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*hi-tech photovoltaic concentrators*



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# *SunGravityControl®*

Products and Services

## **Scope:**

Describe all products and services of the SunGravityControl®.

<b>Prepared</b>	<b>Verified</b>	<b>Approved</b>
Luis Pina 16.03.2010	[Name] [Date]	[Name] [Date]

**Reference list for 2010**
**SunGravityControl® - Products and Services**

Code	Designation	Short description
SGC	<b>SunGravityControl®</b>	SunGravityControl® is a Sun-tracking robotic controller, featuring: <ul style="list-style-type: none"> <li>- Direct actuation for 2 DC motors, up to 5A, 24V.</li> <li>- Astronomical tracking algorithm. ( error &lt; 1° )</li> <li>- Power supply: 230V AC.</li> <li>- SuperCaps backup power up to 30 min.</li> </ul>
<b>Accessories</b>		
SGC – wp	<b>Waterproof protection</b>	Flexible enclosure for extra waterproof protection. Required for extended warranty.
SGC – sp	<b>Self Powering</b>	Adapter for DC power supply from PV modules. The energy is stored in the SuperCaps with over 1.000.000 life cycles, corresponding to over than 20 years.
SGC – ps	<b>Power Sensor</b>	Sensor to measure the instantaneous power of PV modules, up to 1000V, 50A.
SGC – ts	<b>Temperature Sensor</b>	Sensor to measure the PV modules temperature and change orientation in case of extreme overheating or freezing.
SGC – ws	<b>Wind Sensor</b>	Sensor to measure wind velocity and protect the system from extreme wind conditions.
SGC – lds	<b>Light Directional Sensor</b>	Sensor for determining the relative position of the Sun. Enables hybrid tracking algorithm. ( error < 0.1° )
SGC – ia	<b>Indirect Actuation</b>	Power switch for indirect motor actuation.
SGC – PCc	<b>PC Connection</b>	Cables and Software for direct connection to your PC and visualization of the operating parameters.
SGC – PC	<b>PC Computer</b>	Lap-top computer with software to logging and update the operating parameters and to update the Sun-tracking software. Includes PC Connection (PCc), PC Programmer (PCp) and 4 hours of remote support from WS Energia.
SGC – PCp	<b>PC Programmer</b>	Programmer to update the Sun-tracking software and tune operating parameters. Includes hardware and software and, 4 hours of remote support from WS Energia.
<b>Communication interfaces</b>		
SGC – GSM	<b>GSM add in</b>	GSM communication system installed on the SunGravityControl® for remote monitoring, control and maintenance. SIM card is NOT included.
SGC – CAN	<b>CAN Communication</b>	CAN communication system installed on the SunGravityControl® to allow local communication between systems.
SGC – web	<b>Web Portal</b>	Access to the web portal to remotely monitor and control the operation parameters. Requires GSM and fully operational SIM card. Includes 4 hours of remote support from WS Energia.
<b>Technical support</b>		
SGC – commiss	<b>Installation Commissioning and Star-up</b>	Commissioning and coordination of Start-up of PV installations using SunGravityControl® robotic controllers.
SGC – remote assist	<b>Remote Assistance</b>	Remote technical support to the installation, Start-up and/or maintenance. Via email, phone or conference call.
SGC – on site assist	<b>On Site Assistance</b>	Remote technical support to the installation, Start-up and/or maintenance. Must include transportation and accommodation.