

SP SOLAR

With **SCALE PREVENTION** MEDIA INSIDE

WATCH[®] SOLAR PANEL APPLICATIONS

SOLAR PANEL CLEANING UNITS

Watch[®], the manufacturer of **FILTERSORB[®] SP3** technology has introduced a new Solar Panel cleaning unit, **SPSOLAR** a quick change, non-ion exchange 100% chemical free scale prevention solution to keep solar panels boosted for their power production.



MiniDos
for proportional dosing + cleaning

SPSOLAR Quick Change Filter

In the near future, if you are thinking about the most convenient way to clean your solar panels for both residential and commercial solar systems, the most important things to know is WHY, HOW and HOW OFTEN!

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SPSOLAR RESIDENTIAL

Just a simple **SPSOLAR** Quick Change filter for all your solar panels. The treated water can get them clean enough to improve efficiency by minimum 40%. If cleaning the Solar Panels require more than clean water (like for bird droppings and other hard stuff) you have to add **MiniDos** System and a green cleaning liquid, type **INSTANT ISOFT® SOLAR** (in short **I-SOLAR**). **MiniDos** may be the best dosing system, available in solar panel maintenance industry. **I-SOLAR** detergent will not damage aluminum. All other domestic detergents will damage the panel frames and clamps. **I-SOLAR** is consist of **100% biodegradable** cleaning products, that are safe for all solar panels and environment.



The complete environment-friendly cleaning solution for solar panels in residential applications (0.1 - 0.5 m³/h).

Benefits of SPSOLAR Quick Change

- Can be installed on each solar block individually.
- Very fast installation on spray nozzles.
- No Salt, No Chemicals, No Waste water.
- 2 minutes or less time required to change without any kind of valves.
- Lowest cost of cleaning without any expensive service company.
- Availability of water 24 hours a day!

SPSOLAR dealing with hard water stains is the most advanced and latest environment-friendly quick change cleaning technology, which ensures perfect cleaning results and scratch free crystal clear panels. Cleaning with more than 90% high purity water from **SPSOLAR**, the equipments do not need any detergents and this is the reason panels washed with **SPSOLAR** will stay clean for 10x longer period of time than the systems available in the market.

SPSOLAR is innovation, simple, powered by water pressure and almost no maintenance. It consists of three parts Head, Bracket and an Unique Carbon block cartridge with SP3 media inside. Quick is a product like "LEGO" 1-2-3 and ready!

Watch® knows and "we think we have the best residential solar panel cleaning solution" which works here, there and everywhere. It's clean-easy and Quick. **SPSOLAR** is solar panels' best friend forever.

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WATCHER
WATCH WATER

Leading Manufacturer of Scale Prevention Media and Dosing solutions

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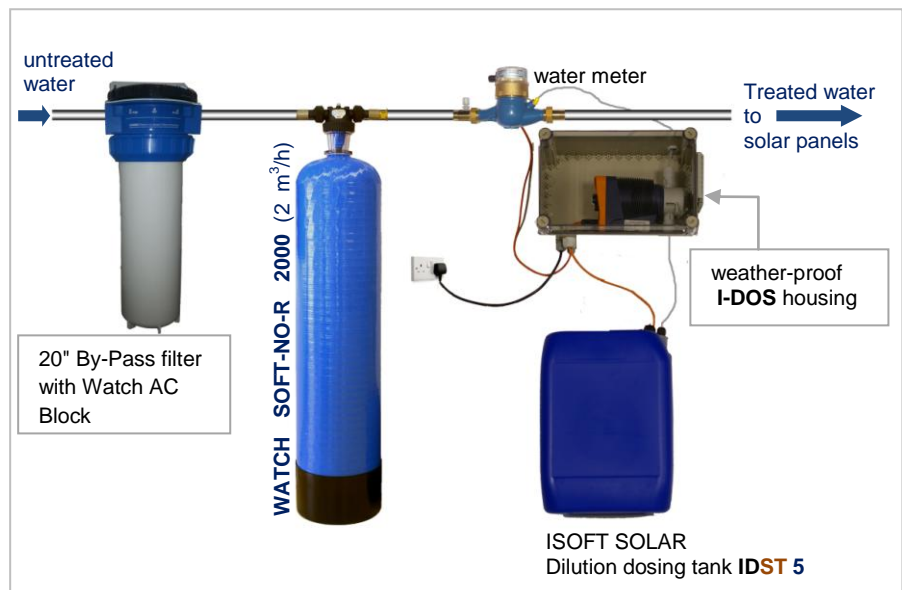
MEDIA INSIDE

SPSOLAR

COMMERCIAL

World Market for SPSOLAR

According to the case studies, the whole world is making tremendous strides in moving away from dependence of oil to make sustainable energy. Sunshine is free & hence the cheap way of making energy. The world demand intends to invest 1200 billion USD into the solar energy over next 10 years. 30 percent of all energy will be produced from the sun, which would be a significant increase from the almost 5% generated in 2012.



SPSOLAR commercial unit for all weather applications

There is only one tiny problem to against this. Solar panels get dirty very quickly. Dirt can cover a panel with residue in less than few days, reducing the efficiency by up to 30 to 40 percent. If the panels are not cleaned regularly, they become less of a clean way to produce energy and more of a service of non-reflective surfaces.

However Watch® Water Germany, has found an inexpensive answer. SPSOLAR is a "NON-ION EXCHANGE Cleaning unit" that has been developed for solar panel cleaning without polluting the environments. "Basically it can clean solar panels without chemicals. It is a brand new solar panel solution to a brand new problem."

The Water Supply

Some locations where the solar panels are mounted will only have tap water and others may require water to be transported on site.

Please note that solar panels does not need spot free water and you don't have to invest in DI units (very low capacity cartridges). To get the solar panels neat and clean a good quality carbon block with absolute 0.2 µm filtration and SP3 water has maximum advantages if you are cleaning the panels. SP3 units can be used directly with tap pressure or it can be used to fill a water tank that you need to carry to the site.

Please visit www.watchwater.de for more information

CALL IT "Material in the wrong place"

WATCHER®
WATCH WATER
Water Company

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MEDIA INSIDE

SPSOLAR

Tech. Datasheet

Residential Units (flow rate: 0.1 - 0.5 m³/h)

Filter model:

MODEL	Capacity	Filtration	Flow rate	Length	function
SPSOLAR 10	12000 liters	Activated Carbon + SP3	3.8 lpm	10 inches	Reduction of dust residue, chlorine, carbonate scale
SPSOLAR 20	24000 liters	Activated Carbon + SP3	7.6 lpm	20 inches	

Dosing unit: MiniDos

Model	PM008	PM009
Fittings	½" M	1/2" F
Maximum flow rate, max, m ³ /h	1.0	1.0
Minimum flow rate, m ³ /h	0.09	0.09
Head loss at maximum flow rate, bar	0.2	0.2
Injection frequency, injections/liter	3.0	3.0
Dosage, ppm I-SOLAR	20	20
Storage tank volume, cm ³	230	230
Max. water pressure, bar	6	6
Max water temperature, °C	40	40

Commercial Units (flow rate: 0.5 - 5.0 m³/h)

Filter model:

MODEL	Capacity	Filtration	Flow rate	Length	function
SPSOLAR J20		Activated Carbon	Up to 5 m ³ /h	20 inches	Reduction of dust residue, chlorine.

Scale Prevention unit ([download brochure](#))

UNIT Name		Flow rate (m ³ /h)		Type of Pressure Vessel	Amount of Filtersorb SP3 (liter)	Pressure (bar)	
		min	max			min	max
WATCH® SOFT-NO-R	500	0.4	0.5	8 x 17	1.5	1	10
WATCH® SOFT-NO-R	1000	0.8	1.0	8 x 35	3.0	1	10
WATCH® SOFT-NO-R	2000	1.6	2.0	10 x 40	6.0	1	10
WATCH® SOFT-NO-R	3000	2.4	3.0	10 x 54	9.0	1	10
WATCH® SOFT-NO-R	5000	4.0	5.0	12 x 52	15.0	1	10

Dosing unit: I-DOS ([download brochure](#))

Metering unit and pump	IDS 5 (Split)	IDC 5 (Compact)	unit	INSTANT I-SOFT® SOLAR
Dilution tank model	IDST 5 (300 lit)	IDCT 5 (300 lit)		MiniDos and I-DOS unit is used to dose I-SOFT® SOLAR (dispersant + cleaning agent) in diluted form.
Maximum flow Q max.	5	5	m ³ /h	
Lower working limit	0.05	0.05	m ³ /h	
Metering interval approx.	0.7	0.7	ml/stroke	INSTANT I-SOFT® SOLAR is now available in powder form in 5 kg packets that makes 100 kg of equivalent competitive or conventional products.
Feed rate 50-100 %	50 – 165	50 – 165	ml/m ³	
Max. operating pressure	10	10	bar	
Metering pump type	BT4b 1000	BT4b 1000		
Meter connecting thread	G 1 B	G 1 B		
Screw connector width	R 3/4	R 3/4		
Length without thread	190	190	mm	(download information)



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