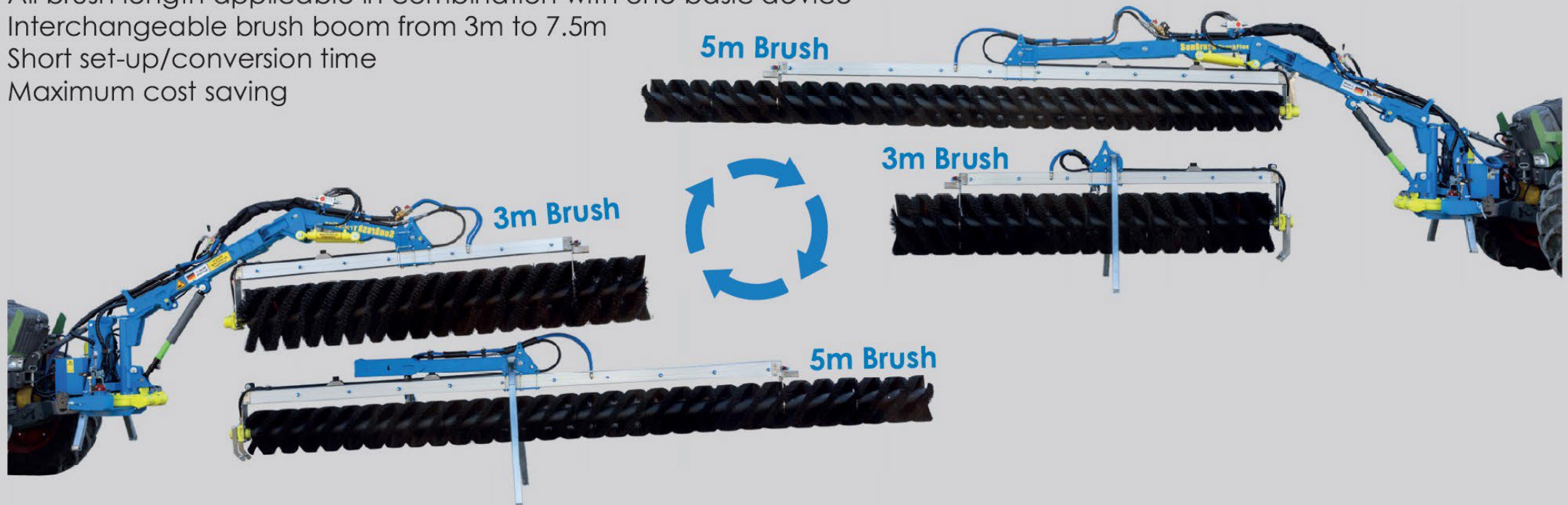
Optimum adjustment to different module table sizes

All brush length applicable in combination with one basic device

Interchangeable brush boom from 3m to 7.5m

Short set-up/conversion time

Maximum cost saving





## Tank System

Flexible and fast water refilling  
High performance motor pump  
Hoses and couplings included



## Water Supply Control Display

Sensor controlled monitoring

- Water flow rate
- Water pressure
- Water temperature
- Water level



## SunBrush Blue

Solar panel cleaner with „Anti-limescale-formula“  
Stainless and spotless cleaning  
No expensive demineralization  
Biodegradable





# SunBrush *mobil rapid*

**Versatile Solar Cleaning Solution**



Cleaning path 1: 8 meter module tables



Cleaning path 2: 8 meter module tables



## Rapid Cleaning Concept

The length of brush boom is 4,5 m, 5m or 5,5m.  
Exemplary cleaning mode applicable for 8m modules tables e.g.

**Cleaning path 1** - The upper area of the module table is cleaned first on the forward run  
**Cleaning path 2** - The lower area of the module table is then cleaned on the reverse run

**Special application  
option of  
SunBrush TrackFlex**



## SunBrush TrackFlex connected to a Tractor



# SunBrush TrackFlex connected to a Tractor



## What is needed:

- min ....kW
- Min .... l/min hydraulic oil
- **Front Power Hitch**



## SunBrush TrackFlex connected to an Avant or similar



# SunBrush TrackFlex connected to an Avant or similar

## What is needed:

- Min Avant 760
- min ....kW
- Min .... l/min hydraulic oil



# SunBrush TrackFlex connected to a CARRARO for difficult terrain

What is special:

- Carraro Mach 4
- Rubber Tracks
- Rev-Guide System



**MACH 4 R**

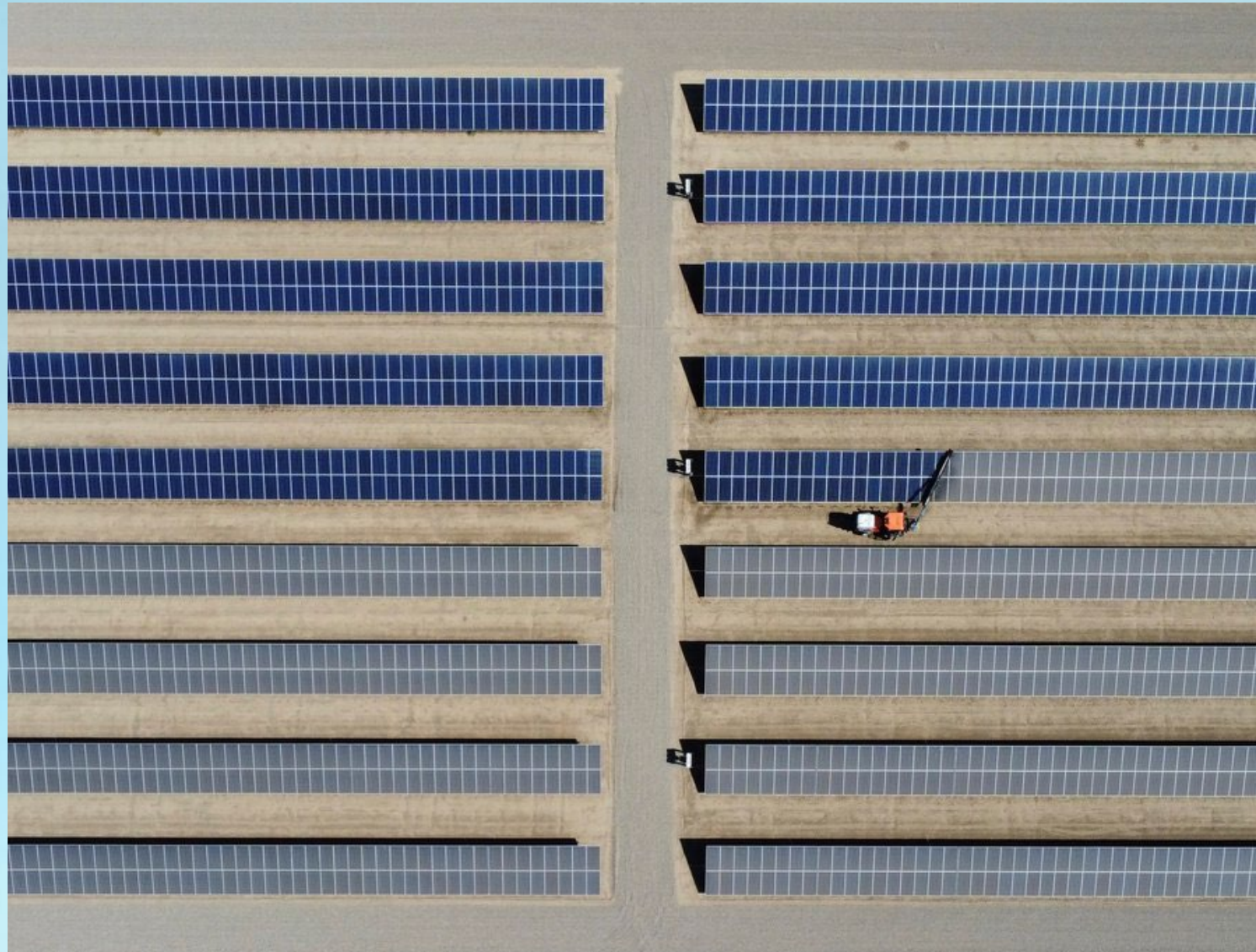
Antonio Carraro

Articulated reversible quadtrack tractor with rubber tracks





## SunBrush TrackFlex in action



## SunBrush TrackFlex in action



## SunBrush TrackFlex in action



## SunBrush TrackFlex in action



**We offer individual Cleaning Systems for best Energy Efficiency!**



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