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HPC – Heated Prism Chassis - System information

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Product Description

Surveying relies on constant access to reflector prisms with known locations where a laser instrument is pointed towards the prism and a reflection gives the instrument the fix point it needs. Should the prism not be accessible due to water droplets, mist or ice on the prism the instrument will not get an accurate, if any, reflection back.

To eliminate this issue the Straightwater Heated Prism Chassis is heated with a precisely regulated heating element that will evaporate any water assemblance on the surface of the prism.

The heating can be powered either by providing 12VDC or by a battery system that is recharged with a solar panel.

System overview Heated Prism Chassis Solar panel 12VDC Power supply System controller Battery system The Heated prism chassis is controlled by a system controller which comes in two versions, one simple for continuous mode where the heater is powered by a mains connected power supply (HPC01), and one more advanced version where the heater is powered by a battery system which is recharged from a solar panel (HPC-02).

The solar powered version utilizes a highly efficient charge controller with MPPT algorithm to get the most power from the sun even in the darker months of the year. This version comes with a planner function where the users can decide when the heater shall be turned on and for how long (if run by battery) or if it shall be in continuous mode (if powered by a 12V power supply).

The planner in the Solar powered version can be set to run a heating cycle of a certain amount of time at the same time on selected weekdays.

The system will run a heating cycle as long as there is sufficient energy in the battery, should the battery be to depleted no cycle will run until the battery has been sufficiently recharged by the solar panel.

If setting a 30 min heating cycle once per day the system can run for 10 days without any charging, thereby getting the most out of the system during winter time.

There is also a larger (55 W instead of 30 W) solar panel that can be used if the system is used far north where sunlight during winter is limited.

The efficiency of the system is dependent on that the solar panel is mounted for best possible sun catching without any shadows, that is due south at 10-30% inclination.

Deviations from optimal position will affect the overall efficiency.

All components are chosen for longevity and are of the highest quality available on the market today.

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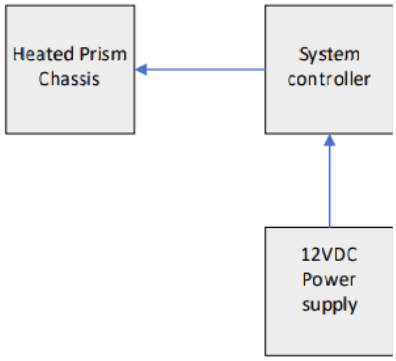
HPC-DP contains:

1 Heated Prism Chassis with cable to connect to the control box.

1 Control unite programmed and optimized from factory.

1 12VDC Power Supply

System overview



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HPC-SP contains:

1 Heated Prism Chassis with cable to connect to the control box.

1 Control unite programmed and optimized from factory.

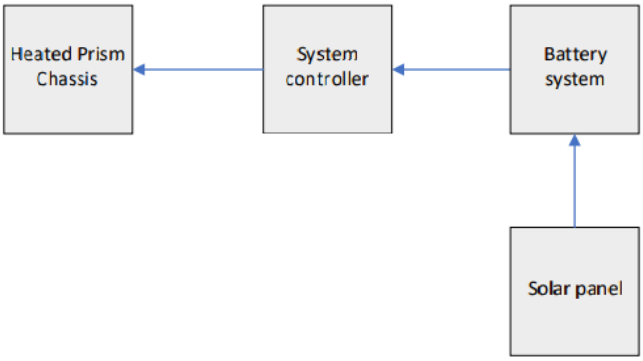
1 Solar Panel Standard hole pattern. Please observe no mounting parts included.

1 Battery System

1 cable for connecting the solar panel to the control box

1 cable for connecting the HPC to the control box

System overview



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Straightwater AB of Grönegatan 2, 275 66 Vollsjö, Sweden, hereby declares under our own responsibility and that these products:

Type :	Heated Prism Chassis System Brand : Straightwater
Part numbers :	2401-1601, 2401-1602, 2401-1603, 2401-1604, 2401-1605, 2401-1606

Are in conformity with the following applicable directives and standards:

EMC Directive 2014/30/EU Low Voltage Directive 2014/35/EU

Restriction of the use of certain hazardous substances, RoHS.

The products comply with 2011/65/EU and 2015/863/EU and all of its amendments to date.

EU Battery Directive 2006/66 and Amendment 2013/56 EU EU Battery Regulation 2023/1542 EC REACH Regulation (EC 1907/2006)

Signed on behalf of Straightwater AB

Padraic Dempsey

CEO 2024-08-08