

# SOLA-TECS W

PHOTOVOLTAIC CLEANING SYSTEMS SINCE 2010



MADE  
IN  
GERMANY

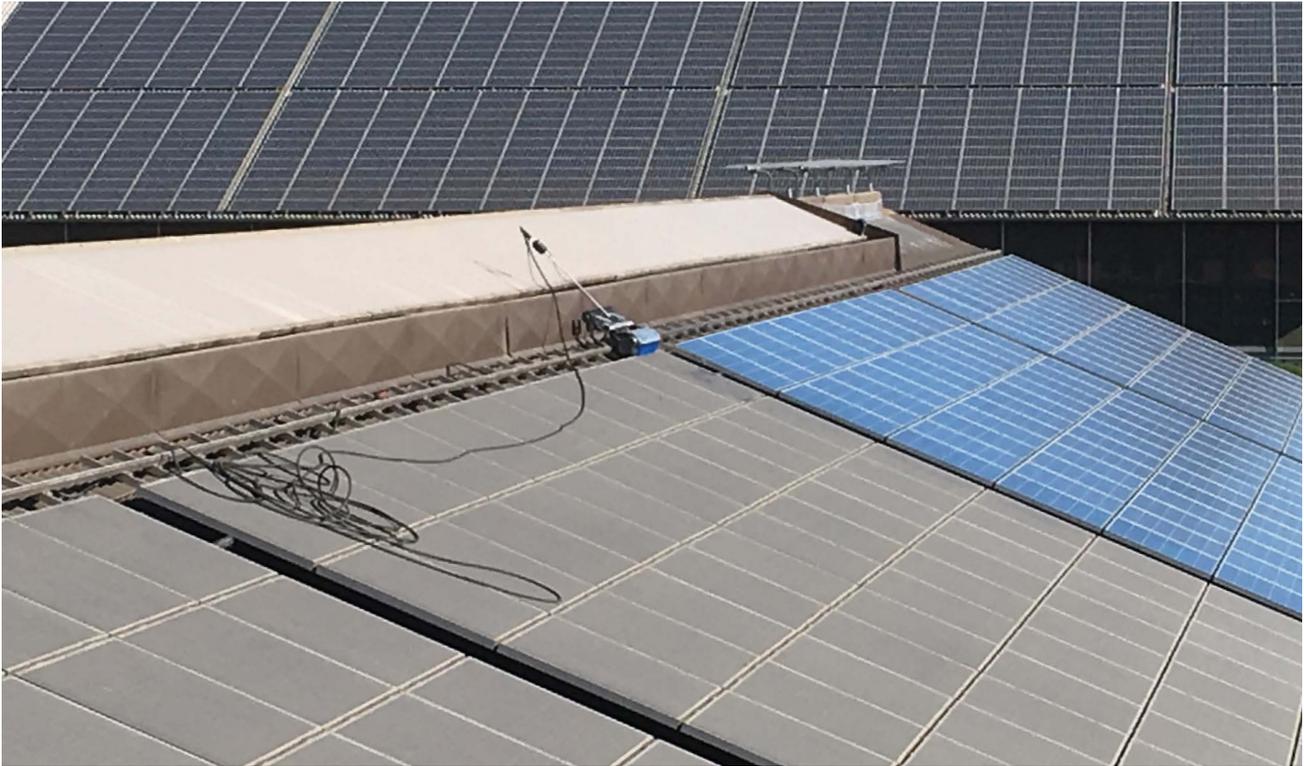
 Cleanatecs

# THE SOLA-TECS FOR HEAVY SOILING –

# AN INVESTMENT THAT PAYS OFF

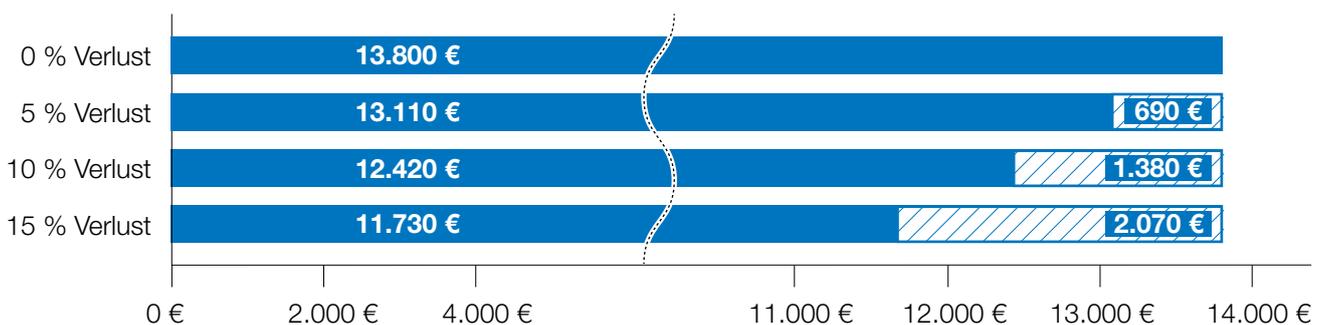
It is no longer a secret that solar and photovoltaic systems need regular cleaning. Almost every system needs to be cleaned regularly. After cleaning, the additional yield of your photovoltaic system amounts to between 3% and 30% (depending on the degree of soiling).

Particularly in the case of agricultural and industrial areas, and roads which carry a lot of traffic, heavy soiling is not uncommon. This means that the system produces less electricity and thus generates fewer feed-in tariffs. Only a clean system brings you full returns and reduces follow-up costs.



## COST-BENEFIT CALCULATION OF A 30 KWP SYSTEM.

The basis of our example calculation is a system with 30,000 kWh and a payment rate of 0.46 cents/kWh (approx. €13,800 annually).



**TAKE ADVANTAGE  
OF OVER 30 YEARS  
OF EXPERIENCE  
ON THE TOPIC OF  
HIGH-PRESSURE WATER  
TECHNOLOGY.**

## APPLYING THE SOLA-TEC W

Do you want to clean your PV system from the roof and have safe access to the roof ridge? Does your system have a roof pitch of at least 5°? Then the SOLA-TECS W is exactly the right PV cleaning system. Here, the brush roller is lowered from the roof ridge with a high-pressure hose and pulled up again.

This technology enables an immense range in solar cleaning as well as fast and economic cleaning of large-scale PV systems. Especially at locations that are exposed to heavy soiling, such as in agriculture, trade, industry, and on a private building. In agriculture, dust from adjacent arable land and exhaust air from stables are the main sources of soiling.



## EFFECTIVE CLEANING OF SOLAR CELLS

Professional cleaning is carried out with mineral-free (demineralised) water, usually without the addition of chemicals. The SOLA-TECS W is rotated via a high-pressure cleaner and supplies the brush roller with water that is also used to clean the PV system.

The SOLA-TECS W has an enormous cleaning power, with a dead weight of over 22 kilograms and a brush roller with a diameter of 240 millimetres at 700 revolutions per minute.

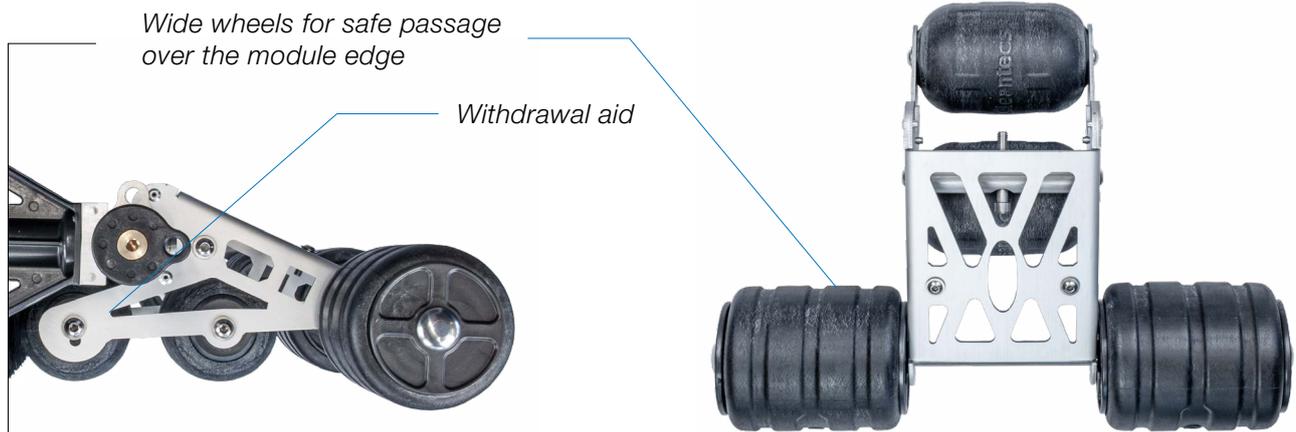
The SOLA-TECS W is one of the most efficient systems on the market and handles a maximum of 600 litres of water per operating hour – an absolute peak value. It easily works at a cleaning rate of 350 square metres per hour.



## SAFE CLEANING UP TO THE MODULE EDGE

The SOLA-TECS W is a cleaning solution that, thanks to innovative safety devices guarantees that even stubborn dirt is efficiently removed.

We have additionally installed guide rollers for gentle and safe cleaning. These protect the solar installation and your system and enable the brush to be guided even better beyond the edge of the module. Thus, in one step, the lowest module edge cleaned.

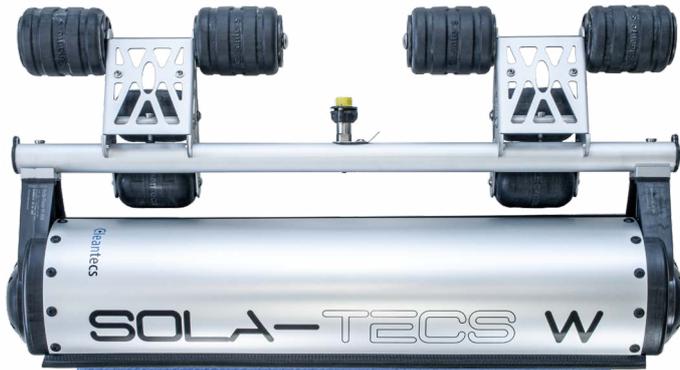


**THE SOLA-TECS W**

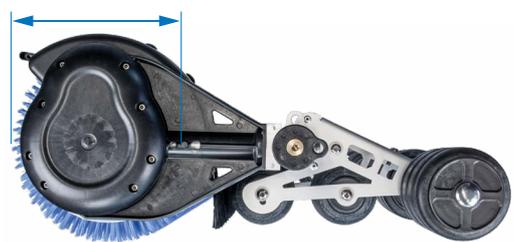
## SOLA-TECS W

Following its market launch in 2010, Cleantecs GmbH already completely updated its SOLA-TECS W class in 2012. Updating included huge emphasis on further improving the quality of SOLA-TECS W and simplifying maintenance for the customer.

The water-powered professional cleaning device was equipped with a splash guard, new safety rollers and a guying system. From now on, it has a more robust gear housing and high-quality high-end ball bearings ensuring a longer service life. This design has already successfully established itself on the market.



Diameter  
240 millimetres



### TECHNICAL DATA



#### W800

Cleaning width	800 mm
Cleaning rate	300 m <sup>2</sup> /h
Working pressure	100 – 120 bar
Weight	22 kg
Temperature max.	40 °C
water consumption	10 l/min
Diameter	240 mm
<b>Item no.</b>	<b>0201015</b>



#### W1000

Cleaning width	1000 mm
Cleaning rate	350 m <sup>2</sup> /h
Working pressure	100 – 120 bar
Weight	29 kg
Temperature max.	40 °C
water consumption	10 l/min
Diameter	240 mm
<b>Item no.</b>	<b>0201017</b>

**THE SOLA-TECS W PRO**

## NEW: SOLA-TECS W PRO

New to the “PRO” model is the option of changing the direction of rotation of the roller. This has many advantages, especially on steep roofs.

Switching the direction of rotation allows you to clean the lower edge of the module frame much better cleaned, and reduce the pulling forces making it less tiring to use. The roof pitch has to be at least 20°, so that the direction of rotation can be changed, and the brush slides down despite the opposite direction of rotation.



### TECHNICAL DATA



#### W800 PRO

#### W1000 PRO

Cleaning width  
 Cleaning rate  
 Working pressure  
 Weight  
 Temperature max.  
 water consumption  
 Diameter  
**Item no.**

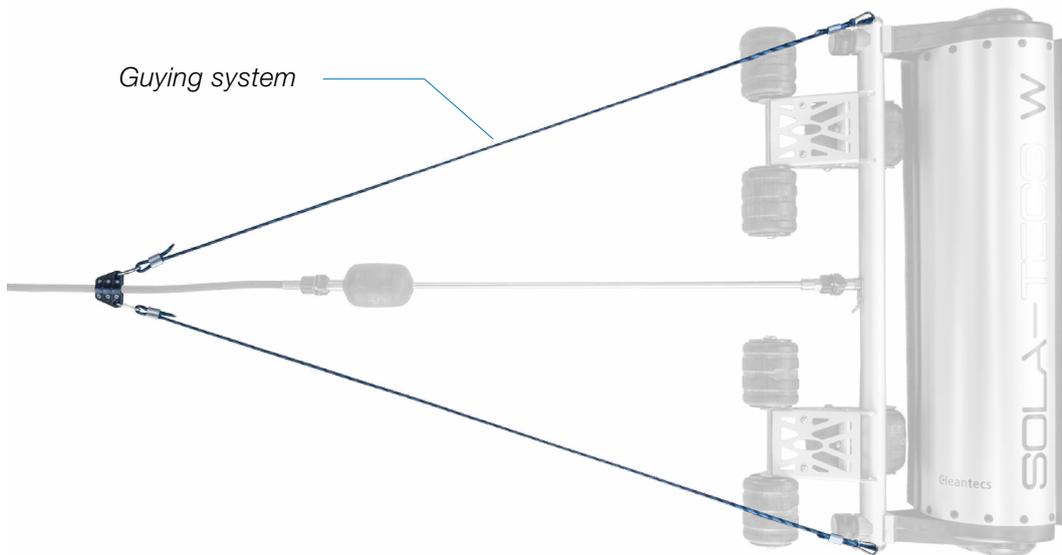
800 mm  
 300 m<sup>2</sup>/h  
 100 – 120 bar  
 22 kg  
 40 °C  
 10 l/min  
 240 mm  
**0201034**

1000 mm  
 350 m<sup>2</sup>/h  
 100 – 120 bar  
 29 kg  
 40 °C  
 10 l/min  
 240 mm  
**0200702**

# ALL COMPONENTS THAT ARE SUPPLIED.

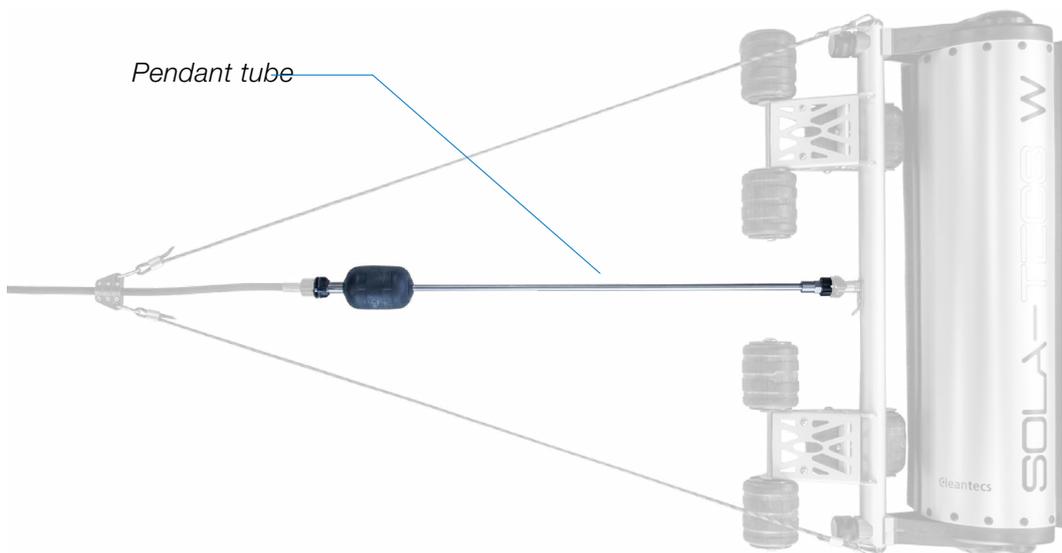
## STABLE STEERING

You can control the brush roller even more stably through our guying system that creates an additional trapezoidal connection between the high-pressure hose and the SOLA-TECS W.



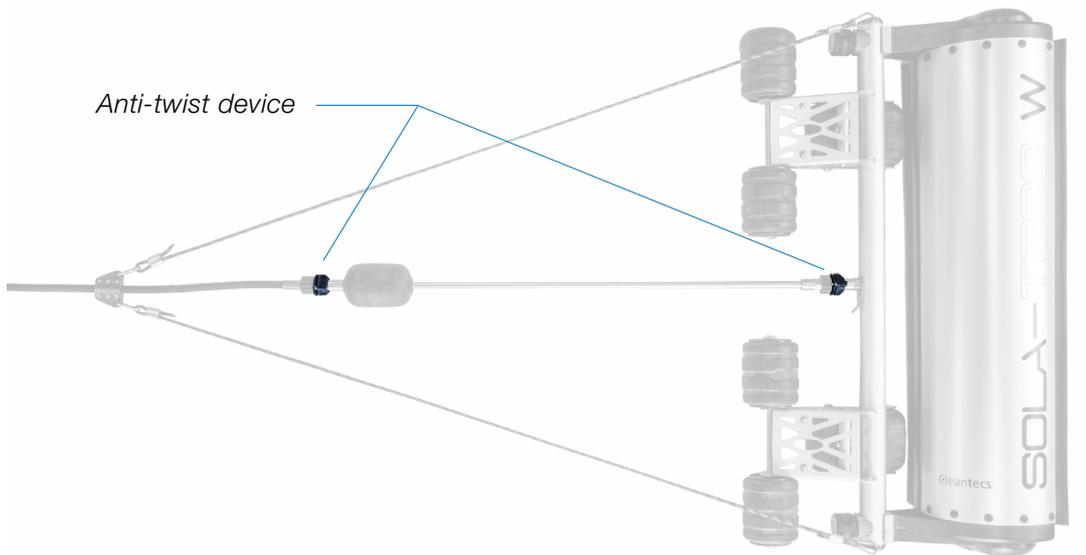
## STABLE HIGH-PRESSURE HOSE

The pendant tube reduces the vibrations that are transmitted to you from the SOLA-TECS W via the high-pressure hose. Thanks to the reduced vibrations, its controllability is improved and it is less tiring to use.



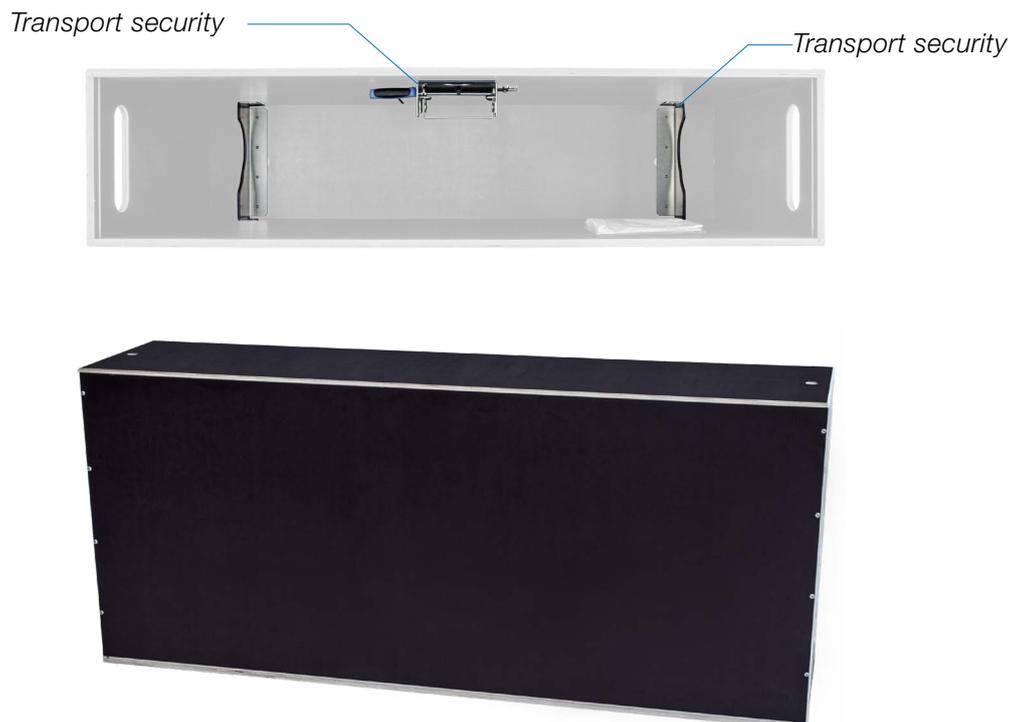
## SECURED QUICK-ACTION SCREW CONNECTION

The quick-action screw connections on the pendant tube and high-pressure hose are secured by our anti-twist protection in case the lock nut loosens uncontrollably.



## SAFE TRANSPORT

So that SOLA-TECS W can be safely transported, we have designed a transport box that safely holds the cleaner and makes transport easier for you.



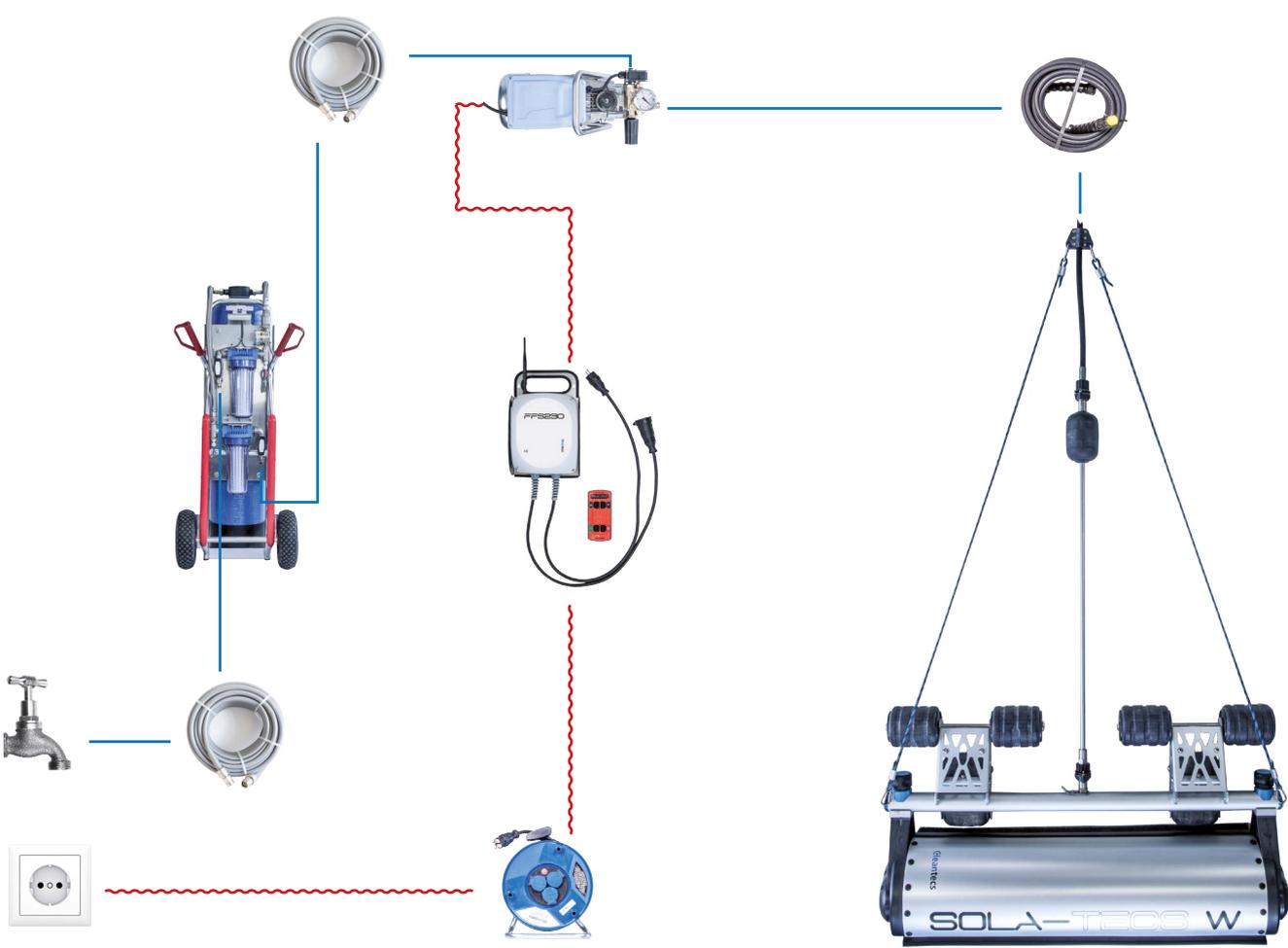
# THE SYSTEM

# ALL COMPONENTS FOR OPERATION.

The SOLA-TECS system is a modular system and complete solution. As a rule, this means that existing high-pressure cleaners or water filter systems can be used for operation. Needless to say, we offer all the necessary products. Depending on the requirements, we can put together any appropriate solution required. For example:



- 1 High-pressure hose
- 2 Low-pressure hose
- 3 Radio remote control
- 4 DI resin filter system
- 5 High-pressure washer
- 1 Cable Reel



## MATCHING DEVICES.

Our recommendation for the SOLA-TECS accessory system:

### RADIO REMOTE CONTROL. FOR MORE SECURITY AT THE TOUCH OF A BUTTON

Our radio remote controls FFS230 and FFS400 have a radio module from ELCA at their core. ELCA has over 25 years of experience in the manufacture of safety radio remote controls. The entire concept of the radio remote control is adapted to meet the requirements of PV cleaning.

The rotating brush can be stopped at the touch of the button that interrupts the power supply to your high-pressure cleaner. The brush is restarted just as easily. The radio remote control offers you a long range, protection class IP69, and an additional shock protection.

Maximum operational safety, reliability and shock resistance make a radio remote control indispensable. The complete set consists of: Transmitter (AT), receiver (AR) and charging adapter. With an optionally available antenna, the range of the radio remote control can be increased many times over.



### WATER STOP. THE INEXPENSIVE ALTERNATIVE

Ball valve for high pressure, mounted on a suction cup including a metal slide. As an alternative to radio remote control systems, the water stop enables the cleaning brush to be operated by interrupting the water supply. The suction cup with ball valve can be mounted directly on a PV panel or pulled behind it on a metal slide. Thus the water stop always and safely stays close by!



## RESIDUE-FREE CLEANING WITH ULTRAPURE WATER

For residue-free cleaning you need “pure water”. Our resin filter instantly produces 100% “pure water”, making it ideal for the residue-free cleaning of photovoltaic modules.

The scope of delivery includes a transport cart with large rubber rollers and two 1  $\mu\text{m}$  fine filters. These hold large contaminant parts in the inflow and resin components in the outflow. This ensures that the photovoltaic modules are cleaned without leaving any residue.

A TDS meter is installed to determine the water quality and is capable of measuring the conductivity value of the water at the water inlet and outlet with precision. A water meter is fitted for monitoring the flow rate.

If your mixed-bed resin is worn out, you can replace it yourself. For this purpose, we offer you a starter set with an auxiliary device, transport containers and reusable mixed-bed resin. You can, of course, also have the mixed-bed resin replaced by a service provider on site.



**CLEANTECS  
IN USE WORLDWIDE**



